VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Sarah E. Lawler, Director Rates & Regulatory Planning, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein are true and correct to the best of her knowledge, information and belief.

Sarah E. Lawler Affiant

Subscribed and sworn to before me by Sarah E. Lawler on this 9th day of November, 2018.

NOTARY PUBLIC

My Commission Expires: July 8, 2022

NOTARY PUBLIC STATE OF OHIO

E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

VERIFICATION

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG)

SS:

The undersigned, Renee Metzler, Managing Director – Retirement and Health and Welfare, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therin are true and correct to the best of her knowledge, information and belief.

Renee Metzler Affiant

Subscribed and sworn to before me by Renee Metzler on this 13th day of November, 2018.

NOTARY PUBLIC

My Commission Expires: 9-17-2023

FELICIA SUEANN RUTTY
NOTARY
PUBLIC
MECKLENBURG COUNTY, NC

VERIFICATION

STATE OF NORTH CAROLINA)
) **SS:**
COUNTY OF MECKLENBURG)

The undersigned, Robert H. "Beau" Pratt., Director, Regional Financial Forecasting, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Robert H. "Beau" Pratt Affiant

Subscribed and sworn to before me by Robert H. "Beau" Pratt on this 9 day of Nov., 2018.

NOTARY PUBLIC

VIRGINIA M. ADAMS NOTARY PUBLIC MECKLENBURG COUNTY, NC EXP. 10/02/2021

My Commission Expires:
10/2/21

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Amy B. Spiller, State President of Duke Energy Ohio, Inc. and its subsidiary, Duke Energy Kentucky, Inc., being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests and that the answers are true and correct to the best of her knowledge, information and belief.

Amy B. Spiller, Affiant

Subscribed and sworn to before me by Amy B. Spiller, on this 20th day of November, 2018.

NOTARY PUBLIC

My Commission Expires: July 8, 2022

NOTARY PUBLIC STATE OF OHIO

E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Trisha Haemmerle, Senior Strategy & Collaboration Manager, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of her knowledge, information and belief.

Trisha Haemmerle, Affiant

Subscribed and sworn to before me by Trisha Haemmerle on this 19TH day of NOVEMBER, 2018.

NOTARY PUBLIC

ADELE M. FRISCH
Notary Public, State of Ohio
My Commission Expires 01-05-2019

My Commission Expires: 1/5/2019

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Bruce L. Sailers, Pricing and Regulatory Solutions Manager, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Bruce L. Sailers

Bruce L. Sailers, Affiant

Subscribed and sworn to before me by Bruce L. Sailers, on this 9TH day of NOVEMBER, 2018.

Adele M. Frisch

NOTARY PUBLIC

ADELE M. FRISCH
Notary Public, State of Ohio
My Commission Expires 01-05-2019

My Commission Expires: 1/5/2019

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, William Don Wathen Jr., Director of Rates & Regulatory Strategy, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

William Don Wathen Jr., Affiant

Subscribed and sworn to before me by William Don Wathen Jr., on this 20th day of November, 2018.

NOTARY PUBLIC

My Commission Expires: July 8, 2022

NOTARY PUBLIC STATE OF OHIO

E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

VERIFICATION

STATE OF NORTH CAROLINA)
) **SS:**
COUNTY OF Mecklenburg)

The undersigned, Tyler A. Barbare, Director of Gas Technical Field Operations, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing testimony and that it is true and correct to the best of his knowledge, information and belief.

Tyler A. Barbare Affiant

Subscribed and sworn to before me by Tyler A. Barbare on this 8 day of November, 2018.

SHANNON L. WALL
Notary Public, North Carolina
Mecklenburg County
My Commission Expires
June 28, 2022

NOTARY PUBLIC

My Commission Expires: 6/28/22

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Gary J. Hebbeler, Vice President Gas Operations, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Gary J. Hebbeler, Affiant

Subscribed and sworn to before me by Gary J. Hebbeler on this 20th day of Nov., 2018.

NOTARY PUBLIC

My Commission Expires: July 8, 2022

NOTARY PUBLIC STATE OF OHIO

E. MINNA ROLFES-ADKINS
Notary Public, State of Ohio
My Commission Expires
July 8, 2022

VERIFICATION

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG)

SS:

The undersigned, Michael Covington, Director, Gas Utilities & Infrastructure Accounting, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein true and correct to the best of his knowledge, information and belief.

Michael Covington., Affiant

Subscribed and sworn to before me by Michael Covington on this 12 day of November 2018.

NOTARY PUBLIC

My Commission Expires: March 1, 2020

JANET P CURETON
NOTARY PUBLIC
Mecklenburg County
State of North Carolina

VERIFICATION

STATE OF NORTH CAROLINA)
) **SS:**
COUNTY OF MECKLENBURG)

The undersigned, John R. Panizza, Director, Tax Operations, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therin are true and correct to the best of his knowledge, information and belief.

John R. Panizza Affiant

Subscribed and sworn to before me by John R. Panizza on this 9 day of Nov, 2018.

VIRGINIA M. ADAMS NOTARY PUBLIC MECKLENBURG COUNTY, NC Exp. 10/02/2021

NOTARY PUBLIC

My Commission Expires: 10/2/21

VERIFICATION

STATE OF NORTH CAROLINA)
) **SS:**
COUNTY OF MECKLENBURG)

The undersigned, Benjamin Walter Bohdan Passty, Lead Load Forecasting Analyst, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Benjamin WB Passty
Benjamin Walter Bohdan Passty Affiant

Subscribed and sworn to before me by Benjamin Walter Bohdan Passty on this 20th day of November, 2018.

Marissa N Andrade
NOTARY PUBLIC

My Commission Expires: 04/07/2021

MARISSA N ANDRADE NOTARY PUBLIC MECKLENBURG COUNTY, NC Exp. 04/07/2021

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, Jeff L. Kern, Lead, Gas Resources, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.

Jeff L. Kern, Affiant

Subscribed and sworn to before me by Jeff L. Kern, on this 12TH day of NOVEMBER, 2018.

NOTARY PUBLIC

ADELE M. FRISCH
Notary Public, State of Ohio
My Commission Expires 01-05-2019

My Commission Expires: 1/5/2019

VERIFICATION

STATE OF NORTH CAROLINA)
) **SS:**
COUNTY OF MECKLENBURG)

The undersigned, Cynthia S. Lee, Director, Asset Accounting, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests and that the answers contained therein are true and correct to the best of her knowledge, information and belief.

Cynthia S. Lee Affiant

Subscribed and sworn to before me by Cynthia S. Lee on this 9 day of Nov., 2018.

NOTARY PUBLIC

My Commission Expires: 10/2/21

KYPSC CASE NO. 2018-00261
STAFF 3rd SET DATA REQUESTS
TABLE OF CONTENTS

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-001

REQUEST:

Refer to Duke Kentucky's response to Commission Staff's First Request for Information, Item 71.

a. The spreadsheet provided in the response has a circular reference on sheets SCH_D2.19 at AU192 and SCH_E1 at Q26. Provide a revised Excel spreadsheet that contains no circular reference errors.

b. Recalculate the information contained in the spreadsheet concerning the forecasted period to reflect the change that would be recorded for unprotected Excess Deferred Income Taxes pursuant to the Final Order in Case No. 2018-0036.[1]

RESPONSE:

a. See STAFF-DR-03-001(a) Attachment.

b. The Company had conservatively assumed amortization of unprotected Excess Deferred Income Taxes (EDIT) over a ten year period in this instant case to be consistent with the outcome of the Commission's order in the Company's recent electric base rate case (Case No. 2017-00321) so no changes to EDIT amortization are necessary.

PERSON RESPONSIBLE: Sarah E. Lawler

[1] Case No. 2018-00036, *In the Matter of Kentucky Industrial Utility Customer's Inc. v. Duke Energy Kentucky, Inc.* (Ky. PSC Oct. 31, 2018).

KYPSC CASE NO. 2018-00261

STAFF-DR-03-001(a) ATTACHMENT IS BEING ELECTRONICALLY FILED AND PROVIDED ON CD

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-002

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 5.e. Also, refer to Duke Kentucky's response to the Attorney General's First Request for Information (Attorney General's First Request), Item 91. Explain in detail why Duke Kentucky provided different responses to the same question.

RESPONSE:

The amounts included in the response to the Staff's Second Request, Item 5.e. are the correct amounts. The response to the Attorney General's First Request, Item 91 presented the amounts for Duke Energy Kentucky Electric in error.

PERSON RESPONSIBLE: Renee H. Metzler

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-003

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 9.g.

a. Explain the large increase in Maintenance Expense for Mains.

b. Explain the credit balance in the base period for Maintenance Expenses – Other.

RESPONSE:

a. The increase in Maintenance Expense for Mains is for corrosion monitoring and leak surveying.

b. The credit balance in the base period for Maintenance Expenses – Other is due to third party damage reimbursements recorded in the actual months of the base period.

PERSON RESPONSIBLE: Robert H. "Beau" Pratt

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-004

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 13.

a. Explain how Duke Kentucky handles true-ups with the Budget Billing Program.

b. Provide whether Duke Kentucky enters into installment agreements with customers that have longer than a 3-month duration.

c. Explain in detail what Duke Kentucky means when it states that is "[m]ust give a customer a 'reasonable' amount of time on the agreement."

d. Provide the monetary credit amount that is provided to customers under the Power Manager Program.

e. Provide the number of customers that are signed up to receive high bill alert emails.

RESPONSE:

a. There are two types of budget billing. The Annual Plan bills any remaining balance in the 12th month. If a credit of more than two times the new installment amount exists at the settle-up month, a refund check is sent three weeks after the last payment was made. Otherwise, the credit is applied toward the next bill or bills.

The quarterly plan has no balancing month. The installment automatically changes if variance is + or - 10%. Any credit on the account after a review remains on the account and the installment amount is adjusted accordingly.

b. Duke Energy's standard payment process is to set a three-month agreement for Duke Energy Kentucky customers. The Company may agree to a longer duration that constitutes a "reasonable amount of time" based upon the individual circumstances of the customer and in accordance with the criteria set forth in response to part c below.

c. The 'reasonable amount of time' is determined based on the following factors:

1. What the previous payment arrangement history looks like for this customer?

- Has the customer established a payment arrangement before, or is this their first one?
- Is there a pattern or history of payment arrangements that were not paid in full?
- Has the customer attempted to make payments on time during the term of the payment arrangement?
- Does the customer have a history of paying late, or a pattern of not paying at all?
- What is the length of time since the last defaulted payment arrangement?

2. If there is a security deposit on file and, if so, how much is it?

- Does the customer have a security deposit on file and, if yes, how much is it?
- Does the security deposit amount on file match the amount a new customer would pay if they moved into this same location?
- Has the security deposit been paid in full?

- If there is no security deposit on file, how come? Was it waived? Not charged? Why?
- Is there future usage that has not been billed yet?
- If there is no security deposit on file, is the customer going down the path of the Existing Customer Security Review (existing customer deposit) process where a deposit could be added to the account?

3. **How many additional days is the customer requesting?**
   - When is the current payment due for the payment arrangement?
   - When is the next meter read date?
   - As long as the customer pays by the next meter read date, they can stay on the agreement.
   - If the customer is unable to pay by the meter read date, does it make sense to cancel the agreement and setup a new one? How will this impact the monthly installment amount?
   - If the customer just defaulted on an agreement and is asking for extra time to pay before being disconnected due to non-payment, how many days are they asking for past the disconnection for non-payment (DNP) date?
   - Would it make sense to push the DNP date out 1 or 2 days to accommodate the customer?
   - If extending the DNP date is the most appropriate solution, do not adjust the DNP date past the next meter reading date.
   - If the customer needs additional time beyond their next meter reading date, and have been assessed, you may suspend collections and change the

termination date to the current meter reading date; however, the customer must be made aware that their next bill will not reflect their promised payment.

d. The Power Manager Program is exclusively for Duke Energy Kentucky's electric customers. The program offers two levels of: a moderate control option and a longer control option. The credit amount for moderate control is $12 and the credit amount for the longer control option is $18.

e. Duke Energy Kentucky has a total of 65,691 customers in a treatment group which we review for possible high usage impact. Each account goes through an additional eligibility assessment confirming the account is not enrolled in a budget billing program that controls the amount of their monthly utility bill. Upon this assessment the number of eligible customers drops to a total of 42,952. The Company also tracks the number of alerts that are sent. In the last three months, approximately 16,000 High Bill Alerts have been sent to customers. The High Bill Alert is based upon the anticipated impact of weather on the customer's monthly utility bill whereby an alert will be sent only if the customer's usage will increase 30% or more from the previous month's actual usage due to weather. Additionally, if usage is expected to increase by 5% the month following, the customer will also receive a Continuous High Usage Message. Eligible customers can receive both alerts and the total sent number above includes both types of messages. With the transition to AMI meters, customers will begin participating in the Company's Usage Alert program instead of the High Bill Alert program. The Usage Alert program is

specifically tied to the individual customer's actual usage data that is available through an AMI meter.

PERSON RESPONSIBLE: Amy B. Spiller – a thru c, e
Trisha Haemmerle – d

STAFF-DR-03-005

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 14.

a. Explain what the payment option IVR stands for in the response.

b. In Amy Spiller's Direct Testimony, page 11, she stated that customers also have access to a convenient bill payment option called Payment Advantage, but it was not included in the above-referenced response. Explain in full detail what Payment Advantage entails.

c. Provide Duke Kentucky's office locations where the customers can pay their bill in person.

RESPONSE:

a. IVR = Interactive Voice Response System

b. Customers interested in Paperless Billing must first enroll through Online Services from the Duke Energy Website. After enrollment, the customer has options to schedule payments and control how those payments occur:

- Payments can be scheduled to post immediately or for a future date;
- Payments made through the direct site will automatically issue a pending payment on the customer's account, which will stop any adverse credit action;

- Payments can be made from either the customer's personal checking or savings account; and,
- Customers will have access to 24 months of billing history, payment activity, bill copies, and bill inserts online.

Customers can choose which payment method they prefer. There is no processing fee for these options.

c. Duke Energy Kentucky does not provide local offices for customer payments. However, payments can be made at authorized third party payment locations. Customers can locate these preferred payment locations using the search function on the Duke Energy website here: www.duke-energy.com/home/billing/payments-locations.

PERSON RESPONSIBLE: Amy B. Spiller

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-006

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 15.

a. Provide the provisions of the Adjusted Due Date Program.

b. Indicate whether Duke Kentucky would be willing to include the provisions of its Adjusted Due Date Program in its tariff. If so, provide revised tariff sheets reflecting this program. If not, explain why not.

RESPONSE:

a. The Adjusted Due Date Program is available to Duke Energy Kentucky gas customers and electric customers who have an analog meter. The service is free but the customer must be current on their account. This service allows a customer to adjust the due date of the energy bill five-to-ten days forward from the original due date.

b. Yes. Duke Energy Kentucky is willing to include the provisions of its Adjusted Due Date Program in its tariff. See STAFF-DR-03-006 Attachment. Please note this attachment also includes a revision referenced in STAFF-DR-03-020(a).

PERSON RESPONSIBLE: Amy B. Spiller – a
Bruce L. Sailers – b

Ky. P.S.C. Gas No. 2
Fourth~~Third~~ Revised Sheet No. 25
Cancelling and Superseding
Third~~Second~~ Revised Sheet No. 25
Page 1 of 2

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, Kentucky 41018

SECTION VI - BILLING AND PAYMENT

1. **Billing Periods - Time and Place for Payment of Bills.**

Bills ordinarily are rendered regularly at monthly intervals, but may be rendered more or less frequently at Company's option. Bills may be rendered by hand delivery, mail, electronically, or by any other reasonable means. ~~If bills are rendered electronically then a charge not to exceed $0.25 per usage may be assessed.~~ (D
Non-receipt of bills by Customer does not release or diminish the obligation of Customer with respect to payment thereof. (D

The word "month" as it pertains to the supply of service shall mean the period of approximately thirty days between meter readings, as fixed and made by Company. Meters are ordinarily read at monthly intervals but may be read more or less frequently at Company's option but no less than quarterly. Company shall have the right to establish billing districts for the purpose of reading meters and rendering bills to customers at various dates. A change or revision of any Rate Schedule shall be applicable to all bills on which the initial monthly meter reading is taken on or after the effective date of such change or revision, except as otherwise ordered by the Kentucky Public Service Commission.

Bills are due on the date indicated thereon as being the last date for payment of the net amount, or as otherwise agreed to, and bills are payable only at the Company's offices or authorized agencies for collection. When not so paid, the Gross Monthly Bill, which is the Net Monthly Bill plus 5%, is due and payable. If a partial payment is made, the amount will be applied to items of indebtedness in the same order as they have accrued, except that any payment received shall first be applied to the bill for service rendered.

Customers current on their account may participate upon request in the Adjusted Due Date Program. (T)
The Adjusted Due Date Program is available to Duke Energy Kentucky gas customers who have an analog meter. This service allows a customer to adjust the due date of the energy bill five-to-ten days forward from the original due date. (T)

The Company may issue interim bills based on average normal usage instead of determining actual usage by reading the meter. Interim bills may also be used when access to Company's meter cannot be obtained or emergency conditions exist.

2. **Information on Customer Bills.**

Every bill rendered by the Company for metered service will clearly state:

(a) The beginning and ending meter readings for the billing period and the dates thereof.
(b) The amount of energy usage.
(c) The amount due for the energy used, any adjustments, including assessed late payment charges, and the gross amount of the bill.
(d) The rate code under which the customer is billed.
(e) The date of the last day payment can be made without a late pay charge being assessed.
(f) Any previous balance.
(g) The address, phone number, and business hours of the Company.

Issued by authority of an Order~~Entry~~ of the Kentucky Public Service Commission dated ~~January 24~~, 2018~~3~~ in Case~~Filing~~ No. 2018~~TFS2012-00261~~1179.

Issued: August 31~~December 21~~, 2018~~2~~
Effective: October 1~~January 21~~, 2018~~3~~

Issued by Amy B. Spiller~~Jim Henning~~, President

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, Kentucky 41018

Ky. P.S.C. Gas No. 2
Fourth~~Third~~ Revised Sheet No. 25
Cancelling and Superseding
Third~~Second~~ Revised Sheet No. 25
Page 2 of 2

SECTION VI - BILLING AND PAYMENT (Contd.)

(h) The date of the next scheduled meter reading.
(i) The date after which received payments are not reflected in the bill.
(j) The type of service rendered (gas or electric).
(k) The amount, and identification, of any tax or fee the Company is authorized either by state law or order of the Commission to collect.

~~**SECTION VI - BILLING AND PAYMENT (Contd.)**~~

3. **Charge for Restoring Service for Non-Payment of Bill and Unlawful Use of Service.**

Company may charge and collect in advance the sum as specified on Tariff Sheet "Charge For Reconnection of Service" for reconnecting a customer's service after service is disconnected because of non-payment of bill when due or when service is discontinued because of fraudulent use, except as may be provided by 807 KAR 5:006, Section 16~~5~~, Winter Hardship Reconnection. (T)

4. **Temporary Discontinuance of Service**.

If any residential customer, because of absence or otherwise, shall notify Company in writing or by telephone to discontinue service, Company will make no minimum charge for any full meter reading period during the period of discontinuance; provided however, that Company may charge and collect the sum as specified on Tariff Sheet "Charge For Reconnection of Service" prior to reconnecting a service which was discontinued at customer's request within the preceding twelve months.

5. **Availability of Budget Billing.**

Company has available to its customers a "Budget Billing Plan" which minimizes billing amount fluctuations over a twelve month period. The Company may exercise discretion as to the availability of such a plan to a customer based on reasonable criteria, including but not limited to:

(a) Customer's recent payment history.
(b) The amount of the delinquent account.
(c) Customer's payment performance in respect to any prior arrangements or plans.
(d) Any other relevant factors concerning the circumstances of the customer including health and age.

If the customer fails to pay bills as rendered under the Budget Payment Plan, the Company reserves the right to revoke the plan, restore the customer to regular billing and require immediate payment of any deficiency.

Failure to receive a bill in no way exempts customer from the provisions of these terms and conditions.

Budget Billing Plan Description: (T)
Annual Plan: (T)
- The Annual Plan provides 11 months of equal payments by using 12 months of customer's usage, dividing the usage by 11, and using the result to calculate the bill. (T)
- Month 12 is a settle-up month between the billed amounts and customer bills based on actual usage. (T)

Issued by authority of an Order~~Entry~~ of the Kentucky Public Service Commission dated _____ ~~January 24~~, 201~~83~~ in Case~~Filing~~ No. 2018~~TFS2012~~-00261~~1179~~. (T)

Issued: August 31~~December 21~~, 201~~82~~
Effective: October 1~~January 21~~, 201~~83~~

Issued by Amy B. Spiller~~Jim Henning~~, President

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, Kentucky 41018

SECTION VI - BILLING AND PAYMENT (Contd.)

- A bill message is sent after 6 months with a suggested new bill amount if the budget bill amounts compared to the actual bill amounts exceeds a Company set threshold; however, Customer must contact Company to change the amount. (T)
- The budget bill amount is changed as needed after the 12 month review. (T)

Quarterly Plan: (T)

- The Quarterly Plan provides 3 months of equal payments starting by using 12 months of customer's usage, dividing the usage by 12, and using the result to calculate the bill. (T)
- However, to prevent a settle-up month, reviews occur after 3, 6, 9, and 12 months on the plan and continue every 3 months thereafter. (T)
- The budget bill amount is changed as needed after each review. The change is automatic and the customer does not need to contact Company. (T)
- A bill message is sent after each review with a new bill amount if the budget bill amounts compared to the actual bill amounts exceeds a Company set threshold. (T)

6. **Partial Payment Plans.**

The Company shall negotiate and accept reasonable partial payment plans at the request of residential customers who have received a termination notice according to the regulations governing failure to pay, except the Company shall not be required to negotiate a partial payment plan with a customer who is delinquent under a previous payment plan.

7. **Bill Format**

The Company has included as Appendix A to these Service Regulations an example of the Company's customer bill format.

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-007

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 16. Explain whether there are any other monetary benefits from the Advanced Metering Infrastructure Project (AMI Project) that should be included in the present case, or future rate cases, other than the costs for meter reading.

RESPONSE:

STAFF-DR-02-072(b) included a worksheet summarizing the gas benefits (DEK Gas Benefit Detail). The benefits identified on that worksheet as "Reduced Meter Reading Costs," and the two lines for "Avoided O&M for TWACS" represent the only direct monetary benefits that are reflected in the case or should exist in future rate cases. The savings associated with these items are reflected in the significant reduction in meter reading expenses described in the Company's response to Staff-DR-02-016, as well as the absence of TWACS-related O&M costs which will be avoided since the system is decommissioned as described in the Company's response to AG-DR-01-063. The O&M savings reflected in the forecasted test year revenue requirement exceed the projected savings shown in Staff-DR-02-072(b).

PERSON RESPONSIBLE: William Don Wathen Jr.

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-008

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 17. Confirm that, in the pending case, Duke Kentucky is not requesting the investment amount for the Customer Information System to be included in rates.

RESPONSE:

Full deployment of the Customer Information System (Customer Connect) is planned to occur after the forecasted test period in this case. However, a portion of the project is forecasted to go into service prior to and during the test period. The 13-month average of the amount in service during the test period is $448,606.

The Company began deploying new capabilities this year and will continue every year leading up to full deployment in 2022. With this phased deployment approach, the Company will have system functionalities in-service and beneficial to customers at tiered states throughout the implementation of the complete system.

In June 2018, Customer Connect deployed its first release, which was foundational to the Program. The Company delivered value early by providing a toolset to begin to know customers better; advanced the overall journey by proving out the solution capability and the team's ability to deliver; and accelerated the foundation for the advanced data conversion capability. This release is foundational to building a holistic customer profile, gathering all relevant touchpoints that customers are having with Duke Energy in real time,

such as web visits, phone calls, power outages, outbound communications, and product and service participation. The Company also gained the ability to execute automated marketing campaigns and more targeted communication campaigns to better serve customers and personalize their experience.

The platform will be leveraged to provide real-time insights to enhance the customer experience. One example of this is how the Company can leverage these insights to enhance operations during significant storm events. With this new platform, data can be visualized in new ways to uncover insights into experiences customers are having across the Company's phone, we and social media channels. The Company can also leverage the automated, targeted marketing campaigns to increase effectiveness of communication campaigns during major storm events and for other operational needs.

In late 2018, the Company will continue to build on automated marketing and more personalized communication capabilities to include automated email, social media and text communication campaigns and improved speed and effectiveness of campaigns.

In 2019, the Company will build on the holistic customer profile, improving its ability to communicate with customers and begin to engage with them in new ways. Examples of new and/or improved capabilities that customers will experience with this release include the following:

- Streamlined Customer Service Experience – Leveraging insights from the holistic customer profile, the Company will be able to use the new platform to predict the intent of customers when they call improving their experience with Duke Energy. In addition, the interaction tracking data, as referenced above, will be made available to

customer care specialists, who will leverage it for context into why a customer may be calling and to have a more informed and productive conversation with the customer.

- More Timely, Relevant and Valuable Communications – The customer data will also be leveraged to prioritize the types of information the customer prefers to receive and the methods of communication by which they wish the receive the information, including via web, email and other channels to ensure it is timely relevant and valuable to them.

- Improved Communication Campaigns – The Company will create improved communication campaigns to proactively provide important information about its customers' service. Examples could include information about power outages, planned outages and vegetation management (i.e. tree trimming).

PERSON RESPONSIBLE: Robert H. "Beau" Pratt
Retha Hunsicker

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-009

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 19. Provide a list of other Kentucky regulated natural gas companies that utilize a return-on-rate-base approach, as opposed to capitalization.

RESPONSE:

The Company is aware that Atmos Energy, Columbia Gas of Kentucky, and Delta Natural Gas all have existing rates that were established using rate base. Atmos Energy's currently pending application, in Case No. 2018-00281, also proposes to use rate base. LG&E-Gas has rates that were established using capitalization. To the Company's knowledge, all other LDCs regulated by the Kentucky Public Service Commission are of a size that qualifies them for Alternative Rate Regulation under Kentucky law and most of these small LDCs use "operating ratio" rather than rate base or capitalization for setting base rates.

PERSON RESPONSIBLE: William Don Wathen Jr.

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-010

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 23.

a. Explain in full detail if Duke Kentucky relies upon a computer system or the customers to alert of possible meter failure when the usage is significantly higher or lower that the historical average.

b. Provide the protocol Duke Kentucky follows if alerted of a potential meter failure.

RESPONSE:

a. Currently Duke Energy does not have a computer system that alerts us of a meter failure. If a house meter has a problem with meter failure, a work file is created with hi-lo readings, these work files kick out on accounts if customer usage is significantly higher or lower than historical average. The work files are assigned to a billing rep and they determine if high usage or low usage is accurate for this customer based off history, that determination will warrant additional investigation, if necessary, or is billed accordingly. If a meter kicks out failed hi-lo work files consecutively, a field visit is scheduled to determine meter accuracy or possible meter failure. Billing also has the "inactive meter usage" program that indicates to them if a meter is potentially stopped or defective.

b. A potential meter failure would generate an investigative order which requires a field visit. At that time the meter is removed and returned to the measurement center

for testing. If the meter tests are within limits, no billing corrections are necessary. If the meter test results are low or high, then those results are sent to revenue recovery to act on billing.

PERSON RESPONSIBLE: Tyler A. Barbare

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-011

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 24.e.2.

a. Provide the reasons that a customer's natural gas meter would be inaccessible to Duke Kentucky.

b. Explain whether Duke Kentucky notifies the Commission when it fails to test a natural gas meter in compliance with 807 KAR 5:022(4).

RESPONSE:

a. Duke defines inaccessible meters as: if a meter is inside; if a customer does not respond to a knock on the door or answers the phone when attempts are made to contact the customer; if the customer does not respond to mailed notifications of letters and/or postcards; if the home or the building is vacant; or if the customer refuses to allow access.

b. Duke provides a quarterly report that is sent to the Commission notifying them of the total number of meters tested within each quarter. If Duke Energy Kentucky fails to test a natural gas meter in compliance with 807 KAR 5:022(4) notification is sent to our Compliance group who then gives official notification to the Commission.

PERSON RESPONSIBLE: Tyler A. Barbare

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-012

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 30. The attachment only gives a description of each integrity management initiative and the dollar amount budgeted for each program. Provide an explanation of how Duke Kentucky determined the dollar amount for each integrity management initiative.

RESPONSE:

The estimated costs for Duke Energy Kentucky for these programs are based upon actual costs experienced with these programs by Duke Energy Ohio. Because the Ohio and Kentucky natural gas systems are similar in terms of age, history, and in terms of resources that would perform the integrity work, the Company believes these estimates are valid.

PERSON RESPONSIBLE: Gary J. Hebbeler

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-013

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 41, Attachment Staff DR-2-41.

a. Provide an explanation for the return on equity (ROE) of 12.00 percent in 2010, and 10.96 percent in 2014.

b. Explain why Duke Kentucky's ROE was 1.19 percent in 2011, and a negative 4.10 percent in 2012.

RESPONSE:

a. A 2010 Kentucky Supreme Court ruling resulted in the reversal of a $9M reserve related to the AMRP rider, yielding an unusually high net income and ROE. In 2014, net income related to gas was favorable due to an abnormally cold winter.

b. ROE for both 2011 and 2012 were depressed as a result of mild winters as evidenced by abnormally low heating degree days, combined with tax adjustments recorded in 2012.

PERSON RESPONSIBLE: Michael Covington

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-014

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 45. Provide the support calculations used to generate the Rate Change for each category to reach the total of $745,885.

RESPONSE:

See STAFF-DR-03-014 Attachment.

PERSON RESPONSIBLE: John R. Panizza

KYPSC CASE NO. 2018-00261

STAFF-DR-03-014 ATTACHMENT IS BEING ELECTRONICALLY FILED AND PROVIDED ON CD

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-015

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 51.

a. Provide an update to the baseload and heat sensitivity factor using a 20-year weather normalization adjustment (WNA).

b. Provide an update to the baseload and heat sensitivity factor using a 30-year weather normalization adjustment.

c. Explain how it is not inconsistent for Duke Kentucky to use a 30-year forecast in its energy forecast, but not for its proposed weather normalization model.

d. Refer to the Direct Testimony of William Don Wathen, Jr., pages 11, lines 19-20, and continuing onto page 12, line 1. Duke Kentucky states that the WNA was modeled after Atmos Energy Corporation's (Atmos) WNA; however, Atmos uses a 20-year normalization period. Provide an explanation of what portion of the WNA was patterned after Atmos, and what portion was not, and why not.

RESPONSE:

a. The updated calculations are provided in STAFF-DR-03-015 Attachment; there is practically no modification to the baseload or sensitivity factors from making this change to the weather normalization period.

b. There is no update to the results presented in STAFF-DR-02-051, which has these calculations described here.

c. Duke Energy Kentucky's normalized *weather* is always calculated based on a thirty-year normalization period. The dependent variable for weather-normalization models—heating degree days—is different from the dependent variable in the WNA models, which is energy volume. That distinguishes the models, making the two different time spans of the data appropriate.

d. It is true that Atmos uses a different number of years for calculating normal weather than does Duke Energy Kentucky. Where the WNA method is like theirs is in the structure of the models—by which I mean the dependent and independent variables—for calculating the BL and HSF factors that indicate the extent to which gas volume changes when weather conditions change. The number of monthly observations are different, but the intuitive meaning of the coefficients of both models are identical. It would also be appropriate to add the (monthly) unit of observation as a shared characteristic of both models.

PERSON RESPONSIBLE: Benjamin W. B. Passty

KYPSC CASE NO. 2018-00261

STAFF-DR-03-015 ATTACHMENT IS BEING ELECTRONICALLY FILED AND PROVIDED ON CD

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-016

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 52. Provide the revised Exhibit BWP-1.

RESPONSE:

Updated forecast volumes from our Summer 2018 forecast cycle have been added to the Revised Attachment BWP-1 attached as STAFF-DR-03-016 Attachment.

PERSON RESPONSIBLE: Benjamin W. B. Passty

KYPSC CASE NO. 2018-00261

STAFF-DR-03-016 ATTACHMENT IS BEING ELECTRONICALLY FILED AND PROVIDED ON CD

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-017

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 59.

a. Confirm that unproductive component of labor is not also included in the fringes component of base labor.

b. Provide the percentage of incentives that is related to financial goals.

RESPONSE:

a. Confirmed.

b. Refer to page 6 (non-union employees) and page 20-33 (union employees) of Confidential Attachment RHM-7(a) of the testimony of Renee H. Metzler. The tables on page 6 and 20-33 outline the percentage weight of each component of short-term incentives.

Refer to pages 7-15 of Confidential Attachment RHM-7(a) for descriptions of each component for non-union employees, and pages 20-33 for union employees. The team and individual portion of the incentive plan is set based on department and/or individual goals. Some of these goals may contain components that are financial in nature.

PERSON RESPONSIBLE: Bruce L. Sailers

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-018

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 60.

a. Listing each year separately, provide how many requests for Rate MPS service have been received over the last five years.

b. Provide how the $78.24 per hour rate was determined and what it includes.

c. Confirm that revising rate MPS to include the costs included in this response would increase the proposed Installation of Meter Pulse Equipment and Replacement of Meter Index changes to $860 and $635, respectively.

RESPONSE:

a. Rate MPS installations by year are provided below:

2014: 13	2017: 6
2015: 18	2018 (YTD): 2
2016: 4	

b. The labor rate of $78.24 / hour is calculated using the fully loaded costs and hours associated with the project id GMSREB. This project id includes resources associated with Rate MPS work as well as field testing and repair of gas meters. The hourly rate is calculated by taking the fully loaded labor costs associated with project id GMSREB divided by the total project id hours recorded.

c. Confirmed.

PERSON RESPONSIBLE: Bruce L. Sailers

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-019

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 62 e.1, and e.2. Indicate whether Duke Kentucky would be willing to include in its tariff the definition of a satisfactory payment record, and a statement that residential customers with satisfactory payment records would not be charged an additional deposit unless their classification of service changes or the customer requests that their deposit be recalculated pursuant to 807 KAR 5:006, Section 8(1)(d)3. If so, provide revised tariff sheets reflecting these items. If not, explain why not.

RESPONSE:

The Company is amenable to include the definition of a satisfactory payment record in its tariff. A revised tariff sheet, STAFF-DR-03-019 Attachment, is provided.

PERSON RESPONSIBLE: Bruce L. Sailers

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Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
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Erlanger, Kentucky 41018

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SECTION VII - DEPOSITS

1. **Deposits.**

The Company may require a minimum cash deposit or other guaranty to secure payment of bills except for customers qualifying for service reconnection pursuant to 807 KAR 5:006, Section 165, Winter Hardship Reconnection. Service may be refused or discontinued for failure to pay the requested deposit. Interest, as prescribed by KRS 278.460, will be paid annually either by refund or credit to the customer's bill. (T)

The deposit may be waived by the Company upon a customer's showing of satisfactory credit or payment history, and required residential service deposits will be returned after one (1) year if the customer has established a satisfactory payment record for that period; but commercial deposits will be retained during the entire time that the account remains active. A satisfactory payment record is defined as twelve (12) months of service without being disconnected for non-payment. If a deposit has been waived or returned and the customer fails to maintain a satisfactory payment record, a deposit may then be required. The Company may require a deposit in addition to the initial deposit if the customer's classification of service changes or if there is a substantial change in usage. Upon termination of service, the deposit, any principal amounts, and any interest earned and owing will be credited to the final bill with any remainder refunded to the customer. (T) (T)

In determining whether a deposit will be required or waived, information such as the following may be considered:

1. Previous payment history with the Company. If the customer has no previous history with the Company, statements from other utilities, banks, etc. may be presented by the customer as evidence of good credit.
2. Whether the customer has filed bankruptcy proceedings within the last seven years.
3. Whether another customer with a good payment history is willing to sign as a guarantor for an amount equal to the required deposit.

A security deposit will be required pursuant to 11 U.S.C. Section 366 in all bankruptcies where the Company is listed as a creditor.

If a deposit is held longer than 18 months, the deposit will be recalculated at the customer's request based on the customer's actual usage. If the deposit on account differs from the recalculated amount by more then $10.00 for a residential customer or 10 percent for a non-residential customer, the Company may collect any underpayment and shall refund any overpayment by check or credit to the customer's bill. No refund will be made if the customer's bill is delinquent at the time of the recalculation.

2. **All Calculated Deposits.**

Customer deposits shall be based upon actual usage of the customer at the same or similar premises for the most recent 12-month period, if such information is available. If usage information is not available, the deposit will be based on the average bills of similar customers and premises in the system. The deposit amount shall not exceed two-twelfths (2/12) of the customer's actual or estimated annual bill

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-020

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 63.

a. Refer to pages 11, 12, 18, 21, and 23 of 91. The citations to 807 KAR 5:006 on these pages are incorrect as they are a previous version of 807 KAR 5:006, which was last revised effective January 4, 2013. Provide revisions to these tariff pages reflecting the correct citations to 807 KAR 5:006.

b. Refer to page 48 of 91. Explain the reasoning for the removal of the following sentence from the tariff: "At least one day preceding the day transportation nominations are due to the interstate pipeline(s) transporting customer's gas, customer's pool operator/supplier agrees to inform Company in writing or, at the Company's discretion, verbally, and confirm in writing with seven (7) days thereafter, the quantities of gas it desires to have transported for the upcoming month, along with all other necessary information."

c. Refer to page 61 of 91. Explain the reasoning for the removal of the following language from the tariff: "The pool operator offering to purchase, sell, or trade gas supplies must provide the following information for publication on the EBB: A) the pool operator's name, B) contact person and telephone number, C) quantities of gas available for purchase, sale or trade, D) other general text trade terms."

RESPONSE:

a. See STAFF-DR-03-020(a) Attachments 1 through STAFF-DR-03-020(a) Attachment 3, STAFF-DR-03-006 Attachment, and STAFF-DR-03-019 Attachment for revised tariff sheets.

b. The removal of the referenced sentence simplifies the tariff. The collection of the information referenced in the sentence is accomplished via the Company's EBB. In addition, as needed, the information can be requested by the Company given the next sentence in the tariff which states "Customer's pool operator must agree upon request by Company to produce, in a timely manner, … any and all transportation arrangements with all interstate pipelines, intrastate pipelines, or others involved in transporting the pool's gas supplies."

c. The removal of the referenced sentence simplifies the tariff by removing unnecessary detail. A pool operator desiring to purchase, sell, or trade gas supplies has access to and can utilize the Company's EBB as referenced in the previous tariff sentence. The information required to input a trade or offer to trade is detailed within the Company's EBB and in the associated online training documentation for pool operators. The Company proposes to simplify the tariff language and remove the unnecessary detail, especially since the detailed data requirements have the potential to change as new versions of the Company's EBB are implemented or upgraded over time.

PERSON RESPONSIBLE: Bruce L. Sailers

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, Kentucky 41018

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SERVICE REGULATIONS

SECTION I - SERVICE AGREEMENTS

1. **Application for Service.**

When a prospective customer desires gas service, an oral application may be accepted by the Company. However, a written application may be required in special circumstances (e.g., the necessity of using special apparatus in providing the requested service).

2. **Customers' Right to Cancel Service Agreement or to Suspend Service.**

Except as otherwise provided in the Service Agreement, Rate Schedules or elsewhere in these Service Regulations, Customer may give Company ten days notice of desire to cancel the Service Agreement whenever he no longer requires any gas service for the purposes mentioned in said Agreement. Company will accept such notice as a cancellation of the Service Agreement upon being satisfied that Customer no longer requires any such service.

3. **Company's Right to Cancel Service Agreement or to Suspend Service.**

Company, in addition to all other legal remedies, shall terminate the Service Agreement, refuse or discontinue service to an applicant or customer, after proper notice for any of the following reasons:

(a) Default or breach of these Service Regulations, after having made a reasonable effort to obtain customer compliance.
(b) Non-payment of bills when due.
(c) Theft, fraudulent representation or concealment in relation to the use of gas.
(d) Use of gas, by the customer, in a manner detrimental to the service rendered others.
(e) Upon the basis of a lawful order of the Kentucky Public Service Commission, the State of Kentucky or any governmental subdivision thereof having jurisdiction over the premise.
(f) When a customer or applicant refuses or neglects to provide reasonable access to the premise.

When a dangerous condition is found to exist on the customer's or applicant's premises, the gas service shall be disconnected without notice, or application for service refused. The Company shall notify the customer or applicant within 24 hours of such action, in writing, of the reasons for the discontinuance or refusal of service and the corrective action to be taken by the applicant or customer before service can be restored.

If discontinuance is for non-payment of bills, the customer shall be given at least ten (10) days written notice, separate from the original bill, and cut-off shall be effected not less than twenty-seven (27) days after the mailing date of the original bill unless, prior to discontinuance, a residential customer presents to the utility a written certificate, signed by a physician, registered nurse, or public health officer, that such discontinuance will aggravate an existing illness or infirmity on the affected premises, in which case discontinuance may be effected not less

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Issued: ~~August 31~~September 29, 201~~80~~
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Issued by Amy B. Spiller~~Julie Janson~~, President

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, Kentucky 41018

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than thirty (30) days from the termination date, in writing, of state and federal programs which

SECTION I - SERVICE AGREEMENTS (Contd.)

may be available to aid in payment of bills and the office to contact for such possible assistance.

Whenever a residential customer receiving both gas and electric service has received a termination of service notice, the customer shall be given the option to pay for and continue receipt of one utility service only. The Company shall offer extended payment arrangements for the service designated by the customer. If both the gas and electric service of a residential customer have been previously discontinued for non-payment, the Company shall reconnect either service upon payment by the customer of the total amount owed on the service designated by the customer to be reconnected, except as provided in 807 KAR 5:006, section 165, Wwinter Hhardship Rreconnection. (T) (T)

4. **Connection of Service.**

Except as provided in Section 15 of the Kentucky Public Service Commission's regulations, the Company shall reconnect existing service within twenty-four (24) hours, and shall install and connect new service within seventy-two (72) hours, when the cause for discontinuance or refusal of service has been corrected and the Company's tariffed rules and Commission's regulations have been met.

5. **Change of Address of Customer.**

When Customer changes his address he should give notice thereof to Company prior to the date of change. Customer is responsible for all service supplied to the vacated premises until such notice has been received and Company has had a reasonable time, but not less than three (3) days, to discontinue service.

If Customer moves to an address at which he requires gas service for any purposes specified in his Service Agreement, and at which address Company has such service available under the same Rate Schedule, the notice is considered as Customer's request that Company transfer such service to the new address, but if Company does not have such service available at the new address the old Service Agreement is considered cancelled. If Company does have service available at the new address to which a different Rate Schedule applies, a new Service Agreement including the applicable Rate Schedule is offered to Customer. Company makes transfer of service as promptly as reasonably possible after receipt of notice.

6. **Successors and Assigns.**

The benefits and obligations of the Service Agreement shall inure to and be binding upon the successors and assigns, survivors and executors or administrators, as the case may be, of the original parties thereto, for the full term thereof; provided that no assignment hereof shall be made by Customer without first obtaining Company's written consent.

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Duke Energy Kentucky, Inc.
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SECTION II - SUPPLYING AND TAKING OF SERVICE

1. **Character of Service**.

The Company by its present franchise requirements has agreed to furnish natural gas of the kind and quality produced in the natural gas fields from which its supply is procured (subject, however, to the removal of oil and gasoline vapors); except as said natural gas may be supplemented with manufactured gas, provided, however, that the heat unit quality of the gas supplied by the Company will, at no time, be less than 800 British Thermal Units **(B.T.U.)** to the cubic foot, as furnished at the point of consumption.

At present the Company is distributing gas of approximately 10830 B.T.U. per cubic foot, at a pressure of 4 ounces, subject to tolerance allowed by the Kentucky Public Service Commission. (T)

2. **Supplying of Service.**

Service is supplied only under and pursuant to these Service Regulations and any modifications or additions hereto lawfully made, and such applicable Rate Schedules and Riders as may from time to time be lawfully fixed. Service is supplied under a given Rate Schedule only at such points of delivery as are adjacent to facilities of Company adequate and suitable, for the service desired; otherwise, special agreements between Customer and Company may be required.

Notwithstanding the provisions of 807 KAR 5:006, Section 16~~5~~, Winter Hardship Reconnection to the contrary, service will not be supplied to any premises if at the time of application for service the applicant is indebted to Company for service previously supplied at the same or other premises until payment of such indebtedness shall have been made. Unpaid balances of previously rendered Final Bills may be transferred to any account for which the customer has responsibility and may be included on initial or subsequent bills for the account to which the transfer was made. Such transferred Final Bills, if unpaid, will be a part of the past due balance of the account to which they are transferred and will be subject to the Company's collection and disconnection procedures. Final Bills may be transferred regardless of whether they are for combination gas and electric or gas only or electric only charges. The Company shall have the right to transfer Final Bills between residential and commercial with residential characteristics (e.g., service supplying common use facilities of any apartment building) revenue classifications. (T)

Service will not be supplied or continued to any premises if at the time of application for service the applicant is merely acting as an agent of a present or former customer who is indebted to the Company for service previously supplied at the same or other premises until payment of such indebtedness shall have been made. Service will not be supplied where the applicant is a partnership or corporation whose general partner or controlling stockholder is a present or former customer who is indebted to the Company for service previously supplied at the same premises until payment of such indebtedness shall have been made.

3. **Information Relative to Service**.

Information relative to the service that will be supplied at a given location should be obtained from Company. Company will not be responsible for mistakes of any kind resulting from information given orally or over the telephone. Such information must be confirmed in writing.

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SECTION II - SUPPLYING AND TAKING OF SERVICE (Contd.)

4. **Continuity of Service.**

The Company shall make reasonable provision to supply satisfactory and continuous service, but does not guarantee a constant or uninterrupted supply of gas and shall not be liable for any damage or claim of damage attributable to any interruption caused by unavoidable accident or casualty, extraordinary action of the elements, action of any governmental authority, litigation, or by any cause which the Company could not have reasonably foreseen and made provision against.

5. **Suspension of Service for Repairs and Changes.**

When necessary to make repairs to or changes in Company's plant, transmission or distribution system, or other property, Company may, without incurring any liability therefore, suspend service for such periods as may be reasonably necessary, and in such manner as not to inconvenience Customer unnecessarily.

6. **Use of Service.**

Service is supplied directly to Customer through Company's own meter and is to be used by Customer only for the purposes specified in and in accordance with the provisions of the Service Agreement and applicable Rate Schedule. Service is for Customer's use only and under no circumstances may Customer or Customer's agent or any other individual, association or corporation install meters for the purpose of reselling ~~or otherwise disposing of~~ service supplied Customer to any other person, firm, or corporation on Customer's premises or for use on any other premises. This does not preclude Customer from allocating Company's billing to Customer to any other person, firm, or corporation provided the sum of such allocations does not exceed Company's billing. (T) (T) (T) (T)

Customer will not install pipes under a street, alley, lane, court or avenue or other public or private space in order to obtain service for adjacent property through one meter even though such adjacent property be owned by Customer. Consent may be given when such adjacent properties are operated as one integral unit under the same name and for carrying on parts of the same business.

In case of unauthorized remetering, sale, extension or other disposition of service, Company may immediately discontinue the supplying of service to Customer until such unauthorized act is discontinued and full payment is made for all service supplied or used, billed on proper classification and Rate Schedule, and reimbursement in full made to Company for all extra expenses incurred, including expenses for clerical work, testing and inspections.

7. **Customer's Responsibility.**

Customer assumes all responsibility on Customer's side of the point of delivery (outlet side of the meter) for the service supplied or taken, as well as for the installation, appliances and apparatus used in connection therewith, and will save Company harmless from and against all claims for injury or damage to persons or property occasioned by or in any way resulting from such service or the use thereof on Customer's side of the point of delivery.

SECTION II - SUPPLYING AND TAKING OF SERVICE (Contd.)

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The customer's house lines, fittings, valve connections and appliance venting shall be installed with materials and workmanship which meet the reasonable requirements of the Company and shall be subject to inspection and test by the Company. The Company shall have no obligation to establish service until after such inspection and tests demonstrate compliance with such requirements of the Company with respect to the facilities as they exist at the time of the test.

8. **Right-of-Way.**

Customer is responsible for all conveyances to Company for all right-of-way satisfactory to it across the property owned or controlled by Customer for Company's mains or extensions thereof necessary or incidental to the supplying of service to Customer.

9. **Access to Premises.**

The properly authorized agents of the Company shall at all reasonable hours have free access to the premises for the purpose of inspecting the Customer's installation and of examining, repairing or removing the Company's meters, or other property, reading of meters and all other purposes incident to the supplying of service, and for such purpose the Customer authorizes and requests his landlord, if any, to permit such access to the premises.

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Cancelling and Superseding
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Page 1 of 1

SECTION V - METERING

1. **Installation of Meters.**

Gas will be measured by a meter or meters to be installed by Company upon Customer's premises at a point most convenient for Company's service, and upon the registration of said meters all bills will be calculated.

2. **Meter Tests**.

All meter tests shall be made in accordance with rules issued by the Kentucky Public Service Commission.

Upon written request by customer, the Company shall perform a meter test if the request is not made more frequently than once a year.

3. **Monitoring of Customer Usage.**

Each month the Company will monitor the usage of each customer according to the following procedure:

1. The customer's monthly usage is monitored through a "hi-lo" review process that will incorporate customer past usage and other related information to provide an expected level of usage. ~~An estimating factor is utilized to provide an expected level of usage. The estimating factor considers the customer's past usage and current variables, such as weather.~~ (T) (T) (D) (D)

~~2. The actual usage is compared to an estimate based on the previous month's usage, an estimate based on the usage from the same month, one year previous, and an estimate based on the usage from the same month, two years previous.~~ (D) (D) (D)

2~~3~~. If there is a substantial difference between the actual and estimated usages, the account will be reviewed manually to determine the appropriate usage level. (T)

3~~4~~. Where the difference is not otherwise explained, the Company may obtain a special meter read to verify the accuracy of the previous usage. (T)

4~~5~~. Where the difference is still unexplainable after taking the special meter read, the Company may test the customer's meter to determine its accuracy. (T)

5~~6~~. The Company will notify the customer of the investigation, its findings, and any refund or back billing to be made, in accordance with 807 KAR 5:006, Section 1~~0~~ (4) and (5). (T) (T)

In addition to the monthly monitoring, the Company will immediately investigate the usage deviations brought to its attention as a result of its on-going meter reading or billing processes or customer inquiry.

Issued by authority of an Order of the Kentucky Public Service Commission dated ~~December 29~~, 201 ~~09~~ in Case No. 201~~809~~-0026~~102~~
Issued: ~~August 31~~September ~~29~~, 201~~80~~
Effective: October 1~~September 30~~, 201~~80~~

Issued by Amy B. Spiller~~Julie Janson~~, President

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-021

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 87.

a. Explain in detail how the monthly NYMEX closing prices are used in Duke Kentucky's Expected Gas Cost (EGC) calculation.

b. Explain how filing a quarterly Gas Cost Adjustment (GCA) would impact Duke Kentucky's cash flow.

RESPONSE:

a. The NYMEX closing price for the prompt month as of a date typically three business days prior to filing is used to determine the Gas Marketers Commodity Rate component of the EGC calculation. The NYMEX price represents the price per dth at Henry Hub in Louisiana. Therefore, it is adjusted for basis, fuel and commodity based on costs for transportation on Columbia Gulf Transmission and KO Transmission to get a price at Duke Kentucky's city gate. This is further adjusted for Duke Kentucky's "lost and unaccounted for" (LAUF) percent and the 12-month weighted average btu factor to get a price per mcf at the customer's burnertip.

The commodity cost component of the EGC is then determined by calculating the weighted average of the Gas Marketers Commodity Rate, the Gas Storage

Commodity Rate and the Propane Commodity Rate. The weightings are based on forecasted purchases, withdrawals and propane utilization.

Since the other components of the EGC are demand charges, which remain relatively constant, any volatility in the EGC is driven by volatility in the underlying NYMEX closing price used to calculate the Commodity Cost Component. The Gas Marketers component also makes up the largest component of the EGC, representing 60-80% of the total.

b. Depending on which direction the market moves between a quarterly filed GCA and a monthly filed one, the cash flow would either increase or decrease. In either case, the inflow of cash from the GCA revenue would more closely match the outflow from purchasing gas under a monthly filed GCA since a monthly filed GCA results in a GCA that is closer to a market price and reduces the magnitude of the Actual Adjustments.

PERSON RESPONSIBLE: Jeff L. Kern

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-022

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request, Item 87, Attachment Staff DR-2-87.

a. Provide documentation to support how Duke Kentucky obtained the Monthly NYMEX price inputs listed.

b. Provide documentation to support how Duke Kentucky calculated the Quarterly NYMEX price inputs listed.

c. Explain what factors caused the high NYMEX closing price for the Month of January 2017.

d. Excluding the January 2017 NYMEX monthly closing price, explain whether Duke Kentucky contends that the difference between the quarterly and monthly price remains too volatile for a shift to a quarterly filing of its GCA.

RESPONSE:

a. The Monthly NYMEX prices are the prices used to calculate the EGC for each month, representing the closing price three days prior to filing the GCA. Please see STAFF-DR-03-022(a) Attachment.

b. The Quarterly NYMEX prices are the averages of the first three months closing prices three days prior to when a quarterly GCA would have been filed. Please see STAFF-DR-022(b) Attachment.

c. As is often the case with natural gas prices, the increase in demand due to cold weather is the most likely cause of the high NYMEX closing price on December 9, 2016 for gas to be delivered in January 2017. Please see the text on page 2 of 24 in STAFF-DR-03-022(a) Attachment.

d. Although January 2017 resulted in the largest variance between the monthly and quarterly NYMEX prices, there were other months during the 2-year period that had variances over $0.30 per dth. Duke Kentucky admits that volatility has decreased since the inception of the monthly GCA in 2003, but there is still a fair amount of volatility in the market. Shifting back to a quarterly GCA would lead to larger over and under collections, which would lead to larger Actual Adjustments and a GCA that further deviates from the true market price of gas.

PERSON RESPONSIBLE: Jeff L. Kern

NATURAL GAS FUTURES

NYMEX December gas settles at $2.816/MMBtu

The NYMEX December natural gas futures contract rose Monday on the eve of a controversial US presidential election and the heels of a bearish week's trading, clawing back 4.9 cents to settle at $2.816/MMBtu. It traded in a range of $2.781/MMBtu and $2.875/MMBtu during the session.

Support came from the usual bump in US demand coming out of the weekend plus a cooler temperature outlook for the US Northeast a few weeks out that could boost region consumption.

US demand is expected to rise 1.5 Bcf day on day to 66.2 Bcf Monday before settling a bit lower on Tuesday at 65.7 Bcf, according to Platts Analytics' Bentek Energy unit. A few weeks out, however, that demand is predicted to rise, averaging 74.4 Bcf.

During this same time frame, forecasts for dry production are slated to remain near 71.3 Bcf, similar to where it has been since November 4. If the models hold true, this will flip the supply/demand gap and US demand will outpace production, according to Platts Analytics forecasts.

Cooler-than-normal temperatures in US National Weather Service forecasts for six to 10 days out are providing a boost to demand. According to the weather service's latest prediction, the entire Northeastern Seaboard can expect cooler temperatures, while Appalachia will see normal temperatures. The western two-thirds of the US can expect higher-than-normal temperatures at least through most of November, the weather service data show.

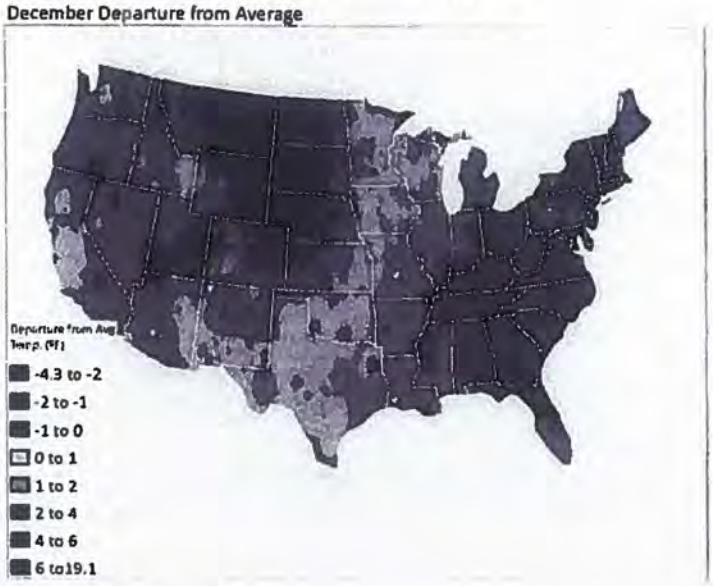
Although not ready to go fully "bullish on weather," Stephen Schork, principal with the Schork Report, said he believes the contract to be at the bottom of a trough and that it could began to realize an upswing as the weather turns cooler. He added that he "feels like we are in for a technical rebound as we are getting a glimpse of cold weather."

NYMEX HENRY HUB GAS FUTURES CONTRACT, NOV 7

	Settlement	High	Low	+/-	Volume
Dec 2016	2.816 ✓	2.875	2.781	0.049	120816
Jan 2017	2.978	3.027	2.940	0.041	60900
Feb 2017	3.011	3.055	2.977	0.044	18134
Mar 2017	3.000	3.039	2.965	0.045	28154
Apr 2017	2.936	2.955	2.901	0.044	31711
May 2017	2.944	2.955	2.912	0.046	16190
Jun 2017	2.983	2.994	2.950	0.045	9599
Jul 2017	3.021	3.028	2.987	0.045	7367
Aug 2017	3.025	3.033	2.994	0.046	6842
Sep 2017	3.014	3.023	2.985	0.049	8551
Oct 2017	3.033	3.042	2.999	0.050	18332
Nov 2017	3.082	3.088	3.050	0.051	5379
Dec 2017	3.233	3.241	3.203	0.051	3338
Jan 2018	3.321	3.334	3.295	0.047	4342
Feb 2018	3.296	3.296	3.274	0.048	455
Mar 2018	3.232	3.245	3.209	0.047	1671
Apr 2018	2.819	2.836	2.800	0.031	888
May 2018	2.797	2.821	2.787	0.029	493
Jun 2018	2.814	2.825	2.814	0.029	246
Jul 2018	2.837	2.845	2.837	0.029	84
Aug 2018	2.837	2.838	2.820	0.029	52
Sep 2018	2.826	2.826	2.825	0.031	12
Oct 2018	2.851	2.851	2.851	0.031	18
Nov 2018	2.904	2.904	2.899	0.030	18
Dec 2018	3.038	3.040	3.034	0.029	32
Jan 2019	3.140	3.140	3.140	0.029	18
Feb 2019	3.112	3.112	3.112	0.029	0
Mar 2019	3.060	3.060	3.060	0.029	25
Apr 2019	2.755	2.755	2.755	0.024	75
May 2019	2.748	2.748	2.748	0.024	0
Jun 2019	2.782	2.782	2.782	0.024	0
Jul 2019	2.819	2.819	2.819	0.024	0
Aug 2019	2.836	2.836	2.836	0.024	0
Sep 2019	2.833	2.833	2.833	0.024	0
Oct 2019	2.865	2.748	2.748	0.024	65
Nov 2019	2.923	2.923	2.923	0.024	0

Contract data for Friday
Volume of contracts traded: 343,810
Front-months open interest:
Dec, 184,678; Jan, 228,161; Feb, 67,481
Total open interest: 1,166,479
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

MONTH-AHEAD TEMPERATURE FORECAST MAP

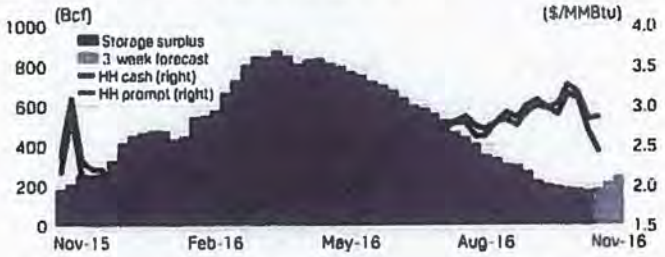


Source: Platts, Custom Weather

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

BENTEK US GAS STORAGE SURPLUS VS. ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX January gas settles at $3.746/MMBtu

The NYMEX January natural gas futures contract surged in late Friday trading to settle at $3.746/MMBtu, up 5.1 cents, as total US demand is expected to stay above 100 Bcf/d into the weekend, Platts Analytics' Bentek Energy data showed.

After testing the $3.75/MMBtu level, Friday's settlement price was the highest since December 12, 2014.

Historically, the 100 Bcf/d demand level is not a frequent occurrence during December, with demand surpassing that level only 14 times in the last five Decembers, with 12 occurring in the record setting cold of 2013.

Platts Analytics projections are calling for levels to be sustained around the 102 Bcf/d level throughout the next seven days, and even popping into the 109.7 Bcf/d range into the latter half of December, putting the current month more in line with December 2013 than more-recent Decembers.

These projections dovetail with the National Weather Service's six- to 10-day outlook, projecting below-average temperatures over a majority of the country, with the highest probability over the demand-driving markets of Chicago, Boston and New York City.

Data from Platts Analytics shows that the upcoming demand surge could quickly eliminate the remaining [Midwest] storage surplus before the year is up if demand levels average, as projected, nearly 9 Bcf/d above the five-year average.

Analysts at Tudor, Pickering, Holt & Co. suggested Friday that upcoming cold weather could draw down gas-storage levels after a recent bout of above-average temperatures widened the year-on-year storage surplus in the latest report.

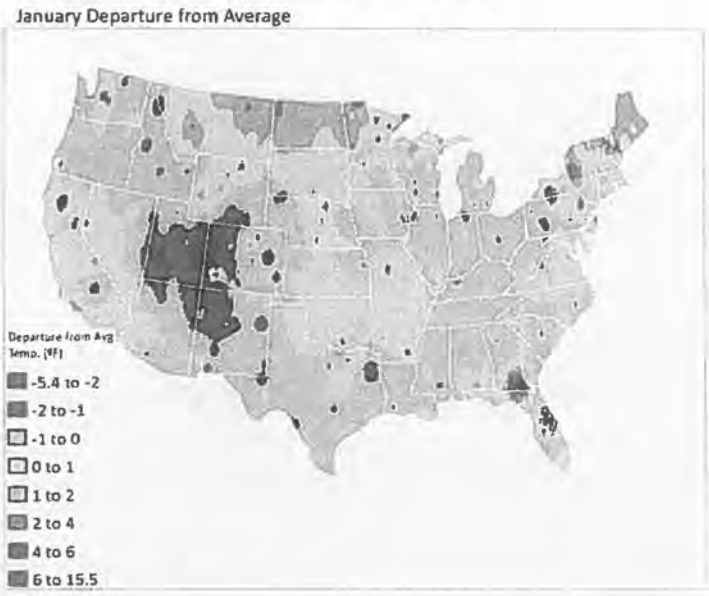
In that report, US Energy Information Administration estimated storage stocks at 3.953 Tcf, 51 Bcf above 2015 and 254 Bcf above the five-year average.

NYMEX HENRY HUB GAS FUTURES CONTRACT, DEC 9

	Settlement	High	Low	+/-	Volume
Jan 2017	3.746	3.777	3.661	0.051	91951
Feb 2017	3.741	3.758	3.655	0.065	24473
Mar 2017	3.691	3.703	3.610	0.060	10466
Apr 2017	3.453	3.500	3.408	0.019	5831
May 2017	3.404	3.427	3.364	0.014	2660
Jun 2017	3.418	3.445	3.379	0.013	1046
Jul 2017	3.441	3.462	3.405	0.011	487
Aug 2017	3.430	3.451	3.390	0.010	1018
Sep 2017	3.408	3.450	3.364	0.012	365
Oct 2017	3.427	3.455	3.382	0.013	1454
Nov 2017	3.458	3.498	3.417	0.011	278
Dec 2017	3.576	3.584	3.535	0.009	213
Jan 2018	3.660	3.668	3.618	0.009	430
Feb 2018	3.599	3.615	3.556	0.010	71
Mar 2018	3.492	3.494	3.456	0.012	58
Apr 2018	2.931	2.931	2.900	0.007	306
May 2018	2.853	2.853	2.832	0.001	24
Jun 2018	2.866	2.866	2.854	0.002	4
Jul 2018	2.883	2.883	2.871	0.003	2
Aug 2018	2.882	2.882	2.855	0.004	4
Sep 2018	2.866	2.872	2.866	0.005	0
Oct 2018	2.889	2.889	2.860	0.003	110
Nov 2018	2.939	2.939	2.910	0.002	2
Dec 2018	3.069	3.069	3.040	0.003	2
Jan 2019	3.172	3.172	3.172	0.003	0
Feb 2019	3.134	3.134	3.134	0.003	0
Mar 2019	3.077	3.077	3.077	0.003	0
Apr 2019	2.742	2.742	2.742	0.008	0
May 2019	2.718	2.718	2.690	0.008	1
Jun 2019	2.748	2.748	2.748	0.008	0
Jul 2019	2.782	2.782	2.782	0.008	0
Aug 2019	2.796	2.796	2.796	0.008	0
Sep 2019	2.795	2.795	2.795	0.008	0
Oct 2019	2.823	2.823	2.823	0.006	0
Nov 2019	2.886	2.748	2.748	0.005	0
Dec 2019	3.021	3.021	3.021	0.004	0

Contract data for Thursday
Volume of contracts traded: 483,823
Front-months open interest:
Jan, 203,498; Feb, 107,052; Mar, 217,254
Total open interest: 943,756
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

MONTH-AHEAD TEMPERATURE FORECAST MAP

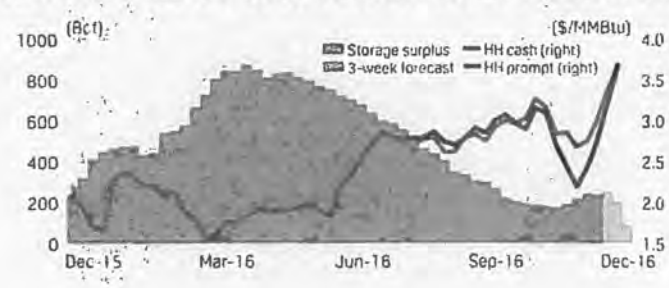


Source: Platts, Custom Weather

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

BENTEK US GAS STORAGE SURPLUS VS. ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX February gas settles at $3.103/MMBtu

The NYMEX February natural gas futures contract settled 18.2 cents lower Monday at $3.103/MMBtu on a warmer-than-normal weather outlook.

According to the National Weather Service, the eight- to 14-day outlook forecasts above-average temperatures from coast to coast. High demand centers of the East Coast and Upper Midwest in particular are expected to be the warmest, while temperatures in the Gulf Coast and Southwest are forecast to be slightly above normal.

Only a pocket of the Pacific Northwest is expected to see temperatures around seasonal norms over the same period.

Demand fell quite a bit over the weekend, averaging 127.3 Bcf/d over the weekend and falling to 113.2 Bcf/d for Monday's gas day. A drop in residential/commercial demand led the way, falling 14.1 Bcf since Friday to 55.2 for Monday, 3.8 Bcf below the previous six-day average.

Power burn also fell, coming in at 25.3 Bcf/d after averaging 28.7 Bcf/d over the weekend. Looking ahead, demand is expected to continue to weaken on warmer weather, putting the eight- to 14-day forecast at 94.3 Bcf/d, according to data from Platts Analytics' Bentek Energy.

Over the same time period, dry production is set to remain relatively flat, with an increase of 0.1 Bcf expected to 70.2 Bcf/d, data showed. Teetering around 70 Bcf/d, production over the last seven days has yet to break 71 Bcf/d.

Prices last week closed just above major support after expanding lows and testing the 50-day moving average, according to a note from EcomEnergy. While the declines may continue, the price action is defining a new range for near-term trade, the note added.

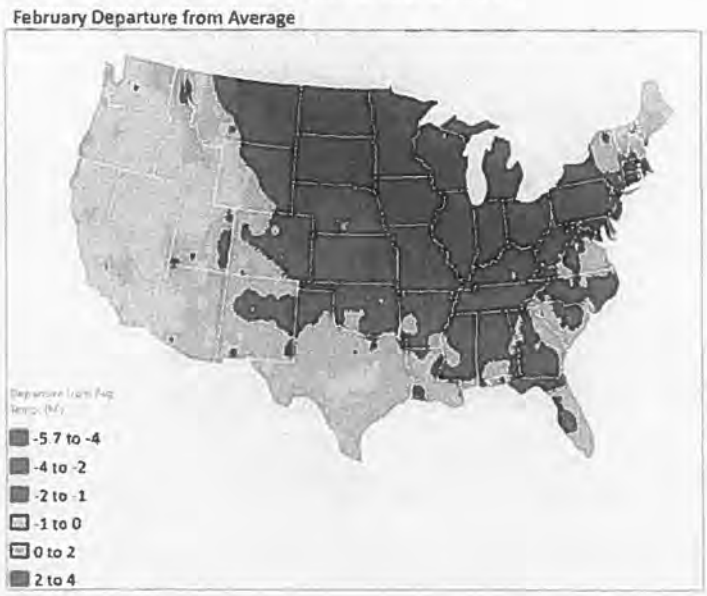
The February gas contract has traded Monday between $3.100/MMBtu and $3.275/MMBtu.

NYMEX HENRY HUB GAS FUTURES CONTRACT, JAN 9

	Settlement	High	Low	+/-	Volume
Feb 2017	3.103	3.275	3.098	-0.182	71342
Mar 2017	3.113	3.283	3.110	-0.175	27432
Apr 2017	3.106	3.247	3.103	-0.150	8196
May 2017	3.114	3.255	3.110	-0.147	3265
Jun 2017	3.153	3.284	3.150	-0.142	2481
Jul 2017	3.191	3.318	3.187	-0.136	1612
Aug 2017	3.195	3.311	3.192	-0.131	828
Sep 2017	3.180	3.297	3.176	-0.128	318
Oct 2017	3.199	3.318	3.195	-0.127	3466
Nov 2017	3.248	3.360	3.243	-0.123	254
Dec 2017	3.368	3.455	3.366	-0.117	255
Jan 2018	3.459	3.565	3.455	-0.113	551
Feb 2018	3.423	3.504	3.417	-0.100	53
Mar 2018	3.337	3.410	3.328	-0.089	377
Apr 2018	2.851	2.911	2.843	-0.060	812
May 2018	2.806	2.834	2.799	-0.041	131
Jun 2018	2.828	2.846	2.822	-0.038	142
Jul 2018	2.853	2.861	2.845	-0.034	19
Aug 2018	2.849	2.857	2.849	-0.033	3
Sep 2018	2.829	2.838	2.825	-0.031	3
Oct 2018	2.847	2.857	2.842	-0.030	27
Nov 2018	2.897	2.910	2.894	-0.028	1
Dec 2018	3.035	3.050	3.030	-0.020	0
Jan 2019	3.140	3.153	3.140	-0.020	0
Feb 2019	3.107	3.118	3.107	-0.019	6
Mar 2019	3.055	3.055	3.055	-0.019	0
Apr 2019	2.720	2.720	2.720	-0.014	0
May 2019	2.692	2.710	2.692	-0.012	2
Jun 2019	2.720	2.720	2.720	-0.012	0
Jul 2019	2.751	2.751	2.751	-0.012	0
Aug 2019	2.764	2.764	2.764	-0.012	0
Sep 2019	2.762	2.762	2.762	-0.012	0
Oct 2019	2.789	2.789	2.789	-0.012	0
Nov 2019	2.855	2.855	2.855	-0.012	0
Dec 2019	2.990	2.751	2.751	-0.012	0
Jan 2020	3.105	3.120	3.105	-0.012	7

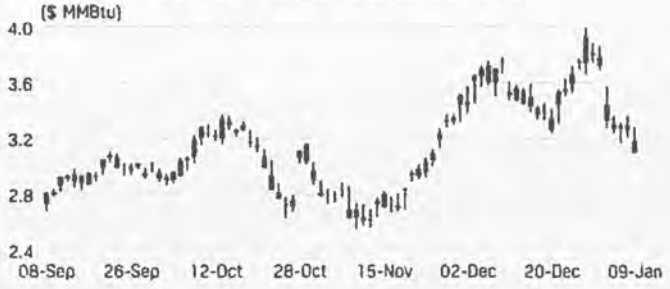
Contract data for Friday
Volume of contracts traded: 440,301
Front-months open interest:
Feb, 173,610; Mar, 273,365; Apr, 110,743
Total open interest: 943,756
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

MONTH-AHEAD TEMPERATURE FORECAST MAP



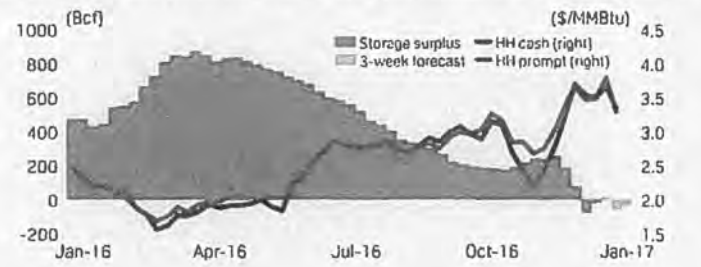
Source: Platts, Custom Weather

NYMEX PROMPT MONTH FUTURES CONTINUATION



Source: Platts

BENTEK US GAS STORAGE SURPLUS VS. ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX March gas settles at $3.130/MMBtu

The NYMEX March natural gas futures contract settled 8 cents higher at $3.130/MMBtu on Tuesday, on the heels of a slide that saw the prompt month shed nearly 13 cents across two trading days.

The March contract had given up a combined 13.7 cents in trading Friday and Monday following the US Energy Information Administration's bearish storage report released Thursday.

US natural gas in storage fell 87 Bcf to 2.711 Tcf in the week ended January 27, according to the EIA, the smallest withdrawal for January since an 86-Bcf draw for the week ended January 22, 2010.

"We continue to anticipate smaller-than-average storage withdrawals over the next few weeks," Tim Evans of Citi Futures said in a note.

"Thursday's storage report for the week ended February 3 may interrupt the larger bearish trend, with the early consensus running similar to our own forecast for 160 Bcf in net withdrawals, exceeding the relatively modest 138 Bcf five-year average for the date," Evans said.

Platts Analytics' Bentek Energy projects total US demand to average around 88.5 Bcf/d over the next two weeks, up about 7 Bcf/d from Tuesday.

Production continues to struggle to gain traction and is expected to stay flat at about 76 Bcf/d over the same period.

The National Weather Service's eight- to 14-day outlook lends additional support to Platts Analytics' demand uptick expectation, with an increasingly high probability for temperatures in New England to be below normal, while the rest of the country is forecast to be slightly above average. This marks a slight cooling down from the six- to 10-day forecast which has the entire country well above normal.

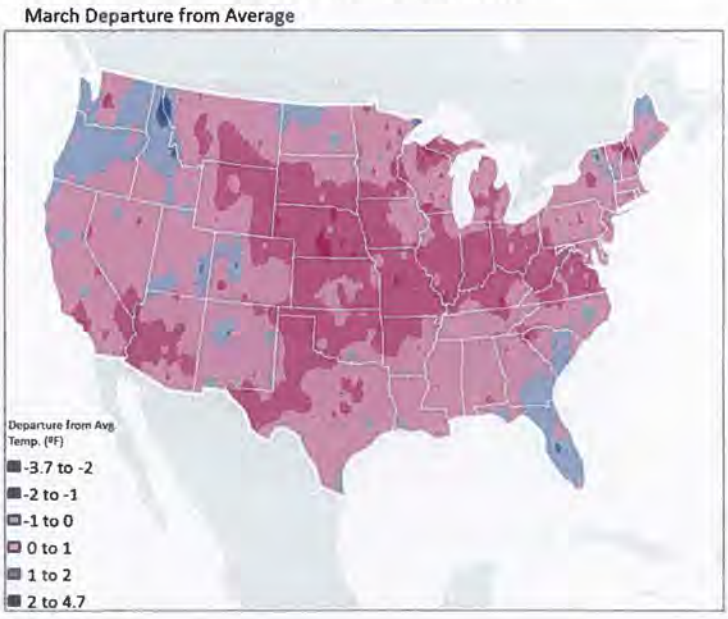
The contract traded in a range of $3.051/MMBtu and $3.156/MMBtu.

NYMEX HENRY HUB GAS FUTURES CONTRACT, FEB 7

	Settlement	High	Low	+/-	Volume
Mar 2017	3.130	3.156	3.051	0.080	59745
Apr 2017	3.192	3.218	3.114	0.075	13232
May 2017	3.246	3.266	3.171	0.077	4098
Jun 2017	3.299	3.320	3.222	0.075	2940
Jul 2017	3.347	3.366	3.283	0.076	2471
Aug 2017	3.354	3.369	3.287	0.076	302
Sep 2017	3.337	3.344	3.281	0.078	384
Oct 2017	3.358	3.370	3.280	0.078	1910
Nov 2017	3.414	3.428	3.364	0.074	551
Dec 2017	3.547	3.558	3.486	0.070	282
Jan 2018	3.637	3.645	3.587	0.069	775
Feb 2018	3.608	3.614	3.582	0.066	153
Mar 2018	3.525	3.525	3.492	0.067	519
Apr 2018	2.964	2.964	2.944	0.033	502
May 2018	2.910	2.910	2.892	0.030	94
Jun 2018	2.925	2.925	2.913	0.029	155
Jul 2018	2.945	2.945	2.929	0.028	88
Aug 2018	2.941	2.941	2.929	0.027	99
Sep 2018	2.918	2.918	2.906	0.027	76
Oct 2018	2.934	2.934	2.917	0.027	103
Nov 2018	2.978	2.980	2.953	0.026	39
Dec 2018	3.110	3.110	3.100	0.022	2
Jan 2019	3.216	3.216	3.209	0.022	0
Feb 2019	3.191	3.191	3.191	0.022	0
Mar 2019	3.136	3.136	3.136	0.022	0
Apr 2019	2.758	2.758	2.758	0.022	0
May 2019	2.719	2.719	2.712	0.022	1
Jun 2019	2.743	2.743	2.743	0.022	0
Jul 2019	2.770	2.770	2.770	0.022	0
Aug 2019	2.781	2.781	2.781	0.022	0
Sep 2019	2.777	2.777	2.777	0.023	0
Oct 2019	2.802	2.802	2.802	0.023	0
Nov 2019	2.867	2.867	2.867	0.023	0
Dec 2019	3.004	3.004	3.004	0.022	0
Jan 2020	3.119	2.781	2.781	0.022	1
Feb 2020	3.089	3.089	3.089	0.025	0

Contract data for Monday
Volume of contracts traded: 354,388
Front-months open interest:
Mar, 256,706; Apr, 123,488; May, 122,276
Total open interest: 943,756
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

MONTH-AHEAD TEMPERATURE FORECAST MAP

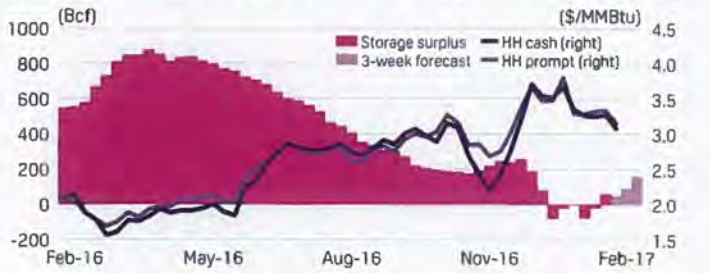


Source: Platts, Custom Weather

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

BENTEK US GAS STORAGE SURPLUS VS. ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX April gas settles down at $2.824/MMBtu

The NYMEX April natural gas futures contract fell Tuesday, ceding Monday's increase as a cold weather system continues to move across the top part of the US toward the East Coast, leaving a majority of the country with above-average temperatures.

Downward pressure was also felt by lagging demand compared with last year.

The April contract settled 7.7 cents down at $2.824/MMBtu and ranged between $2.815/MMBtu and $2.890/MMBtu Tuesday.

Pessimism has re-entered the market after digesting the past few sessions, which saw average daily gains of 4 cents since April became the front-month contract, S&P Global Platts historical pricing data showed.

The softness comes despite models from Platts Analytics' Bentek Energy indicating that US demand will increase to 79.4 Bcf over the next seven days. However, this small increase in demand is juxtaposed with year-to-date data that showed US demand is 8.5 Bcf weaker compared with this time in 2016.

Additionally, the bump up to 79.4 Bcf is still under the prior six-day average of 81.38 Bcf.

"With only three weeks left in winter, the focus has shifted to the refill season that runs through the end of October," analysts at EnergyGPS said in an emailed commentary. "Any changes to the daily supply/demand balances will land squarely on the season ending inventory estimate."

The latest forecast from the US National Weather Service for the six- to 10-day period shows a cold front heading east, encompassing the top third of the continental US, with the highest likelihood of below-average temperatures centered on the Northeast and just west of the Great Lakes.

In eight to 14 days, the pattern shifts and warmer air begins to infiltrate north to once again cover a majority of the continental US.

NYMEX HENRY HUB GAS FUTURES CONTRACT, MAR 7

	Settlement	High	Low	+/-	Volume
Apr 2017	2.824	2.890	2.815	-0.077	59570
May 2017	2.921	2.972	2.909	-0.063	10977
Jun 2017	3.008	3.044	2.992	-0.048	2547
Jul 2017	3.081	3.108	3.065	-0.038	1120
Aug 2017	3.110	3.141	3.099	-0.033	763
Sep 2017	3.101	3.127	3.087	-0.031	861
Oct 2017	3.121	3.153	3.107	-0.031	6997
Nov 2017	3.185	3.214	3.173	-0.031	269
Dec 2017	3.322	3.354	3.313	-0.030	197
Jan 2018	3.412	3.441	3.400	-0.028	1056
Feb 2018	3.384	3.415	3.375	-0.029	110
Mar 2018	3.302	3.338	3.296	-0.027	255
Apr 2018	2.843	2.870	2.832	-0.017	945
May 2018	2.797	2.830	2.789	-0.016	107
Jun 2018	2.820	2.847	2.814	-0.015	66
Jul 2018	2.848	2.875	2.846	-0.014	4
Aug 2018	2.857	2.888	2.855	-0.014	8
Sep 2018	2.837	2.872	2.836	-0.014	9
Oct 2018	2.854	2.891	2.847	-0.013	84
Nov 2018	2.906	2.914	2.903	-0.011	25
Dec 2018	3.043	3.061	3.043	-0.010	8
Jan 2019	3.150	3.168	3.141	-0.009	12
Feb 2019	3.137	3.155	3.137	-0.009	1
Mar 2019	3.082	3.095	3.082	-0.010	1
Apr 2019	2.724	2.724	2.724	-0.006	0
May 2019	2.703	2.703	2.695	-0.004	1
Jun 2019	2.731	2.731	2.731	-0.002	0
Jul 2019	2.761	2.761	2.761	0.000	0
Aug 2019	2.773	2.773	2.773	0.000	0
Sep 2019	2.768	2.768	2.768	0.000	0
Oct 2019	2.793	2.830	2.793	0.000	35
Nov 2019	2.854	2.854	2.854	0.000	0
Dec 2019	2.991	2.991	2.991	0.000	0
Jan 2020	3.105	3.105	3.105	0.000	0
Feb 2020	3.079	2.768	2.768	0.000	0
Mar 2020	3.020	3.020	3.020	0.000	0

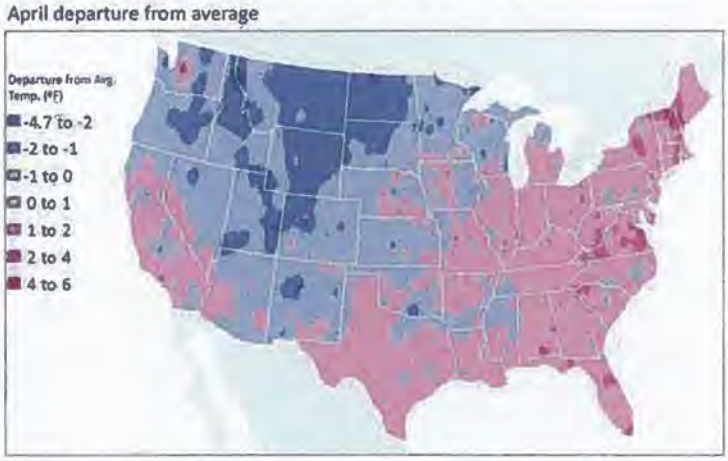
Contract data for Monday
Volume of contracts traded: 347,523
Front-months open interest:
Apr, 257,878; May, 226,350; Jun, 104,868
Total open interest: 1,364,391
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

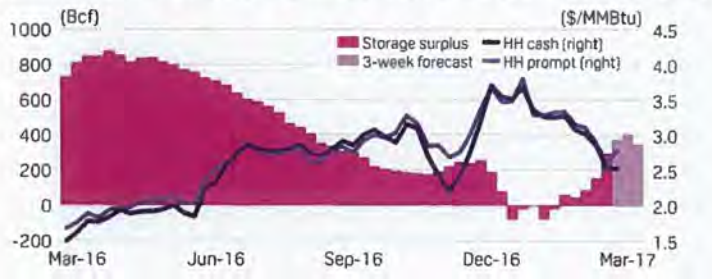
MONTH-AHEAD TEMPERATURE FORECAST MAP

April departure from average



Source: Platts, Custom Weather

BENTEK US GAS STORAGE SURPLUS VS. ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX May gas settles at $3.261/MMBtu

The NYMEX May natural gas futures contract settled at $3.261/MMBtu Friday, down 7 cents and dropping below key resistance of $3.266/MMBtu as markets squared books ahead of the weekend and priced in near-term warmer weather expectations.

The movement kept the contract at a 2.2% gain since opening as the prompt month.

The most recent National Weather Service forecasts show a greater chance of above-average temperatures across the eastern two-thirds of the continental US through April 20. While, during summer months, these weather expectations would signal bullish expectations for power burn, this early in April, above-average temperature expectations diminish traders' hopes for late-winter heating demand.

April-to-date residential/commercial demand, a proxy for heating demand, has averaged 24.2 Bcf/d, 3 Bcf/d lower year on year, Platts Analytics data shows, and will remain roughly 2 Bcf/d below year-ago levels through April 20.

This, in turn, has fueled market concerns that the current 265 Bcf storage overhang compared with the five-year average will widen in the coming weeks. "We are seeing some profit-taking in today's session, but there is some investor concern because we still have record volumes at this point," Daniel Flynn, energy analyst with the Price Futures Group, said Friday.

Looking forward, the market can expect a lot of pendulum action but will require more bullish weather forecasts to really drive the market, Flynn said.

With Platts Analytics projecting that power burn levels will remain around 21 Bcf/d through April 20 compared with year-ago levels of more than 24 Bcf/d, near-term fundamentals point toward an extension of the current supply overhang, effectively weighing on gas futures that have seen notable upside recently.

NYMEX HENRY HUB GAS FUTURES CONTRACT, APR 7

	Settlement	High	Low	+/-	Volume
May 2017	3.261	3.340	3.254	-0.070	57704
Jun 2017	3.331	3.413	3.326	-0.070	9600
Jul 2017	3.402	3.478	3.399	-0.068	4189
Aug 2017	3.425	3.499	3.423	-0.066	723
Sep 2017	3.411	3.473	3.407	-0.064	1296
Oct 2017	3.423	3.484	3.419	-0.063	1692
Nov 2017	3.470	3.516	3.466	-0.061	257
Dec 2017	3.590	3.637	3.583	-0.057	511
Jan 2018	3.660	3.708	3.653	-0.055	533
Feb 2018	3.619	3.657	3.614	-0.052	546
Mar 2018	3.521	3.557	3.514	-0.050	343
Apr 2018	2.903	2.924	2.889	-0.028	1839
May 2018	2.833	2.849	2.819	-0.024	488
Jun 2018	2.851	2.876	2.838	-0.022	52
Jul 2018	2.871	2.876	2.858	-0.020	41
Aug 2018	2.873	2.888	2.860	-0.020	23
Sep 2018	2.852	2.854	2.840	-0.020	28
Oct 2018	2.871	2.880	2.857	-0.020	191
Nov 2018	2.924	2.928	2.910	-0.020	10
Dec 2018	3.063	3.082	3.049	-0.019	24
Jan 2019	3.170	3.170	3.159	-0.018	9
Feb 2019	3.144	3.148	3.130	-0.016	52
Mar 2019	3.071	3.071	3.068	-0.016	0
Apr 2019	2.687	2.687	2.687	0.003	0
May 2019	2.654	2.654	2.654	0.003	0
Jun 2019	2.678	2.678	2.678	0.003	0
Jul 2019	2.705	2.705	2.705	0.003	0
Aug 2019	2.716	2.716	2.716	0.003	0
Sep 2019	2.715	2.715	2.715	0.003	0
Oct 2019	2.745	2.745	2.745	0.003	0
Nov 2019	2.810	2.810	2.810	0.003	0
Dec 2019	2.950	2.950	2.950	0.003	0
Jan 2020	3.070	3.070	3.070	0.003	0
Feb 2020	3.043	3.043	3.043	0.004	0
Mar 2020	2.985	2.745	2.745	0.004	0
Apr 2020	2.665	2.665	2.665	0.004	0

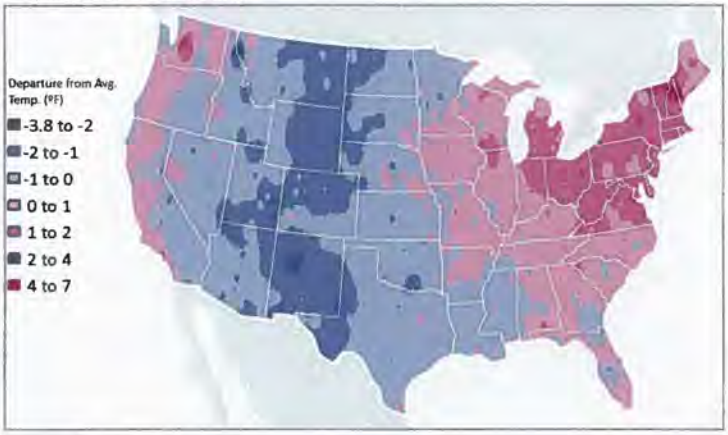
Contract data for Thursday
Volume of contracts traded: 392,330
Front-months open interest:
May, 292,364; Jun, 135,547; Jul, 159,132
Total open interest: 1,434,233
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

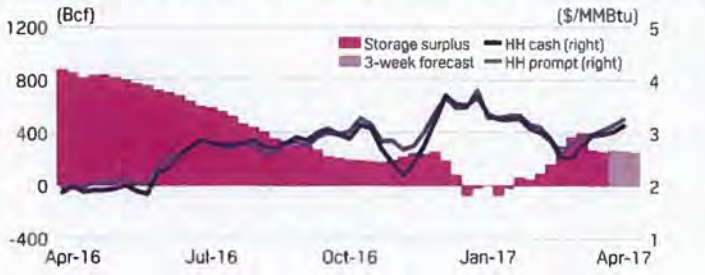
MONTH-AHEAD TEMPERATURE FORECAST MAP

May departure from average



Source: Platts, Custom Weather

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX June gas settles at $3.227/MMBtu

The NYMEX June natural gas futures contract rose Tuesday as total demand is expected to increase, coinciding with a decrease in dry production.

The NYMEX June natural gas futures contract settled at $3.227/MMBtu, up 5.5 cents day on day.

Data from Platts Analytics' Bentek Energy forecast a day-on-day increase in total demand of 1.3 Bcf to 70.7 Bcf/d on Tuesday, as warmer-than-average temperatures impact the Southeast, raising power burn demand in the region 442MMcf from Monday.

Temperatures over the next six to 10 days are forecast to be below average in the West and Northeast, with the Midcontinent seeing warmer-than-average temperatures, according to the latest outlook from the National Weather Service.

Power burn as a whole is projected to increase 1.3 Bcf from Monday to 22.1 Bcf/d on Tuesday, though residential/commercial demand is expected to see a 500-MMcf decrease from Monday to 19.6 Bcf/d. Dry production is also expected to dip Tuesday, decreasing supply. Platts Analytics expects a dry production decrease of 1.4 Bcf from Monday to 69.9 Bcf.

In competing products, hydro generation in the West is up 33 GWh/d, or 14%, year to date, encroaching upon gas demand in the region. Renewables in the West as a whole have increased 8% year to date, according to Platts Analytics.

With a year-to-date decrease in US demand of 4.8 Bcf/d, exports to Mexico and LNG exports as feedgas are helping to offset that decline slightly. Exports to Mexico and LNG exports as feedgas have increased 2.1 Bcf/d year to date, according to Platts Analytics data.

NYMEX HENRY HUB GAS FUTURES CONTRACT, MAY 9

	Settlement	High	Low	+/-	Volume
Jun 2017	3.227	3.246	3.173	0.055	68848
Jul 2017	3.315	3.327	3.257	0.058	11209
Aug 2017	3.349	3.359	3.291	0.058	1974
Sep 2017	3.333	3.343	3.282	0.054	1136
Oct 2017	3.355	3.367	3.300	0.053	1897
Nov 2017	3.405	3.416	3.358	0.050	504
Dec 2017	3.527	3.537	3.482	0.049	333
Jan 2018	3.601	3.609	3.558	0.049	1029
Feb 2018	3.566	3.572	3.524	0.047	315
Mar 2018	3.478	3.485	3.441	0.043	524
Apr 2018	2.939	2.941	2.921	0.022	678
May 2018	2.877	2.878	2.862	0.018	559
Jun 2018	2.903	2.903	2.893	0.017	8
Jul 2018	2.929	2.930	2.923	0.016	128
Aug 2018	2.935	2.935	2.929	0.016	53
Sep 2018	2.910	2.910	2.897	0.016	9
Oct 2018	2.925	2.926	2.920	0.015	106
Nov 2018	2.975	2.975	2.970	0.015	8
Dec 2018	3.110	3.110	3.102	0.015	31
Jan 2019	3.204	3.204	3.195	0.016	9
Feb 2019	3.185	3.187	3.180	0.014	7
Mar 2019	3.112	3.112	3.107	0.010	149
Apr 2019	2.723	2.732	2.723	0.004	2
May 2019	2.681	2.683	2.681	0.004	2
Jun 2019	2.705	2.705	2.705	0.002	0
Jul 2019	2.736	2.736	2.736	0.001	0
Aug 2019	2.749	2.755	2.749	0.000	1
Sep 2019	2.742	2.742	2.742	-0.002	0
Oct 2019	2.768	2.768	2.768	-0.004	0
Nov 2019	2.841	2.841	2.841	-0.004	0
Dec 2019	2.986	2.986	2.986	-0.004	0
Jan 2020	3.107	3.120	3.105	-0.004	1
Feb 2020	3.078	3.078	3.078	-0.003	0
Mar 2020	3.016	3.016	3.016	-0.002	0
Apr 2020	2.701	2.841	2.841	-0.002	0
May 2020	2.691	2.691	2.691	-0.002	0

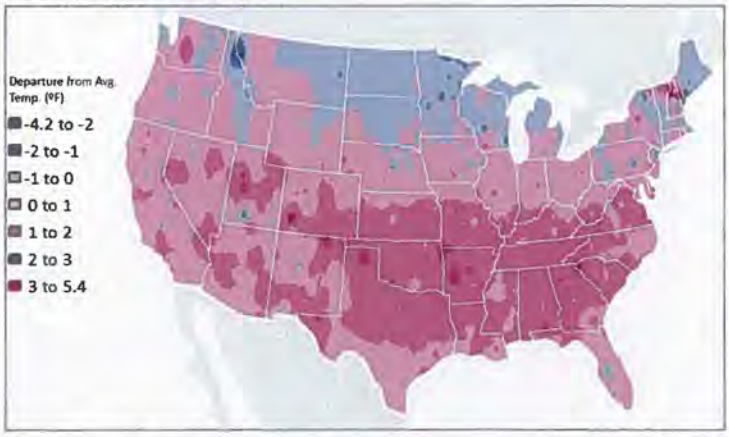
Contract data for Monday
Volume of contracts traded: 359,445
Front-months open interest:
Jun, 239,506; Jul, 239,262; Aug, 103.233
Total open interest: 1,539,292
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

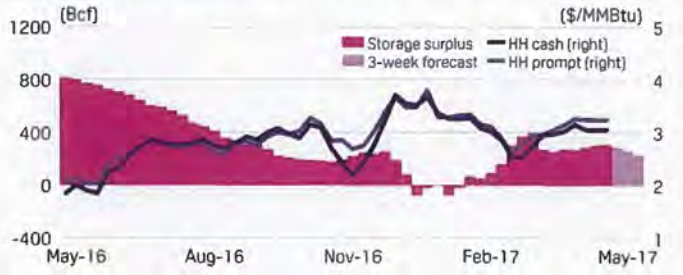
MONTH-AHEAD TEMPERATURE FORECAST MAP

June departure from average



Source: Platts, Custom Weather

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX July gas settles up on weather outlook

The NYMEX July natural gas futures contract rose Tuesday for the first time in six trading sessions, boosted by forecasts calling for warmer-than-average temperatures.

NYMEX July gas settled at $3.042/MMBtu, up 6 cents from Monday's close.

Stephen Schork, principal of the Schork Report, said the market would see its first real spurt of cooling demand heading into next week.

The most recent six- to 10-day outlook from the US National Weather Service calls for temperatures to be warmer than average in the Northeast, a change from the milder temperatures seen recently.

Temperatures in New York City are expected to reach highs of over 80 degrees Fahrenheit starting Sunday, with next Monday projected to have a high of 86 degrees, 6 degrees above average, according to the weather service.

Cooling demand for the US in the next eight to 14 days is expected to be 30.1 Bcf/d, some 2.6 Bcf/d above Tuesday's projected 27.5 Bcf/d, according to Platts Analytics' Bentek Energy.

The downward trend in price since mid-May came as a string of higher-than-expected storage injections were announced by the US Energy Information Administration, which helped to alleviate concerns of tightening supply heading into the summer.

Schork said the market is "establishing a bottom" as it has been "down at the bottom of a bearish channel since the middle of May. From a technical standpoint, the market is oversold."

Dry production Monday hit 71.99 Bcf, its highest single-day point so far this year, according to Platts Analytics.

Dry production has seen an increase in recent weeks, which is expected to continue, with Platts Analytics expecting an average of 71.4 Bcf/d over the next 14 days, 500 MMcf over the year-to-date average of 70.9 Bcf/d.

NYMEX HENRY HUB GAS FUTURES CONTRACT, JUN 6

	Settlement	High	Low	+/-	Volume
Jul 2017	3.042	3.059	2.972	0.060	58427
Aug 2017	3.076	3.096	3.014	0.052	8605
Sep 2017	3.062	3.080	3.003	0.048	3194
Oct 2017	3.082	3.101	3.024	0.046	4054
Nov 2017	3.146	3.160	3.090	0.043	692
Dec 2017	3.277	3.291	3.227	0.036	550
Jan 2018	3.355	3.371	3.307	0.034	1387
Feb 2018	3.335	3.347	3.296	0.030	208
Mar 2018	3.270	3.285	3.227	0.029	539
Apr 2018	2.881	2.887	2.857	0.017	665
May 2018	2.843	2.850	2.820	0.015	302
Jun 2018	2.875	2.883	2.854	0.015	256
Jul 2018	2.907	2.909	2.885	0.014	22
Aug 2018	2.917	2.920	2.894	0.014	53
Sep 2018	2.896	2.898	2.881	0.015	26
Oct 2018	2.912	2.917	2.890	0.015	91
Nov 2018	2.966	2.966	2.960	0.014	2
Dec 2018	3.104	3.106	3.085	0.014	4
Jan 2019	3.197	3.197	3.183	0.012	11
Feb 2019	3.174	3.176	3.172	0.010	4
Mar 2019	3.102	3.105	3.102	0.010	2
Apr 2019	2.712	2.716	2.712	0.009	50
May 2019	2.672	2.672	2.665	0.009	0
Jun 2019	2.698	2.698	2.698	0.009	0
Jul 2019	2.728	2.728	2.728	0.007	0
Aug 2019	2.742	2.742	2.742	0.007	0
Sep 2019	2.734	2.734	2.734	0.007	0
Oct 2019	2.759	2.759	2.759	0.007	0
Nov 2019	2.834	2.834	2.834	0.007	0
Dec 2019	2.980	2.980	2.973	0.007	4
Jan 2020	3.095	3.095	3.088	0.007	5
Feb 2020	3.062	3.062	3.057	0.006	2
Mar 2020	2.997	2.997	2.993	0.005	2
Apr 2020	2.667	2.667	2.667	0.000	0
May 2020	2.652	2.980	2.973	-0.003	0
Jun 2020	2.685	2.685	2.685	-0.003	0

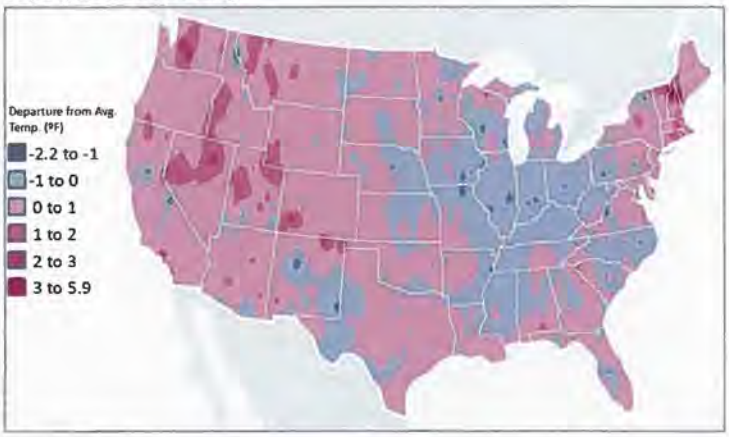
Contract data for Monday
Volume of contracts traded: 285,231
Front-months open interest:
Jul, 319,312; Aug, 150,286; Sep, 162.334
Total open interest: 1,524,867
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

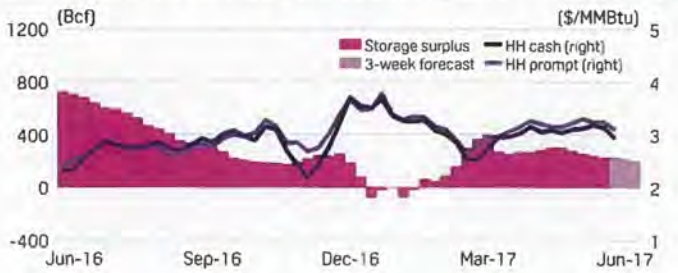
MONTH-AHEAD TEMPERATURE FORECAST MAP

July departure from average



Source: Platts, Custom Weather

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX August drops 2.4 cents to $2.864

The NYMEX August natural gas contract settled 2.4 cents lower at $2.864/MMBtu. The contract had traded as much as 6 cents higher in the early morning, but moved into negative territory shortly after the release of this week's US gas storage report.

The Energy Information Administration's weekly storage report showed an injection of 72 Bcf, 9-Bcf greater than market expectations, instantly injecting bearish sentiment into the market. Just minutes before the release, the contract had traded as high as $2.947/MMBtu.

The build nearly doubled last year's corresponding 38-Bcf injection, came close to the five-year-average injection of 66 Bcf, and took estimated inventory levels to 2.888 Tcf, a notable 285 Bcf below this time a year ago, but 187 Bcf above the five-year average.

The injection ends a period of modestly bullish reports and kept the contract just below the $2.90-$3.10/MMBtu range for the second straight day. The contract had traded in that range for all but three days in June.

"This time of the year ought to be bullish, but we have not seen that since May," David Thompson, executive vice president at PowerHouse told S&P Global Platts Friday. "Instead we are trying to hold the range we saw in June."

Markets have also seen large scale liquidation of long positions in the front month, which has added further negative pressure to the contract, Tom Saal, senior vice president at INTL FC Stone, also told S&P Global Platts Friday.

Major support sits in the $2.869-$2.859/MMBtu range, with movement below that level potentially foreshadowing a fall into the $2.70s/MMBtu.

US production levels continue to trend lower, standing at 71.2 Bcf/d Friday, over 1.3 Bcf below Tuesday's year-to-date high while power burn continues to hold around 36 Bcf/d, nearly 4 Bcf above year-ago levels, Platts Analytics' Bentek Energy data shows.

NYMEX HENRY HUB GAS FUTURES CONTRACT, JUL 7

	Settlement	High	Low	+/-	Volume
Aug 2017	2.864	2.947	2.847	-0.024	94044
Sep 2017	2.857	2.938	2.842	-0.024	10683
Oct 2017	2.886	2.964	2.872	-0.022	4447
Nov 2017	2.947	3.019	2.934	-0.020	1506
Dec 2017	3.104	3.169	3.091	-0.018	1657
Jan 2018	3.201	3.262	3.187	-0.016	2592
Feb 2018	3.189	3.241	3.177	-0.015	432
Mar 2018	3.137	3.188	3.125	-0.012	731
Apr 2018	2.786	2.807	2.779	-0.004	736
May 2018	2.757	2.773	2.750	0.000	257
Jun 2018	2.784	2.798	2.780	0.000	27
Jul 2018	2.812	2.825	2.805	0.000	9
Aug 2018	2.820	2.831	2.819	0.000	9
Sep 2018	2.797	2.812	2.792	0.000	6
Oct 2018	2.816	2.830	2.811	0.001	36
Nov 2018	2.867	2.876	2.863	0.004	26
Dec 2018	3.001	3.010	2.993	0.008	133
Jan 2019	3.088	3.095	3.082	0.008	30
Feb 2019	3.059	3.059	3.055	0.006	14
Mar 2019	2.992	2.997	2.992	0.003	13
Apr 2019	2.652	2.660	2.649	-0.005	7
May 2019	2.629	2.630	2.625	-0.004	12
Jun 2019	2.656	2.656	2.650	-0.004	0
Jul 2019	2.686	2.686	2.686	-0.004	0
Aug 2019	2.700	2.700	2.700	-0.004	0
Sep 2019	2.688	2.688	2.688	-0.004	0
Oct 2019	2.714	2.714	2.714	-0.004	0
Nov 2019	2.785	2.785	2.785	-0.004	0
Dec 2019	2.927	2.927	2.927	-0.004	0
Jan 2020	3.032	3.032	3.032	-0.005	0
Feb 2020	3.007	3.007	3.007	-0.005	0
Mar 2020	2.943	2.943	2.943	-0.005	0
Apr 2020	2.633	2.633	2.633	-0.005	0
May 2020	2.615	2.615	2.615	-0.005	0
Jun 2020	2.645	3.032	3.032	-0.005	0
Jul 2020	2.677	2.677	2.677	-0.005	0

Contract data for Thursday
Volume of contracts traded: 285,238
Front-months open interest:
Aug, 280,707; Sep, 191,917; Oct, 180.280
Total open interest: 1,356,389
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

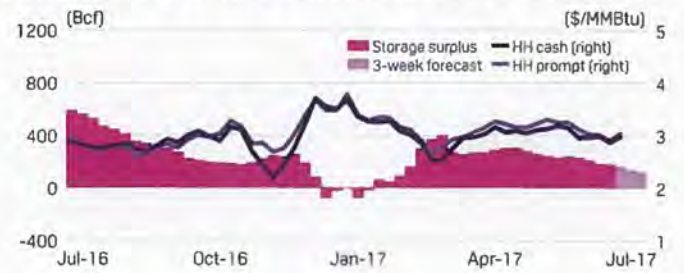
Source: Platts

MONTH-AHEAD TEMPERATURE FORECAST MAP

August departure from average

Source: Platts, Custom Weather

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX Sept. gas rises; temp outlook is bullish

NYMEX September natural gas futures rose Monday as temperature outlooks took a slightly more bullish turn.

The September contract settled at $2.801/MMBtu, up 2.7 cents from Friday's close.

According to the most recent six- to 10-day outlook from the National Weather Service, the East Coast has a likelihood of seeing average to warmer-than-average temperatures, a change from the cooler temperatures experienced recently, putting upward pressure on prices.

Though weather outlooks are more bullish for the East, the weather service continues to project cooler-than-average temperatures for the entire Midcontinent, with temperatures in Chicago not expected to exceed 80 degrees over the next seven days. The average high in Chicago during that time is 83.

The climb in price comes one trading session after the NYMEX front-month gas contract settled at its lowest point in five months.

Phil Flynn, senior market analyst at Price Futures Group, attributed the decline in price to the recent cooler-than-average temperatures, adding that the market could bounce back slightly with more heat in the forecast.

Another factor that could put upward pressure on prices is gas storage. Flynn said there are "concerns of storage numbers" due to a "slew of injections below the five-year average." Flynn added that although the roughly 72-73 Bcf/d of US dry production was "admirable," it hasn't been enough to see above-average builds in storage.

Natural gas stocks currently sit at an estimated 3.01 Tcf, according to US Energy Information Administration data, down 8.5% from the estimated 3.29 Tcf in storage at this time last year.

Data from Platts Analytics' Bentek Energy projects US dry production to average 72.95 Bcf/d over the next 14 days, outpacing the year-to-date average of 71.4 Bcf/d.

NYMEX HENRY HUB GAS FUTURES CONTRACT, AUG 7

	Settlement	High	Low	+/-	Volume
Sep 2017	2.801	2.812	2.764	0.027	40264
Oct 2017	2.840	2.849	2.805	0.023	8650
Nov 2017	2.926	2.937	2.899	0.020	2550
Dec 2017	3.079	3.095	3.061	0.014	702
Jan 2018	3.175	3.192	3.152	0.017	3295
Feb 2018	3.165	3.179	3.146	0.016	389
Mar 2018	3.125	3.138	3.106	0.016	255
Apr 2018	2.834	2.844	2.823	0.012	859
May 2018	2.814	2.823	2.803	0.012	428
Jun 2018	2.840	2.841	2.830	0.011	30
Jul 2018	2.867	2.872	2.858	0.011	22
Aug 2018	2.872	2.879	2.862	0.011	29
Sep 2018	2.851	2.856	2.844	0.010	25
Oct 2018	2.871	2.876	2.865	0.009	26
Nov 2018	2.923	2.924	2.921	0.008	4
Dec 2018	3.056	3.057	3.050	0.009	12
Jan 2019	3.143	3.143	3.142	0.009	4
Feb 2019	3.120	3.120	3.120	0.010	0
Mar 2019	3.059	3.059	3.059	0.011	2
Apr 2019	2.714	2.720	2.714	0.008	5
May 2019	2.684	2.688	2.676	0.010	1
Jun 2019	2.706	2.710	2.706	0.010	1
Jul 2019	2.729	2.730	2.723	0.010	0
Aug 2019	2.740	2.740	2.740	0.010	0
Sep 2019	2.721	2.721	2.720	0.010	0
Oct 2019	2.743	2.747	2.743	0.010	4
Nov 2019	2.807	2.807	2.807	0.010	0
Dec 2019	2.941	2.941	2.941	0.006	0
Jan 2020	3.044	3.044	3.044	0.006	0
Feb 2020	3.019	3.019	3.019	0.006	0
Mar 2020	2.959	2.959	2.959	0.006	0
Apr 2020	2.642	2.642	2.642	0.004	0
May 2020	2.621	2.621	2.621	0.003	0
Jun 2020	2.647	2.647	2.647	0.002	0
Jul 2020	2.677	3.019	3.019	0.002	0
Aug 2020	2.698	2.698	2.698	0.002	0

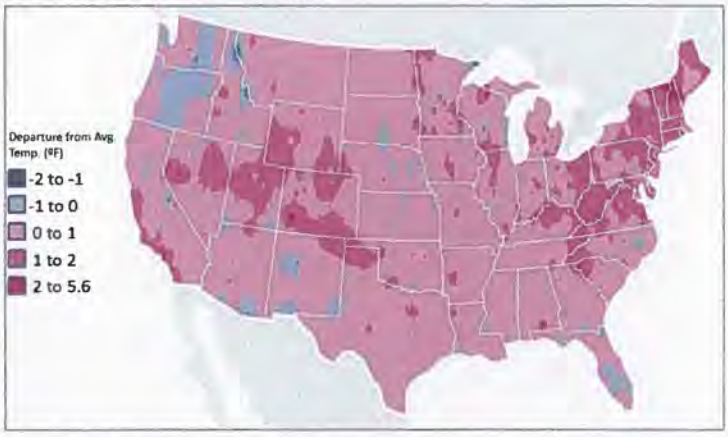
Contract data for Friday
Volume of contracts traded: 322,822
Front-months open interest:
Sep, 340,069; Oct, 192,457; Nov, 93,625
Total open interest: 1,349,030
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

MONTH-AHEAD TEMPERATURE FORECAST MAP

September departure from average



Source: Platts, Custom Weather

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE

NATURAL GAS FUTURES

NYMEX October gas settles 9.8 cents lower

The NYMEX October natural gas futures contract plunged Tuesday, taking a big step down from the more than 13-cent rally seen in the prior two trading sessions, as dry gas production continues to recover from Harvey.

The October contract settled at $2.972/MMBtu, down 9.8 cents from Friday's close.

Tuesday's price drop comes after a rally in which the market climbed 13.1 cents after a well-below-average storage injection report from the US Energy Information Administration. The rally helped the front-month contract break the $3/MMBtu threshold for the first time since July 20.

Although the estimated build to gas storage stocks for the week that ended August 25 was below average, other factors, such as dry production, have been bearish lately as US dry gas production has bounced back from the impact of Hurricane Harvey. Platts Analytics' Bentek Energy data shows US dry production has averaged 73.6 Bcf/d over the past five days, well above the 71.4 Bcf/d averaged so far this year.

US dry production is expected to remain strong, with Platts Analytics projecting an average 73.7 Bcf/d over the next seven days.

Weather outlooks are relatively bearish as well, with the most recent six- to 10-day weather outlook from the National Weather Service projecting average to cooler-than-average weather for demand areas in the Northeast and Midcontinent.

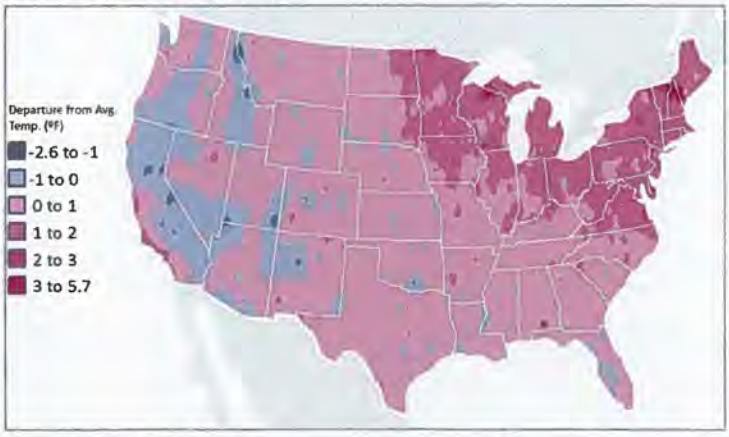
Exports to Mexico and LNG feedgas are putting added pressure on prices, as they have not recovered from Harvey as quickly as dry production.

LNG exports as feedgas have only averaged 520 MMcf/d over the past five days, substantially below the 1.9 Bcf/d averaged so far this year, according to Platts Analytics, as ships are unable to enter Sabine Pass because of the traffic suspension on the Intracoastal Waterway.

Exports to Mexico are projected to remain below average over the coming week, averaging 3.7 Bcf/d over the next seven days, down from the 4 Bcf/d year-to-date average, according to Platts Analytics.

MONTH-AHEAD TEMPERATURE FORECAST MAP

October departure from average



Source: Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, SEP 5

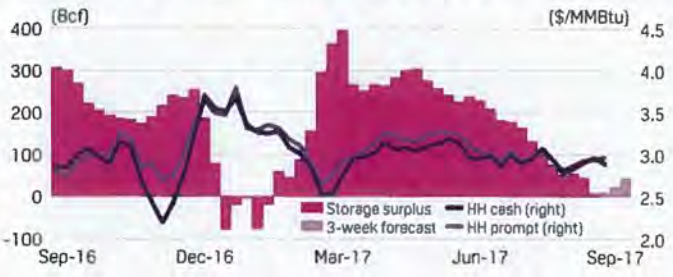
	Settlement	High	Low	+/-	Volume
Oct 2017	2.972	3.059	2.965	-0.098	76423
Nov 2017	3.044	3.129	3.037	-0.092	10444
Dec 2017	3.189	3.265	3.180	-0.081	3528
Jan 2018	3.287	3.363	3.278	-0.079	3109
Feb 2018	3.285	3.355	3.275	-0.076	2037
Mar 2018	3.244	3.312	3.236	-0.074	1758
Apr 2018	2.911	2.945	2.902	-0.032	1905
May 2018	2.875	2.903	2.864	-0.027	335
Jun 2018	2.901	2.927	2.891	-0.024	81
Jul 2018	2.927	2.954	2.918	-0.022	47
Aug 2018	2.931	2.954	2.921	-0.021	409
Sep 2018	2.907	2.935	2.896	-0.021	49
Oct 2018	2.926	2.954	2.916	-0.021	211
Nov 2018	2.975	3.000	2.964	-0.020	104
Dec 2018	3.102	3.126	3.093	-0.019	48
Jan 2019	3.184	3.198	3.174	-0.019	17
Feb 2019	3.158	3.173	3.147	-0.019	5
Mar 2019	3.094	3.094	3.081	-0.018	3
Apr 2019	2.729	2.732	2.729	-0.007	1
May 2019	2.697	2.697	2.697	-0.007	0
Jun 2019	2.719	2.719	2.719	-0.007	0
Jul 2019	2.740	2.740	2.740	-0.007	0
Aug 2019	2.744	2.744	2.740	-0.006	0
Sep 2019	2.728	2.728	2.728	-0.005	0
Oct 2019	2.749	2.749	2.749	-0.005	0
Nov 2019	2.810	2.810	2.810	-0.004	0
Dec 2019	2.940	2.940	2.935	-0.004	1
Jan 2020	3.043	3.043	3.040	-0.004	3
Feb 2020	3.017	3.017	3.010	-0.004	2
Mar 2020	2.962	2.962	2.955	-0.004	1
Apr 2020	2.645	2.645	2.645	-0.004	0
May 2020	2.617	2.617	2.617	-0.004	0
Jun 2020	2.641	2.641	2.641	-0.004	0
Jul 2020	2.668	2.668	2.660	-0.004	2
Aug 2020	2.685	2.962	2.955	-0.004	0
Sep 2020	2.680	2.680	2.680	-0.004	0

Contract data for Monday
Volume of contracts traded: 313,523
Front-months open interest:
Oct, 311,484; Nov, 143,128; Dec, 93,786
Total open interest: 1,296,876
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX Nov. gas slides 1.7 cents to $2.923

The NYMEX November natural gas futures contract slid 1.7 cents Thursday to settle at $2.923/MMBtu, despite the US Energy Information Administration announcing a smaller-than-expected storage build for last week, which nudged estimated national stocks below the five-year average for the first time since January.

Stocks in the week ended September 29 built by 42 Bcf, the EIA estimated, less than the 47 Bcf consensus estimate of analysts surveyed by S&P Global Platts and well below the 91-Bcf build averaged over the past five years. This put estimated national gas stocks at 3.508 Tcf, 0.2% below the five-year average.

The prior surplus to the five-year average had been tightening since the beginning of May, with 17 of the past 22 injections coming in below average, according to EIA data.

Though the build had a bullish tone, immediate market reaction to the below-average injection was tempered. Prices did not show any noticeable upticks when the number was announced, remaining around levels seen before the news.

That tempered reaction took a bearish turn in the afternoon, with the front-month contract ultimately settling at a decline on the day.

Daniel Flynn, energy analyst at Price Futures Group, said he was "shocked the market isn't motoring," after the announced injection.

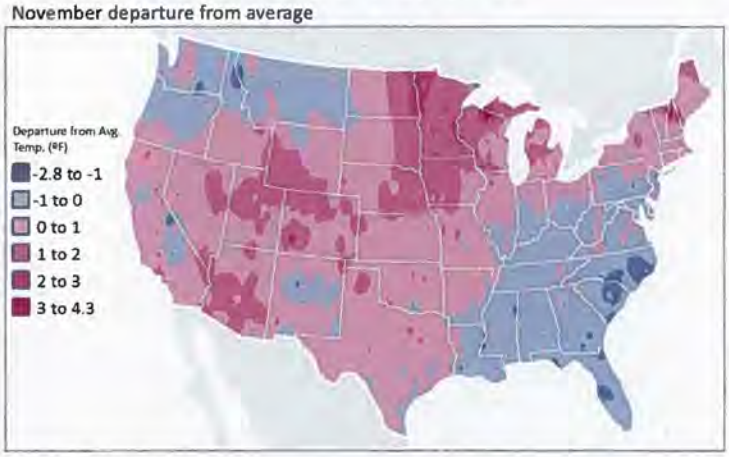
Gene McGillian, manager of market research at Tradition Energy, said the bullish build "could have been priced in yesterday," as the market climbed 4.5 cents Wednesday.

McGillian also said the latest build "looks to be the last below-average storage injection for a while," adding that with short-term outlooks for mild weather, the "market will find pretty strong resistance near $3[/MMBtu]."

The Natural Gas Supply Association said Wednesday it anticipates this winter will be 13% colder than last year's, with demand accordingly expected to reach "an all-time high this winter."

However, it also said that increased production, Canadian imports and "robust storage inventories" would be able to meet that demand.

MONTH-AHEAD TEMPERATURE FORECAST MAP



Source: Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, OCT 5

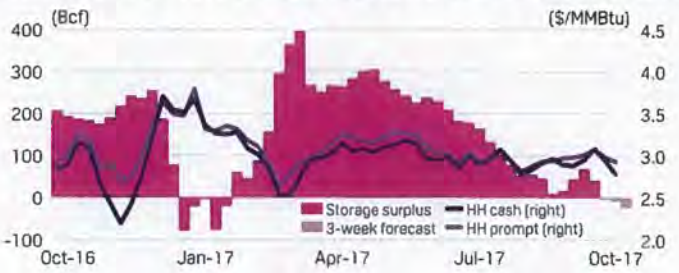
	Settlement	High	Low	+/-	Volume
Nov 2017	2.923	2.995	2.914	-0.017	95008
Dec 2017	3.103	3.167	3.095	-0.019	14335
Jan 2018	3.230	3.283	3.222	-0.017	7249
Feb 2018	3.235	3.283	3.226	-0.013	2090
Mar 2018	3.193	3.235	3.185	-0.008	2784
Apr 2018	2.939	2.957	2.931	0.006	3467
May 2018	2.911	2.928	2.903	0.008	917
Jun 2018	2.939	2.954	2.934	0.007	527
Jul 2018	2.966	2.980	2.962	0.007	350
Aug 2018	2.969	2.983	2.964	0.007	430
Sep 2018	2.951	2.963	2.945	0.008	182
Oct 2018	2.974	2.989	2.967	0.007	628
Nov 2018	3.028	3.041	3.028	0.006	71
Dec 2018	3.164	3.178	3.159	0.005	191
Jan 2019	3.248	3.266	3.242	0.004	139
Feb 2019	3.225	3.243	3.225	0.004	71
Mar 2019	3.153	3.172	3.153	0.004	22
Apr 2019	2.758	2.767	2.758	0.004	26
May 2019	2.719	2.732	2.719	0.003	64
Jun 2019	2.741	2.749	2.741	0.003	50
Jul 2019	2.763	2.767	2.762	0.003	110
Aug 2019	2.767	2.785	2.767	0.002	49
Sep 2019	2.753	2.756	2.753	0.002	3
Oct 2019	2.776	2.782	2.776	0.001	3
Nov 2019	2.841	2.841	2.841	0.001	0
Dec 2019	2.998	3.002	2.998	0.001	12
Jan 2020	3.105	3.110	3.105	0.002	4
Feb 2020	3.085	3.085	3.085	0.003	0
Mar 2020	3.030	3.030	3.030	0.003	0
Apr 2020	2.712	2.712	2.712	0.005	0
May 2020	2.685	2.685	2.685	0.005	0
Jun 2020	2.708	2.708	2.708	0.005	0
Jul 2020	2.734	2.734	2.734	0.005	0
Aug 2020	2.744	2.744	2.744	0.005	0
Sep 2020	2.740	2.712	2.712	0.005	0
Oct 2020	2.768	2.768	2.768	0.005	0

Contract data for Wednesday
Volume of contracts traded: 341,627
Front-months open interest:
Nov, 340,400; Dec, 134,473; Jan, 157,699
Total open interest: 1,388,702
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Source: Platts

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

December up 15 cents on low storage levels

The NYMEX December gas futures contract settled Monday at $3.134/MMBtu, up 15 cents from Friday's close, on lagging storage levels heading into winter, despite US dry gas production posting a fresh high over the weekend.

Dry gas production hit 76.1 Bcf Saturday, besting the previous record posted October 26 by 0.3 Bcf, according to Platts Analytics' Bentek Energy data.

Dry production is expected to maintain similar levels for the next couple weeks, averaging 75.8 Bcf/d for the next seven days and 75.9 Bcf/d for the following week, the data show.

But storage numbers are on the bullish side of the ledger. Injections for Monday looked set to come in at 2.8 Bcf, down 3.4 Bcf from Sunday, data show.

Over the next seven days, a draw from stocks is expected, with Tuesday seeing 0.9 Bcf being taken out. Draws from stocks are expected to average 0.6 Bcf/d over the next seven days.

In the eight- to 14-day window, gas in storage is slated to start moving to the positive side, averaging a 0.4 Bcf/d increase during that period.

According to the US National Weather Service, winter looks set to start being felt across the country. Looking out eight to 14 days, colder-than-normal weather is forecast to move into the Pacific Northwest and the Rockies.

Major demand areas in the Northeast, Southeast and Midwest are likely to see average to slightly above-average temperatures during the same period, but it will be mid- to late November, so heating demand could see a boost, which would also push the market higher.

During that eight- to 14-day period, the Southwest is likely to see the opposite, as higher-than-normal temperatures are expected to hover over the region, possibly putting air-conditioning systems to work, also boosting demand.

NYMEX HENRY HUB GAS FUTURES CONTRACT, NOV 6

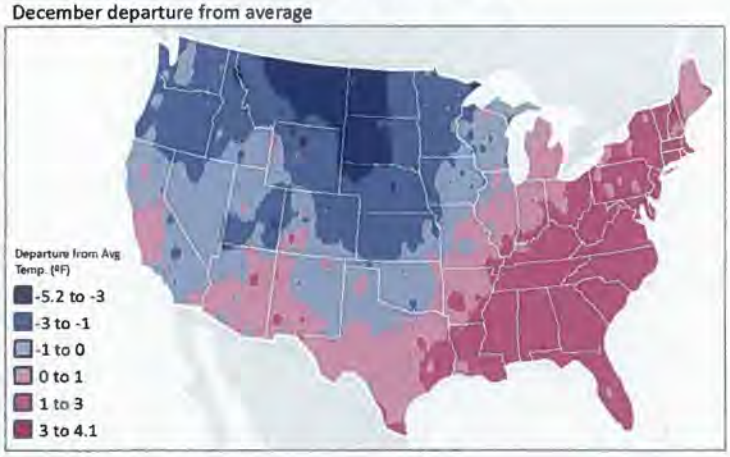
	Settlement	High	Low	+/-	Volume
Dec 2017	3.134	3.143	3.051	0.150	127615
Jan 2018	3.232	3.242	3.154	0.135	21802
Feb 2018	3.231	3.240	3.157	0.129	5445
Mar 2018	3.189	3.197	3.118	0.121	4488
Apr 2018	2.953	2.968	2.928	0.050	6949
May 2018	2.928	2.944	2.909	0.043	1189
Jun 2018	2.955	2.970	2.937	0.041	396
Jul 2018	2.986	3.000	2.968	0.039	474
Aug 2018	2.990	3.003	2.974	0.039	310
Sep 2018	2.973	2.985	2.957	0.039	189
Oct 2018	2.995	3.008	2.977	0.038	1368
Nov 2018	3.047	3.060	3.038	0.036	136
Dec 2018	3.182	3.194	3.166	0.035	242
Jan 2019	3.263	3.273	3.246	0.035	127
Feb 2019	3.230	3.241	3.220	0.032	38
Mar 2019	3.155	3.167	3.147	0.028	134
Apr 2019	2.793	2.804	2.788	0.006	95
May 2019	2.748	2.780	2.745	0.003	2
Jun 2019	2.770	2.783	2.770	0.003	1
Jul 2019	2.793	2.807	2.793	0.004	2
Aug 2019	2.793	2.807	2.787	0.004	0
Sep 2019	2.776	2.776	2.771	0.004	0
Oct 2019	2.799	2.806	2.795	0.004	0
Nov 2019	2.862	2.862	2.858	0.004	0
Dec 2019	3.019	3.027	3.013	0.008	0
Jan 2020	3.120	3.120	3.115	0.009	1
Feb 2020	3.095	3.095	3.095	0.009	0
Mar 2020	3.044	3.044	3.040	0.011	15
Apr 2020	2.734	2.734	2.734	0.004	0
May 2020	2.708	2.708	2.708	0.004	0
Jun 2020	2.732	2.732	2.732	0.004	0
Jul 2020	2.759	2.759	2.759	0.004	0
Aug 2020	2.774	2.774	2.774	0.004	0
Sep 2020	2.774	2.774	2.774	0.004	0
Oct 2020	2.800	2.708	2.708	0.004	0
Nov 2020	2.868	2.870	2.868	0.004	4

Contract data for Friday
Volume of contracts traded: 489,483
Front-months open interest:
Dec, 306,161; Jan, 232,808; Feb, 85,917
Total open interest: 1,389,174
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

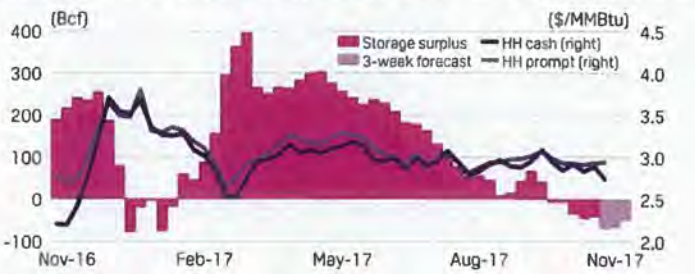
Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: Platts

MONTH-AHEAD TEMPERATURE FORECAST MAP



Source: Platts, Custom Weather

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX Jan settles nearly flat at $2.772/MMBtu

With US dry production projected to remain at robust levels for the foreseeable future, the NYMEX January natural gas contract remained on an even keel Friday, settling at $2.772/MMBtu, up just 0.9 cent from Thursday's close.

The contract had traded in a narrow range of $2.757/MMBtu to $2.82/MMBtu.

Interest in the February and March contracts was also on the rise, with the former being moved at $2.792/MMBtu, up 1 cent, and the latter at $2.767/MMBtu, up 0.6 cent.

Platts Analytics' Bentek Energy data showed dry production ticking down some 600 MMcf/d to 75.9 Bcf/d on Friday, but ramping up to 76.1 Bcf/d on Saturday. Over the next seven days, production is expected to average 76.2 Bcf/d and then 76.3 Bcf/d the following week.

This continues a trend that saw dry production average 76.43 Bcf/d over the previous seven days.

December production has averaged 76.4 Bcf/d, a 5.4 Bcf/d, or 7.6%, gain from December 2016.

The healthy production figures come at a time when demand is in a lull. Friday's consumption ticked down 1.2 Bcf/d to 97.9 Bcf/d, while Saturday was set to drop another 1.6 Bcf to check in at 96.3 Bcf/d.

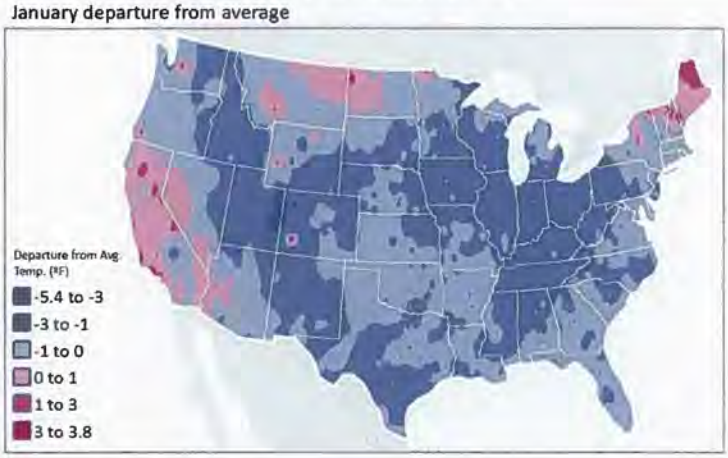
That looks to change over the next few weeks, however, as colder-than-normal temperatures are predicted for the eastern half of the country. During that time, demand looks set to rise, averaging 99.9 Bcf/d for the next week and 104.4 Bcf/d the following seven days.

On the whole, consumption in 2017 has been bearish, averaging 70.3 Bcf/d, a 2.4 Bcf/d decline from 2016, Platts Analytics said.

December has seen an even sharper drop in demand, with 2017 averaging 84 Bcf/d, down 3.8 Bcf/d from December 2016's 87.8 Bcf/d pace.

Storage figures show inventories at 3.695 Tcf, which is about 36 Bcf below the five-year average and 264 Bcf below that of stocks at this time last year.

MONTH-AHEAD TEMPERATURE FORECAST MAP



Source: Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, DEC 8

	Settlement	High	Low	+/-	Volume
Jan 2018	2.772	2.820	2.757	0.009	74731
Feb 2018	2.792	2.837	2.774	0.010	18316
Mar 2018	2.767	2.813	2.750	0.006	11952
Apr 2018	2.698	2.741	2.688	-0.007	8118
May 2018	2.704	2.747	2.695	-0.009	3444
Jun 2018	2.742	2.783	2.733	-0.009	1647
Jul 2018	2.782	2.805	2.772	-0.007	1044
Aug 2018	2.788	2.817	2.777	-0.008	425
Sep 2018	2.772	2.806	2.760	-0.008	357
Oct 2018	2.798	2.835	2.787	-0.009	2588
Nov 2018	2.863	2.899	2.856	-0.008	296
Dec 2018	3.001	3.037	2.995	-0.008	440
Jan 2019	3.096	3.128	3.087	-0.007	656
Feb 2019	3.072	3.088	3.070	-0.005	72
Mar 2019	3.007	3.020	3.000	-0.004	127
Apr 2019	2.706	2.716	2.695	0.010	98
May 2019	2.670	2.674	2.659	0.012	30
Jun 2019	2.694	2.695	2.694	0.013	1
Jul 2019	2.718	2.718	2.715	0.013	6
Aug 2019	2.718	2.718	2.710	0.013	10
Sep 2019	2.701	2.701	2.697	0.013	1
Oct 2019	2.725	2.725	2.720	0.013	33
Nov 2019	2.774	2.774	2.774	0.012	2
Dec 2019	2.918	2.923	2.908	0.010	2
Jan 2020	3.028	3.028	3.028	0.009	0
Feb 2020	3.004	3.004	3.004	0.009	0
Mar 2020	2.954	2.954	2.954	0.009	0
Apr 2020	2.669	2.669	2.669	0.006	0
May 2020	2.645	2.645	2.645	0.006	0
Jun 2020	2.673	2.673	2.673	0.006	0
Jul 2020	2.703	2.703	2.703	0.006	0
Aug 2020	2.718	2.718	2.718	0.006	0
Sep 2020	2.718	2.718	2.718	0.006	0
Oct 2020	2.748	2.748	2.748	0.006	0
Nov 2020	2.818	2.673	2.673	0.006	0
Dec 2020	2.966	2.966	2.960	0.006	4

Contract data for Thursday
Volume of contracts traded: 484,488
Front-months open interest:
Jan, 363,930; Feb, 185,587; Mar, 231,161
Total open interest: 1,529,748
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: Platts

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE

NATURAL GAS FUTURES

NYMEX Feb. up 4 cents on storage pull outlook

With a potential record-breaking storage pull on the horizon, the NYMEX February futures contract started the week bullish, settling at $2.835/MMBtu Monday, up 4 cents.

S&P Global Platts Analytics is predicting a 363-Bcf draw from storage for the week ended Friday when the US Energy Information Administration releases its storage report Thursday.

If that projection holds true, the draw would shatter the previous record withdrawal from stocks of 288 Bcf, which occurred in January 2014.

The Platts Analytics estimate would be about 45 Bcf above the combined totals of the last two weeks. The week ended December 22 saw a withdrawal of 112 Bcf, while the week ended December 29 had 206 Bcf withdrawn from stocks.

The potentially record-breaking withdrawal would be a direct result of the frigid weather that sat over the eastern half of the country during the last few weeks, dropping temperatures at major demand centers in the Northeast and the Midwest into the single digits.

But that is expected to change as temperatures begin to edge upward. Looking at the National Weather Service's extended forecast, warmer-than-normal weather is expected in the Midwest and Northeast eight to 14 days out.

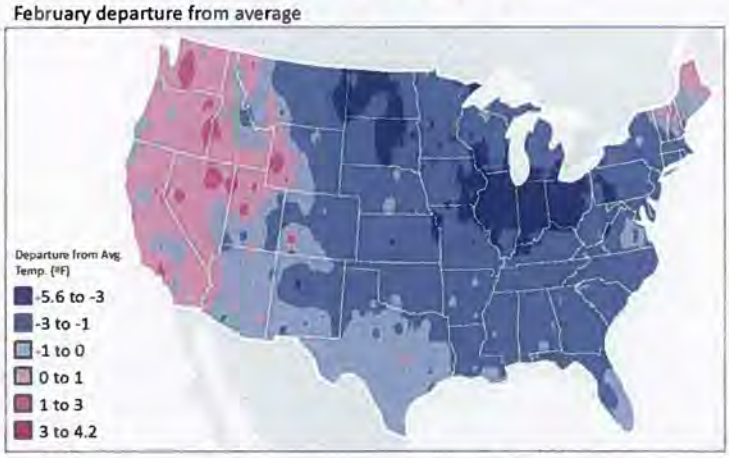
Temperatures are already starting to rise. In New York, highs were expected in the 30s Monday, while temperatures near the end of the workweek were expected to rise to the 50s.

US demand is expected to fall as temperatures rise, according to Platts Analytics. Monday's consumption was set at 98 Bcf/d, down 12.4 Bcf/d from Sunday's demand of 110 Bcf/d.

Demand is expected to continue to fall over the next week, with Tuesday set to check in at 93.7 Bcf/d and the next seven days averaging 93.2 Bcf/d.

That's a far cry from demand seen so far this year, with January averaging 122.3 Bcf/d, 17.4 Bcf/d above the average consumption seen during the same period a year ago.

MONTH-AHEAD TEMPERATURE FORECAST MAP



Source: Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, JAN 8

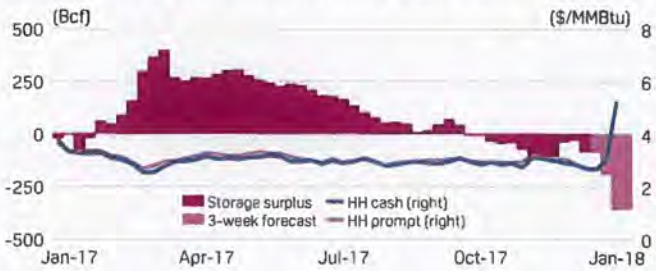
	Settlement	High	Low	+/-	Volume
Feb 2018	2.835	2.869	2.784	0.040	86140
Mar 2018	2.772	2.812	2.721	0.027	22265
Apr 2018	2.676	2.696	2.624	0.026	7912
May 2018	2.680	2.698	2.627	0.025	3122
Jun 2018	2.720	2.735	2.668	0.023	927
Jul 2018	2.758	2.771	2.705	0.023	1285
Aug 2018	2.761	2.772	2.709	0.021	290
Sep 2018	2.742	2.756	2.694	0.019	289
Oct 2018	2.766	2.779	2.716	0.019	1306
Nov 2018	2.825	2.835	2.774	0.019	276
Dec 2018	2.952	2.960	2.905	0.018	86
Jan 2019	3.034	3.043	2.986	0.018	372
Feb 2019	3.014	3.019	2.965	0.020	91
Mar 2019	2.947	2.951	2.899	0.020	168
Apr 2019	2.663	2.671	2.624	0.021	646
May 2019	2.631	2.633	2.596	0.017	168
Jun 2019	2.658	2.658	2.650	0.016	17
Jul 2019	2.686	2.687	2.660	0.015	17
Aug 2019	2.688	2.689	2.662	0.016	17
Sep 2019	2.671	2.672	2.659	0.016	9
Oct 2019	2.697	2.697	2.684	0.016	13
Nov 2019	2.746	2.746	2.732	0.015	7
Dec 2019	2.883	2.883	2.871	0.012	3
Jan 2020	2.992	2.992	2.981	0.014	3
Feb 2020	2.976	2.976	2.976	0.014	0
Mar 2020	2.927	2.927	2.927	0.014	0
Apr 2020	2.667	2.667	2.667	0.017	0
May 2020	2.652	2.652	2.650	0.017	3
Jun 2020	2.681	2.681	2.680	0.016	3
Jul 2020	2.712	2.712	2.712	0.015	3
Aug 2020	2.727	2.727	2.727	0.015	2
Sep 2020	2.725	2.726	2.725	0.014	2
Oct 2020	2.755	2.756	2.755	0.014	2
Nov 2020	2.817	2.817	2.817	0.013	0
Dec 2020	2.964	2.712	2.712	0.010	0
Jan 2021	3.069	3.069	3.069	0.010	0

Contract data for Friday
Volume of contracts traded: 460,788
Front-months open interest:
Feb, 294,813; Mar, 303,644; Apr, 165,501
Total open interest: 1,428,530
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: Platts

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX March gas snaps losing streak

The NYMEX March natural gas futures contract rose 1.2 cents Tuesday to settle at $2.759/MMBtu, snapping a losing streak that saw the March contract slide 44.8 cents over the previous four trading sessions, as strong production has put downward pressure on prices recently.

Phil Flynn, senior market analyst at Price Futures Group, said the market "is a victim of production success," as colder temperatures have been overshadowed by the "expectation of production increasing," leading to prices remaining low despite the recent uptick in demand.

US dry production has seen marked improvement, averaging 77.8 Bcf/d throughout February thus far, well above the 70.8 Bcf/d averaged this time last February, according to S&P Global Platts Analytics data.

The market appears to be relatively unfazed by the increased demand seen recently, as month-to-date US demand has averaged 96.4 Bcf/d, according to S&P Global Platts Analytics, up from the 88.3 Bcf/d seen this time last year.

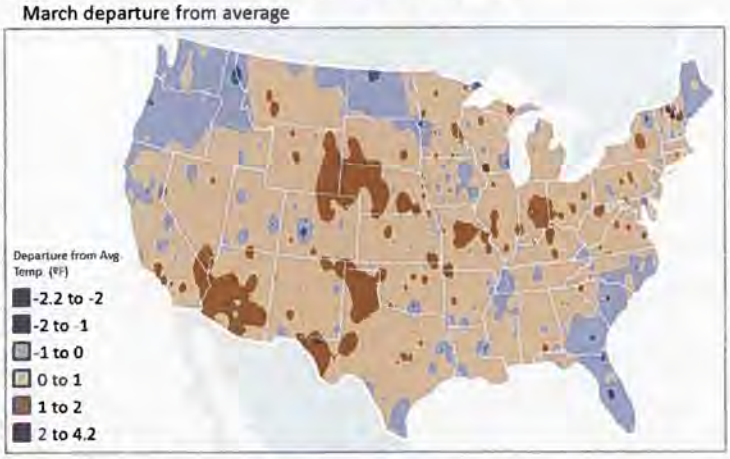
Though national storage stocks have lagged behind the five-year average in recent months, Flynn said the increased production should lead to "big deposits into storage" once temperatures warm up across the country.

According to US Energy Information Administration data, national stocks currently sit at a 16.2%% deficit to the five-year average. That deficit could be diminished, however, as the market eyes the shoulder season, which will start in a few months.

Looking ahead, the most recent eight- to 14-day weather outlook from the National Weather Service calls for a likelihood of warmer-than-average temperatures for the West and East coasts, which could push demand downward over that time.

When asked if increased LNG feedgas and Mexican exports could support prices, Flynn said that "demand needs to be seen somewhere," and once lines to Mexico are completed, demand should increase, which could put upward pressure on prices. Flynn said LNG exports remain low, as "globally, supplies are ample."

MONTH-AHEAD TEMPERATURE FORECAST MAP



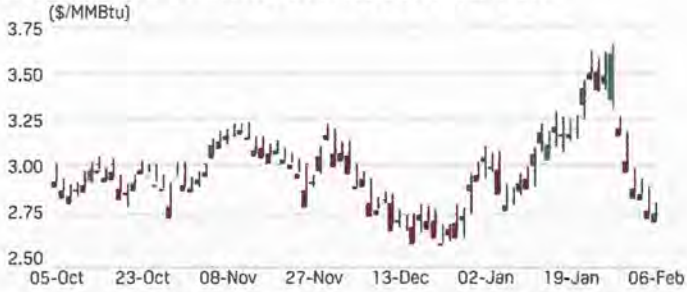
Source: S&P Global Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, FEB 6

	Settlement	High	Low	+/-	Volume
Mar 2018	2.759	2.785	2.695	0.012	86873
Apr 2018	2.723	2.754	2.681	-0.003	21457
May 2018	2.735	2.763	2.694	-0.002	6062
Jun 2018	2.769	2.795	2.730	-0.003	2065
Jul 2018	2.810	2.836	2.771	-0.003	2284
Aug 2018	2.814	2.836	2.775	-0.001	1198
Sep 2018	2.798	2.812	2.760	-0.001	429
Oct 2018	2.819	2.841	2.783	-0.003	1992
Nov 2018	2.864	2.881	2.832	-0.004	639
Dec 2018	2.998	3.015	2.974	-0.006	136
Jan 2019	3.093	3.108	3.062	-0.005	624
Feb 2019	3.064	3.078	3.041	-0.005	84
Mar 2019	2.963	2.966	2.937	-0.003	191
Apr 2019	2.691	2.699	2.680	-0.006	443
May 2019	2.665	2.669	2.657	-0.005	31
Jun 2019	2.694	2.698	2.687	-0.004	15
Jul 2019	2.726	2.735	2.722	-0.002	146
Aug 2019	2.731	2.732	2.725	0.000	99
Sep 2019	2.718	2.720	2.712	0.000	14
Oct 2019	2.743	2.748	2.726	0.000	155
Nov 2019	2.794	2.794	2.794	0.001	0
Dec 2019	2.927	2.927	2.926	0.001	31
Jan 2020	3.047	3.047	3.044	0.002	0
Feb 2020	3.031	3.031	3.031	0.001	0
Mar 2020	2.955	2.955	2.955	0.002	0
Apr 2020	2.695	2.695	2.695	0.007	0
May 2020	2.677	2.677	2.677	0.007	0
Jun 2020	2.704	2.704	2.704	0.007	0
Jul 2020	2.733	2.733	2.733	0.007	0
Aug 2020	2.734	2.734	2.734	0.007	0
Sep 2020	2.727	2.727	2.727	0.007	0
Oct 2020	2.755	2.755	2.755	0.007	0
Nov 2020	2.812	2.812	2.812	0.006	0
Dec 2020	2.957	2.957	2.957	0.006	0
Jan 2021	3.072	2.734	2.734	0.006	0
Feb 2021	3.052	3.052	3.052	0.006	0

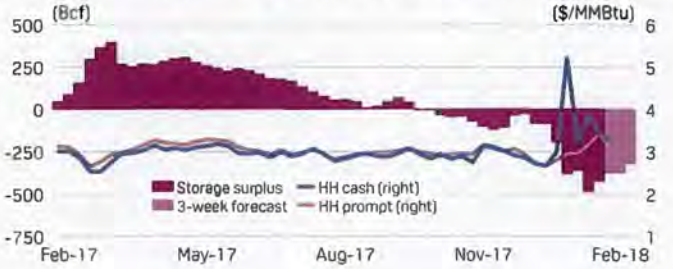
Contract data for Monday
Volume of contracts traded: 338,170
Front-months open interest:
Mar, 302,615; Apr, 158,054; May, 185.160
Total open interest: 1,399,029
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION



Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: S&P Global Platts

BENTEK US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX April gas falls, settles at $2.756/MMBtu

The NYMEX April natural gas futures contract fell Thursday, settling down 2.1 cents at $2.756/MMBtu, as a lower-than-average storage withdrawal and strong production overshadowed the cold weather seen across much of the US.

The US Energy Information Administration announced Thursday an estimated 57 Bcf draw from storage in the week ended March 2, just below the consensus 59 Bcf draw expected by analysts surveyed by S&P Global Platts, and less than half the 129 Bcf withdrawal averaged over the past five years.

The withdrawal reported Thursday trimmed nationwide inventories to 1.625 Tcf and cut the deficit to the five-year average to an estimated 15.6%, according to EIA data.

The most recent six- to 10-day outlook from the US National Weather Service calls for colder-than-average temperatures in the Northeast, Southeast and parts of the West Coast. The outlook also calls for warmer-than-average temperatures in parts of the Midwest, Rockies, Northwest, Midcontinent and Southwest.

Demand has seen an uptick recently, averaging 85 Bcf/d over the past seven days, a 6.3 Bcf/d increase compared with the 78.7 Bcf/d averaged in March 2017, according to S&P Global Platts Analytics data.

With the winter season coming to an end, the bump in demand seen of late may start to wind down, as over the next eight- to 14-day period US demand is expected to average 78.9 Bcf/d, according to Platts Analytics.

Supply has continued its robust ways of the past few weeks. According to Platts Analytics, dry production has averaged 77.7 Bcf/d in March, a 6.4 Bcf/d increase compared with 71.3 Bcf/d in March 2017.

NYMEX HENRY HUB GAS FUTURES CONTRACT, MAR 8

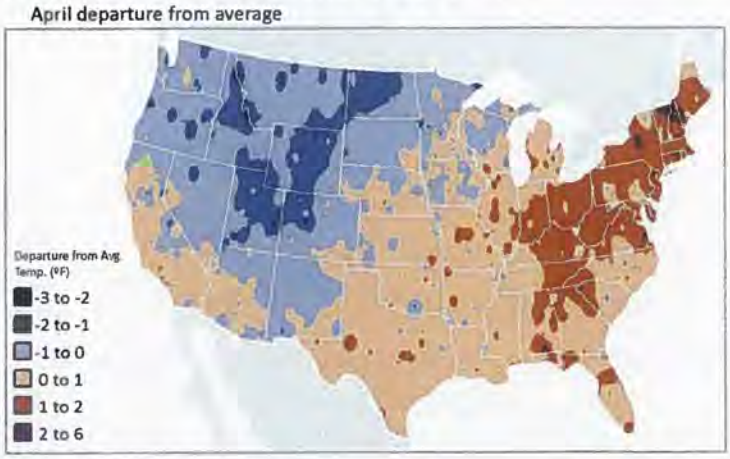
	Settlement	High	Low	+/-	Volume
Apr 2018	2.756	2.793	2.737	-0.021	69701
May 2018	2.787	2.819	2.767	-0.019	17684
Jun 2018	2.833	2.859	2.812	-0.014	3352
Jul 2018	2.881	2.903	2.858	-0.011	2112
Aug 2018	2.890	2.907	2.866	-0.009	542
Sep 2018	2.870	2.890	2.848	-0.008	1020
Oct 2018	2.881	2.901	2.860	-0.009	2507
Nov 2018	2.927	2.945	2.905	-0.008	468
Dec 2018	3.044	3.060	3.025	-0.007	335
Jan 2019	3.127	3.142	3.106	-0.005	1287
Feb 2019	3.092	3.105	3.071	-0.004	340
Mar 2019	2.998	3.008	2.976	-0.002	714
Apr 2019	2.694	2.699	2.676	0.000	1059
May 2019	2.655	2.657	2.639	0.000	240
Jun 2019	2.683	2.683	2.666	0.000	115
Jul 2019	2.713	2.713	2.696	0.000	149
Aug 2019	2.718	2.718	2.703	-0.001	150
Sep 2019	2.705	2.705	2.691	-0.001	405
Oct 2019	2.733	2.734	2.719	-0.001	189
Nov 2019	2.784	2.786	2.770	-0.001	70
Dec 2019	2.918	2.921	2.907	-0.003	28
Jan 2020	3.034	3.034	3.028	-0.004	15
Feb 2020	3.010	3.010	3.005	-0.003	3
Mar 2020	2.917	2.917	2.912	-0.004	3
Apr 2020	2.627	2.627	2.627	-0.012	0
May 2020	2.605	2.605	2.605	-0.014	0
Jun 2020	2.631	2.631	2.631	-0.014	0
Jul 2020	2.659	2.659	2.659	-0.014	0
Aug 2020	2.661	2.661	2.661	-0.014	0
Sep 2020	2.654	2.654	2.654	-0.014	0
Oct 2020	2.682	2.682	2.682	-0.014	0
Nov 2020	2.737	2.737	2.737	-0.016	0
Dec 2020	2.889	2.889	2.889	-0.016	0
Jan 2021	3.021	3.030	3.021	-0.016	0
Feb 2021	2.998	2.654	2.654	-0.016	2
Mar 2021	2.933	2.945	2.933	-0.021	2

Contract data for Wednesday
Volume of contracts traded: 361,047
Front-months open interest:
Apr, 271,998; May, 222,979; Jun, 83,947
Total open interest: 1,355,419
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: S&P Global Platts

MONTH-AHEAD TEMPERATURE FORECAST MAP



Source: S&P Global Platts, Custom Weather

US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE

NATURAL GAS FUTURES

NYMEX May recovers ground, settles up 2.6 cents

The NYMEX May gas contract inched higher by 2.6 cents to settle at $2.701/MMBtu Friday, recovering some of the declines ceded during Thursday's session, but with the market still eyeing a wide supply-demand picture through April.

The May contract traded in a range of $2.675-$2.717/MMBtu.

The demand picture that had helped provide a semblance of support for the May contract around pre-prompt month trading levels appears to be set for a downward slide throughout a large chunk of April, likely weighing on the futures contract as production levels remain robust.

S&P Global Platts Analytics projects that gas consumption levels will slide to an average of 66.7 Bcf/d April 15-21, a dramatic 12.4 Bcf/d drop from the average in the first six days of April.

High demand levels have helped to mitigate much of the pricing impact that overall higher supply levels could have had on the prompt-month contract compared with year ago, which Platts Analytics puts at 84.9 Bcf/d through April, 8.6 Bcf/d above year-ago levels.

Looking ahead, Daniel Myers of Gelber & Associates said in a market note that while "weather forecasts remain supportive in the immediate future," engendering further withdrawals deeper into April, "it is hard to override the production growth that threatens to flood storage and collapse prices when milder weather takes over."

While much of the focus has been centralized on robust production levels, supply has also seen a boost from the Western Canadian market, with flows from that region averaging 5.9 Bcf/d so far in April, up nearly 1 Bcf/d from last year.

A combination of strong Upper Midwest demand that is 5.7 Bcf/d above year-ago early April levels and AECO cash prices that have averaged C$1.925/Gj over the last 30 days — 54 Canadian cents lower than last year — has helped to encourage additional flows into the US market.

NYMEX HENRY HUB GAS FUTURES CONTRACT, APR 6

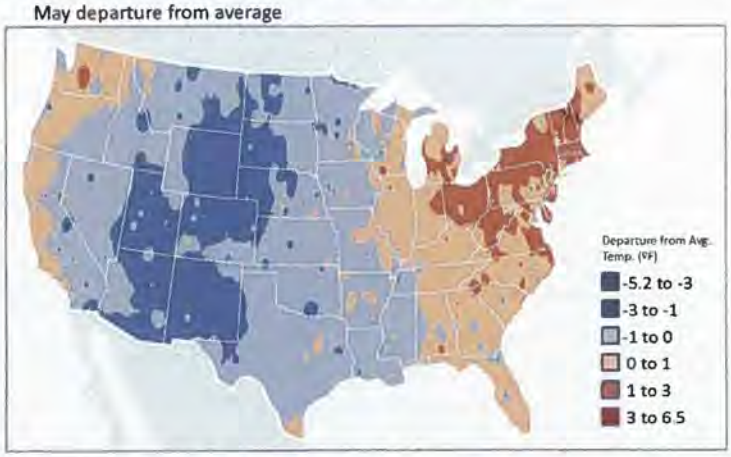
	Settlement	High	Low	+/-	Volume
May 2018	2.701	2.717	2.675	0.026	36131
Jun 2018	2.747	2.768	2.729	0.018	8962
Jul 2018	2.804	2.829	2.790	0.013	2894
Aug 2018	2.825	2.850	2.813	0.013	1759
Sep 2018	2.816	2.838	2.804	0.013	957
Oct 2018	2.829	2.850	2.816	0.012	1512
Nov 2018	2.876	2.895	2.870	0.011	582
Dec 2018	3.003	3.018	2.988	0.012	399
Jan 2019	3.088	3.101	3.075	0.013	765
Feb 2019	3.053	3.064	3.046	0.011	72
Mar 2019	2.945	2.958	2.940	0.010	736
Apr 2019	2.666	2.682	2.658	-0.001	1042
May 2019	2.637	2.652	2.630	-0.003	449
Jun 2019	2.664	2.677	2.658	-0.004	88
Jul 2019	2.693	2.705	2.683	-0.004	201
Aug 2019	2.697	2.709	2.689	-0.005	123
Sep 2019	2.682	2.692	2.675	-0.007	85
Oct 2019	2.709	2.723	2.704	-0.007	118
Nov 2019	2.765	2.775	2.764	-0.008	6
Dec 2019	2.894	2.915	2.893	-0.009	5
Jan 2020	2.996	2.996	2.996	-0.011	0
Feb 2020	2.974	2.974	2.974	-0.013	0
Mar 2020	2.888	2.888	2.888	-0.013	0
Apr 2020	2.638	2.638	2.638	-0.013	0
May 2020	2.616	2.616	2.616	-0.013	0
Jun 2020	2.644	2.644	2.644	-0.013	0
Jul 2020	2.674	2.674	2.674	-0.013	0
Aug 2020	2.679	2.679	2.679	-0.011	0
Sep 2020	2.669	2.669	2.669	-0.011	0
Oct 2020	2.696	2.696	2.696	-0.011	0
Nov 2020	2.751	2.751	2.751	-0.011	0
Dec 2020	2.897	2.897	2.897	-0.011	0
Jan 2021	3.025	3.025	3.025	-0.011	0
Feb 2021	3.003	3.003	3.003	-0.011	0
Mar 2021	2.919	2.696	2.696	-0.011	3
Apr 2021	2.671	2.671	2.671	-0.009	0

Contract data for Thursday
Volume of contracts traded: 358,768
Front-months open interest:
May, 393,203; Jun, 119,711; Jul, 172,603
Total open interest: 1,506,829
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: S&P Global Platts

MONTH-AHEAD TEMPERATURE FORECAST MAP



Source: S&P Global Platts, Custom Weather

US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE

NATURAL GAS FUTURES

NYMEX June gas down 0.9 cent to $2.732/MMBtu

The NYMEX front-month natural gas futures contract nudged 0.9 cent lower Tuesday to settle at $2.732/MMBtu, with US demand projected to continue to pace below year-ago levels.

The contract traded in a range of $2.706/MMBtu to $2.773/MMBtu.

Tuesday's slip was the fourth decline in the past five trading sessions and comes as US demand is expected to average 62.7 Bcf/d over the next seven days, only a 600 MMcf/d increase from the average for Monday and Tuesday, according to S&P Global Platts Analytics.

Month to date, US demand has averaged 61.6 Bcf/d, down from the 63.6 Bcf/d averaged this time last May, according to Platts Analytics.

Looking ahead, the most recent eight- to 14-day weather outlook from the US National Weather Service calls for a likelihood of warmer-than-average temperatures for much of the US, which could lend support to power burn demand in many regions.

US gas demand over the same period is expected to average 63.2 Bcf/d, according to Platts Analytics, with power burn accounting for 27.7 Bcf/d of that total.

US dry production is forecast by Platts Analytics to take a step back over the coming weeks, averaging 77.4 Bcf/d over the next 14 days, down from the 78.2 Bcf/d averaged throughout May thus far.

Still, that level would be well above the 70.7 Bcf/d averaged this time last May, which could allow storage stocks to cut into the estimated 28.4% deficit to the five-year average that occurred due to a high-demand winter.

Increased exports of gas to Mexico could give support to total demand; however, that does not appear to be on the horizon in the short term, with Platts Analytics projecting exports to Mexico to average 4.4 Bcf/d over the next 14 days, in line with what has been seen through May thus far.

NYMEX HENRY HUB GAS FUTURES CONTRACT, MAY 8

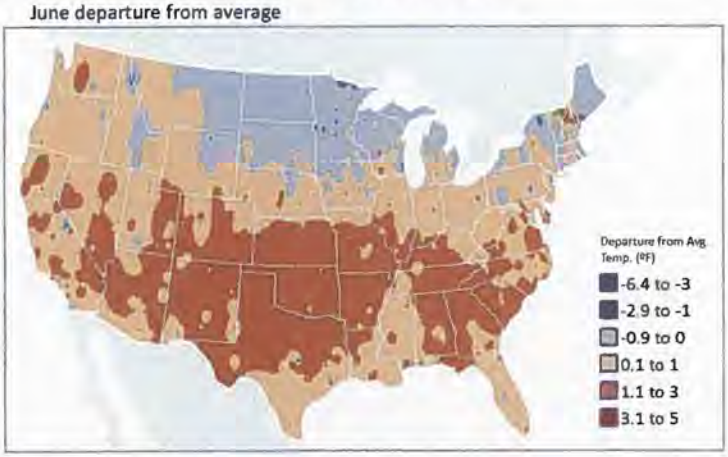
	Settlement	High	Low	+/-	Volume
Jun 2018	2.732	2.773	2.706	-0.009	71708
Jul 2018	2.760	2.797	2.735	-0.007	16107
Aug 2018	2.767	2.799	2.740	-0.005	2306
Sep 2018	2.752	2.782	2.725	-0.003	2103
Oct 2018	2.759	2.791	2.734	-0.005	2657
Nov 2018	2.797	2.829	2.775	-0.007	987
Dec 2018	2.897	2.927	2.876	-0.010	594
Jan 2019	2.978	3.009	2.958	-0.012	1339
Feb 2019	2.942	2.974	2.923	-0.013	180
Mar 2019	2.833	2.867	2.819	-0.018	1134
Apr 2019	2.536	2.566	2.525	-0.023	1334
May 2019	2.506	2.536	2.497	-0.023	922
Jun 2019	2.537	2.567	2.529	-0.023	101
Jul 2019	2.571	2.599	2.562	-0.023	393
Aug 2019	2.576	2.603	2.565	-0.023	145
Sep 2019	2.561	2.588	2.551	-0.024	59
Oct 2019	2.585	2.611	2.574	-0.024	369
Nov 2019	2.646	2.672	2.642	-0.026	14
Dec 2019	2.788	2.812	2.778	-0.028	61
Jan 2020	2.894	2.904	2.893	-0.030	10
Feb 2020	2.866	2.880	2.866	-0.032	33
Mar 2020	2.779	2.787	2.774	-0.032	51
Apr 2020	2.527	2.549	2.526	-0.039	51
May 2020	2.502	2.520	2.500	-0.039	51
Jun 2020	2.531	2.531	2.530	-0.041	30
Jul 2020	2.563	2.563	2.563	-0.041	0
Aug 2020	2.571	2.571	2.571	-0.041	0
Sep 2020	2.561	2.561	2.561	-0.041	0
Oct 2020	2.586	2.586	2.585	-0.041	2
Nov 2020	2.646	2.646	2.642	-0.041	20
Dec 2020	2.793	2.793	2.793	-0.041	0
Jan 2021	2.898	2.900	2.898	-0.041	1
Feb 2021	2.876	2.885	2.876	-0.041	33
Mar 2021	2.784	2.784	2.784	-0.041	0
Apr 2021	2.552	2.646	2.642	-0.038	0
May 2021	2.528	2.550	2.525	-0.038	11

Contract data for Monday
Volume of contracts traded: 320,783
Front-months open interest:
Jun, 231,440; Jul, 219,335; Aug, 65,909
Total open interest: 1,452,146
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: S&P Global Platts

MONTH-AHEAD TEMPERATURE FORECAST MAP



Source: S&P Global Platts, Custom Weather

US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE

NATURAL GAS FUTURES

NYMEX July gas settles 4 cents lower

The NYMEX July natural gas futures contract dipped further Tuesday, as Monday's bearish sentiment remained on a mixed weather outlook.

The front-month contract fell 4 cents to settle at $2.89/MMBtu after trading between $2.874/MMBtu and $2.931/MMBtu so far Tuesday.

The price slide is a product of the "weather pattern and short-term profit-taking," according to John Woods, president of JJ Woods Associates.

US National Weather Service forecasts show above-average temperatures over most of the US in its six- to 10-day outlook, while below-average conditions are expected in the Northwest and the Southeast.

Milder temperatures in key consuming markets could drive demand further down. Total US demand fell 600 MMcf to 70.4 Bcf Tuesday. S&P Global Platts Analytics forecast demand to pick up over the next eight to 14 days to 64.5 Bcf/d.

Most of this drop came from the fall in gas-fired power burn, which dropped 10% from last week to 27.3 Bcf Tuesday based on Platts Analytics data. Power burn demand is estimated to reach 30.3 Bcf/d over the next eight to 14 days, according to Platts Analytics, which would likely push up gas prices.

The drop in demand could put the process of building gas stocks back on track in the upcoming storage report. Early cooling demand and withdrawals that extended deep into April have affected storage replenishment efforts during the injection season. Current US gas stocks are 22.5% below the five-year average at 1.725 Tcf based on US Energy Information Administration data.

"The economy is turning and industrial demand is coming up. Now throw that all into the mix and we will see prices come up again to a healthy level again," Woods said.

US dry gas production was down 1.2 Bcf to 77.5 Bcf Tuesday with notable declines in the Northeast, Southeast and the Rockies. But production is likely to pick up in the coming days with Platts Analytics forecasting production to reach 78 Bcf/d over the next eight to 14 days.

MONTH-AHEAD TEMPERATURE FORECAST MAP

July departure from average

Source: S&P Global Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, JUN 5

	Settlement	High	Low	+/-	Volume
Jul 2018	2.890	2.931	2.874	-0.040	68017
Aug 2018	2.907	2.945	2.889	-0.036	10939
Sep 2018	2.892	2.928	2.875	-0.033	3628
Oct 2018	2.900	2.934	2.882	-0.032	2519
Nov 2018	2.940	2.971	2.923	-0.031	1431
Dec 2018	3.046	3.077	3.031	-0.030	507
Jan 2019	3.131	3.160	3.115	-0.028	891
Feb 2019	3.097	3.125	3.083	-0.026	357
Mar 2019	2.994	3.020	2.980	-0.024	1013
Apr 2019	2.635	2.652	2.624	-0.017	1427
May 2019	2.594	2.608	2.584	-0.016	259
Jun 2019	2.622	2.636	2.609	-0.016	144
Jul 2019	2.654	2.669	2.641	-0.015	220
Aug 2019	2.661	2.677	2.648	-0.015	140
Sep 2019	2.648	2.664	2.635	-0.016	150
Oct 2019	2.669	2.684	2.656	-0.016	166
Nov 2019	2.723	2.732	2.716	-0.018	7
Dec 2019	2.856	2.864	2.845	-0.017	41
Jan 2020	2.956	2.959	2.950	-0.016	21
Feb 2020	2.921	2.921	2.919	-0.018	1
Mar 2020	2.828	2.830	2.824	-0.015	2
Apr 2020	2.554	2.554	2.541	-0.007	5
May 2020	2.530	2.530	2.515	-0.004	3
Jun 2020	2.561	2.570	2.560	-0.004	3
Jul 2020	2.595	2.599	2.595	-0.004	1
Aug 2020	2.603	2.607	2.603	-0.004	1
Sep 2020	2.591	2.595	2.591	-0.004	1
Oct 2020	2.612	2.616	2.612	-0.004	1
Nov 2020	2.669	2.673	2.669	-0.004	1
Dec 2020	2.804	2.810	2.804	-0.006	1
Jan 2021	2.904	2.904	2.898	-0.006	1
Feb 2021	2.873	2.873	2.873	-0.005	0
Mar 2021	2.788	2.788	2.785	-0.002	0
Apr 2021	2.528	2.528	2.528	0.000	0
May 2021	2.503	2.810	2.804	0.000	0
Jun 2021	2.529	2.529	2.529	0.000	0

Contract data for Monday
Volume of contracts traded: 243,941
Front-months open interest:
Jul, 301,873; Aug, 111,702; Sep, 172,302
Total open interest: 1,563,859
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: S&P Global Platts

US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE

NATURAL GAS FUTURES

NYMEX August higher after storage build

The NYMEX August natural gas futures contract increased Friday, up 2.10 cents to settle at $2.837/MMBtu after the US Energy Information Administration announced a larger-than-expected storage build for the week that ended June 29.

The front-month contract traded Friday between $2.824/MMBtu and $2.862/MMBtu.

EIA announced a storage build of 78 Bcf, boosting total stocks to 2.152 Tcf for the week that ended June 29. Analysts had expected a 74 Bcf build. Total stocks are 717 Bcf below year-ago inventory levels and 493 Bcf under the five-year historical average.

Although the storage deficit continues to persist, the market is factoring in the record production of the last few days and is not really reacting, according to Daniel Myers, a market analyst at Gelber & Associates.

"In June, the market felt pressure that helped prices build to the $3/MMBtu mark, but that has acted as a price ceiling because of high production," Myers said.

US dry gas production is expected to total 79.9 Bcf Friday, after three record-breaking days in the last week, according to S&P Global Platts Analytics data.

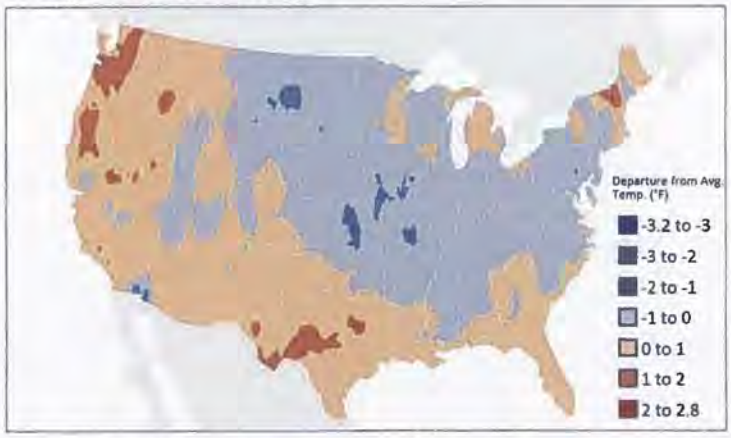
Total US supply has averaged 86.5 Bcf/d so far in July, an 8.6 Bcf/d increase compared with the same period in 2017, according to Platts Analytics.

Looking ahead, the most recent eight- to 14-day outlook from the US National Weather Service continues to call for warmer-than-average temperatures in the Northeast and Midwest, in line with the weather service's most recent one-month forecast, which projected a warmer-than-average July.

So far in July, the Northeast has seen average power burn of 9.313 Bcf/d, a 23% increase compared with the same time last year. The Midwest is averaging power burn of 3.357 Bcf/d, 1.138 Bcf/d higher than in the year-ago period, according to Platts Analytics.

MONTH-AHEAD TEMPERATURE FORECAST MAP

August departure from average



Source: S&P Global Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, JUL 6

	Settlement	High	Low	+/-	Volume
Aug 2018	2.858	2.862	2.824	0.021	54823
Sep 2018	2.826	2.833	2.799	0.014	9974
Oct 2018	2.834	2.841	2.809	0.012	3468
Nov 2018	2.880	2.888	2.857	0.010	841
Dec 2018	2.986	2.992	2.965	0.008	640
Jan 2019	3.067	3.074	3.047	0.008	1489
Feb 2019	3.032	3.037	3.014	0.007	177
Mar 2019	2.937	2.943	2.920	0.005	531
Apr 2019	2.658	2.661	2.644	0.003	815
May 2019	2.631	2.634	2.617	0.003	532
Jun 2019	2.660	2.663	2.651	0.003	249
Jul 2019	2.690	2.692	2.678	0.003	283
Aug 2019	2.698	2.698	2.686	0.002	78
Sep 2019	2.682	2.683	2.670	0.001	27
Oct 2019	2.698	2.701	2.688	-0.001	195
Nov 2019	2.752	2.755	2.746	-0.001	18
Dec 2019	2.881	2.884	2.873	0.001	10
Jan 2020	2.975	2.985	2.971	0.001	214
Feb 2020	2.937	2.953	2.933	0.000	2
Mar 2020	2.840	2.845	2.840	-0.005	42
Apr 2020	2.548	2.558	2.541	0.002	90
May 2020	2.519	2.531	2.511	0.004	45
Jun 2020	2.546	2.546	2.540	0.004	0
Jul 2020	2.574	2.574	2.574	0.004	0
Aug 2020	2.586	2.586	2.586	0.002	0
Sep 2020	2.571	2.571	2.571	0.002	0
Oct 2020	2.587	2.587	2.587	0.002	0
Nov 2020	2.642	2.642	2.642	0.002	0
Dec 2020	2.766	2.766	2.766	-0.002	0
Jan 2021	2.864	2.864	2.864	-0.002	0
Feb 2021	2.833	2.833	2.833	0.000	0
Mar 2021	2.745	2.745	2.745	-0.004	0
Apr 2021	2.493	2.493	2.493	0.002	0
May 2021	2.469	2.469	2.469	0.002	0
Jun 2021	2.496	2.864	2.864	0.002	0
Jul 2021	2.526	2.526	2.526	0.002	0

Contract data for Thursday
Volume of contracts traded: 206,438
Front-months open interest:
Aug, 199,443; Sep, 196,840; Oct, 166.132
Total open interest: 1,492,209
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: S&P Global Platts

US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE

NATURAL GAS FUTURES

NYMEX September little changed as production balances uptick in power burn

The NYMEX September natural gas futures contract ended Monday relatively unchanged, settling 0.7 cent higher at $2.860/MMBtu as strong production balanced out the uptick in power burn expected for the rest of the week.

The front-month contract traded between $2.822/MMBtu and $2.865/MMBtu on Monday.

Total US production remained relatively flat over the weekend, decreasing 300 MMcf day on day to 80.7 Bcf Monday, according to S&P Global Platts Analytics.

Looking ahead to the next seven days, US dry gas production is expected to average 80.8 Bcf/d, and has averaged 80.5 Bcf/d thus far in August, 7.4 Bcf/d more than at the same time last year, according to Platts Analytics.

A warmer-than-average summer has made it difficult for increase in gas production to stamp its authority on the sector and close the storage deficit.

Looking ahead, the most recent six- to 10-day temperature forecast from the US National Weather Service calls for warmer-than-average temperatures for most of the Midcontinent and Upper Midwest. And a warmer-than average forecast in California could put further pressure on an already tight market there.

In the Midwest, a 4 degrees Fahrenheit week-on-week increase in temperatures is expected to translate to an increase in burn of 241 MMcf/d this week. The Midcontinent producing states are also expected warm up, with temperatures set to be slightly more than 3 F higher, but that should only drive a small increase in gas burn, according to Platts Analytics.

Nationwide power burn has averaged 27.81 Bcf/d so far in 2018, 3.12 Bcf/d more than power burn through the same point last year, according to Platts Analytics.

— *Arsalan Syed*

MONTH-AHEAD TEMPERATURE FORECAST MAP

September departure from average

Source: S&P Global Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, AUG 6

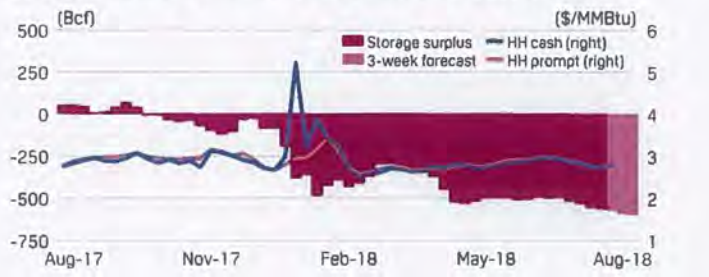
	Settlement	High	Low	+/-	Volume
Sep 2018	2.860	2.865	2.822	0.007	44181
Oct 2018	2.866	2.875	2.835	0.004	11954
Nov 2018	2.903	2.912	2.876	0.005	3673
Dec 2018	3.003	3.010	2.980	0.005	1599
Jan 2019	3.090	3.096	3.065	0.008	2346
Feb 2019	3.052	3.057	3.029	0.007	794
Mar 2019	2.947	2.950	2.925	0.006	1253
Apr 2019	2.634	2.634	2.614	0.008	1225
May 2019	2.604	2.604	2.584	0.009	430
Jun 2019	2.632	2.632	2.615	0.008	328
Jul 2019	2.664	2.665	2.647	0.007	101
Aug 2019	2.669	2.669	2.654	0.007	46
Sep 2019	2.651	2.651	2.630	0.007	26
Oct 2019	2.667	2.667	2.649	0.008	133
Nov 2019	2.716	2.716	2.697	0.008	40
Dec 2019	2.843	2.843	2.827	0.009	51
Jan 2020	2.938	2.938	2.921	0.009	54
Feb 2020	2.898	2.898	2.887	0.006	14
Mar 2020	2.795	2.795	2.789	0.006	2
Apr 2020	2.496	2.500	2.494	0.000	8
May 2020	2.458	2.460	2.454	-0.002	0
Jun 2020	2.486	2.489	2.486	-0.003	0
Jul 2020	2.516	2.516	2.516	-0.003	8
Aug 2020	2.523	2.534	2.523	-0.003	8
Sep 2020	2.506	2.506	2.506	-0.004	0
Oct 2020	2.521	2.521	2.521	-0.004	0
Nov 2020	2.580	2.580	2.580	-0.004	0
Dec 2020	2.708	2.708	2.708	-0.006	0
Jan 2021	2.812	2.820	2.812	-0.008	0
Feb 2021	2.780	2.780	2.780	-0.010	0
Mar 2021	2.697	2.697	2.697	-0.011	0
Apr 2021	2.438	2.438	2.438	-0.013	0
May 2021	2.407	2.425	2.407	-0.013	0
Jun 2021	2.436	2.436	2.436	-0.013	0
Jul 2021	2.467	2.780	2.780	-0.013	0
Aug 2021	2.480	2.480	2.480	-0.013	0

Contract data for Friday
Volume of contracts traded: 241,941
Front-months open interest:
Sep, 283,647; Oct, 179,040; Nov, 151.300
Total open interest: 1,573,210
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: S&P Global Platts

US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX October gas futures lower after production hits record high over weekend

NYMEX October gas futures dropped 9.3 cents Tuesday, as record production over the weekend put downward pressure on the market.

The front-month contract settled at $2.823/MMBtu Tuesday, after trading in a range of $2.812-$2.904/MMBtu on Tuesday.

US dry gas production reached a record high over the long Labor Day Weekend, increasing to 83.4 Bcf/d Sunday. It has decreased to 82.5 Bcf/d Tuesday, according to S&P Global Platts Analytics.

Total demand — including exports to Mexico and LNG exports — decreased by 700 MMcf/d on the day to 75.8 Bcf/d Tuesday. Deliveries to the Sabine Pass terminal drove the US drop, falling close to 600 MMcf/d, according to Platts Analytics.

Overall, the supply-demand balance has grown recently as record production continued and demand backed off. This can possibly drive storage injections higher as summer months come to an end.

The bearish sentiment continued Tuesday, with power burn totals in the Midwest falling 251 MMcf/d to 3.04 Bcf/d, according to Platts Analytics.

Looking ahead, the NYMEX winter strip averaged approximately $2.961/MMBtu on Tuesday as the market does not seem bothered by the storage deficit going into the winter months and as strong production seems to be deemed sufficient to take care of approaching demand.

All the bearish factors hampered the market, as the front-month contract reached its lowest levels since the beginning of August. The front-month contract has not broken $3/MMBtu since June 15 as strong dry gas production has kept a lid on the market.

Looking ahead, the most recent six- to 10-day temperature forecast from the National Weather Service calls for higher-than-average temperatures for much of the country, excluding the Pacific Northwest, which will put upward pressure on the market.

— Arsalan Syed

MONTH-AHEAD TEMPERATURE FORECAST MAP

October departure from average

Source: S&P Global Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, SEP 4

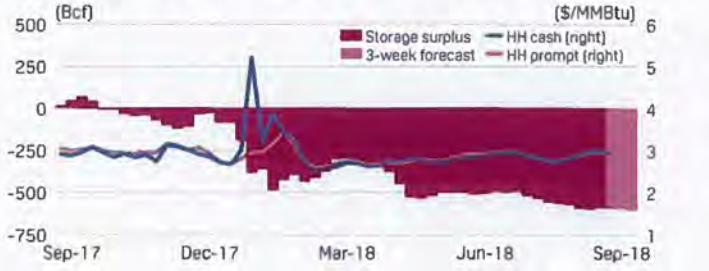
	Settlement	High	Low	+/-	Volume
Oct 2018	2.823	2.904	2.812	-0.093	93845
Nov 2018	2.842	2.926	2.831	-0.097	18613
Dec 2018	2.937	3.014	2.923	-0.092	9670
Jan 2019	3.027	3.100	3.013	-0.087	3910
Feb 2019	2.995	3.060	2.981	-0.083	1508
Mar 2019	2.891	2.956	2.877	-0.079	2393
Apr 2019	2.614	2.653	2.602	-0.048	2294
May 2019	2.585	2.617	2.573	-0.043	515
Jun 2019	2.616	2.646	2.603	-0.042	726
Jul 2019	2.648	2.678	2.634	-0.042	481
Aug 2019	2.651	2.678	2.638	-0.041	343
Sep 2019	2.632	2.662	2.619	-0.040	221
Oct 2019	2.648	2.680	2.634	-0.040	517
Nov 2019	2.697	2.726	2.681	-0.039	162
Dec 2019	2.820	2.846	2.805	-0.036	128
Jan 2020	2.914	2.936	2.900	-0.036	116
Feb 2020	2.875	2.895	2.870	-0.035	19
Mar 2020	2.771	2.771	2.766	-0.033	106
Apr 2020	2.496	2.496	2.490	-0.020	104
May 2020	2.466	2.466	2.466	-0.014	0
Jun 2020	2.492	2.492	2.480	-0.014	5
Jul 2020	2.520	2.520	2.520	-0.015	0
Aug 2020	2.526	2.526	2.526	-0.017	0
Sep 2020	2.510	2.510	2.510	-0.017	0
Oct 2020	2.526	2.526	2.526	-0.017	0
Nov 2020	2.580	2.580	2.580	-0.016	0
Dec 2020	2.706	2.720	2.706	-0.016	0
Jan 2021	2.808	2.811	2.808	-0.015	4
Feb 2021	2.774	2.774	2.774	-0.014	0
Mar 2021	2.687	2.687	2.687	-0.014	0
Apr 2021	2.430	2.430	2.430	-0.016	0
May 2021	2.400	2.400	2.400	-0.014	0
Jun 2021	2.428	2.428	2.428	-0.014	0
Jul 2021	2.458	2.458	2.458	-0.014	0
Aug 2021	2.470	2.687	2.687	-0.014	0
Sep 2021	2.467	2.467	2.467	-0.014	0

Contract data for Monday
Volume of contracts traded: 504,872
Front-months open interest:
Oct, 226,422; Nov, 202,851; Dec, 145.156
Total open interest: 1,617,589
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION

Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: S&P Global Platts

US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



NATURAL GAS FUTURES

NYMEX November gas slides 2.2 cents on offsetting heating and cooling demand

The NYMEX November natural gas futures contract settled at $3.143/MMBtu Friday, down 2.2 cents on offsetting movements in heating and cooling demand.

The front-month contract traded between $3.109/MMBtu and $3.224/MMBtu.

"East has a warm start to fall," said Elaine Levin, president of PowerHouse Brokerage, noting that the price slide could be a result of the depressed demand across much of the eastern US.

Total US gas burn for power generation is set to decline by 2.8 Bcf day on day and stand at 31.2 Bcf/d, likely due to mild temperatures, according to S&P Global Platts Analytics. Power burn is estimated to drop and average 26.5 Bcf over the next eight to 14 days as cooling demand continues to decrease.

The declines in power burn are offset by gains in heating demand across much of the northern and western parts of the country. Residential and commercial demand is estimated to stand at 16.1 Bcf/d Friday, up 3 Bcf day on day.

Heating demand is likely to climb and estimated to average 19.9 Bcf/d over the next eight to 14 days, with the US National Weather Service calling for a likelihood of cooler-than-average temperatures across much of these regions.

"Storage builds have taken some of the wind out of the sail," Levin said. The surprisingly large injection of 98 Bcf to US gas stocks announced Thursday by the US Energy Information Administration resulted in bearish sentiment in the market, she added.

Current gas sits at 2.866 Tcf, down 17.5% from the five-year levels of 3.473 Tcf, according to EIA data.

After a long consolidation period, the market finally was able to break out of a long-established trading range of $2.75/MMBtu to $3.08/MMBtu in the week.

The prompt-month contract hit a high of $3.23/MMBtu Wednesday. The contract was last seen at this level on January 17.

— Veda Chowdhury

MONTH-AHEAD TEMPERATURE FORECAST MAP

November departure from average

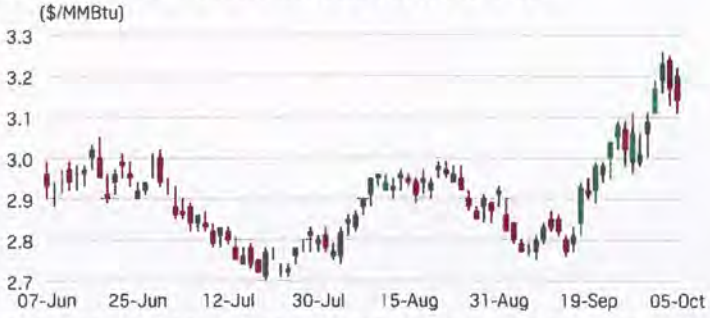
Source: S&P Global Platts, Custom Weather

NYMEX HENRY HUB GAS FUTURES CONTRACT, OCT 5

	Settlement	High	Low	+/-	Volume
Nov 2018	3.143	3.224	3.109	-0.022	96156
Dec 2018	3.188	3.274	3.161	-0.033	24824
Jan 2019	3.253	3.340	3.225	-0.035	13240
Feb 2019	3.167	3.238	3.150	-0.028	3652
Mar 2019	2.990	3.035	2.979	-0.008	4396
Apr 2019	2.713	2.726	2.696	0.009	6334
May 2019	2.675	2.685	2.658	0.009	1144
Jun 2019	2.704	2.713	2.686	0.009	438
Jul 2019	2.736	2.745	2.718	0.009	431
Aug 2019	2.737	2.746	2.720	0.009	331
Sep 2019	2.717	2.725	2.699	0.010	367
Oct 2019	2.735	2.742	2.717	0.010	1619
Nov 2019	2.782	2.786	2.764	0.012	654
Dec 2019	2.909	2.910	2.889	0.014	294
Jan 2020	2.997	3.000	2.977	0.012	499
Feb 2020	2.929	2.929	2.910	0.011	100
Mar 2020	2.796	2.796	2.773	0.015	155
Apr 2020	2.535	2.545	2.517	0.012	425
May 2020	2.501	2.516	2.484	0.013	15
Jun 2020	2.530	2.546	2.529	0.013	1
Jul 2020	2.560	2.560	2.546	0.012	26
Aug 2020	2.565	2.565	2.547	0.010	2
Sep 2020	2.551	2.551	2.540	0.008	44
Oct 2020	2.569	2.575	2.556	0.008	44
Nov 2020	2.629	2.629	2.629	0.009	0
Dec 2020	2.761	2.761	2.751	0.006	21
Jan 2021	2.866	2.866	2.866	0.006	0
Feb 2021	2.815	2.815	2.815	0.006	0
Mar 2021	2.714	2.714	2.714	0.006	0
Apr 2021	2.464	2.464	2.464	-0.005	0
May 2021	2.435	2.445	2.435	-0.005	0
Jun 2021	2.465	2.475	2.465	-0.005	0
Jul 2021	2.497	2.508	2.497	-0.005	0
Aug 2021	2.510	2.520	2.510	-0.005	0
Sep 2021	2.503	2.464	2.464	-0.005	31
Oct 2021	2.523	2.532	2.523	-0.005	0

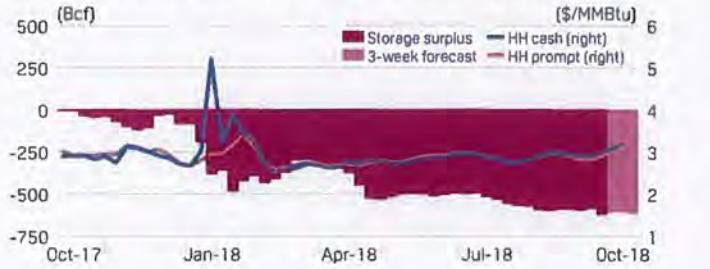
Contract data for Thursday
Volume of contracts traded: 479,781
Front-months open interest:
Nov, 320,787; Dec, 180,072; Jan, 208.805
Total open interest: 1,699,571
Data is provided by a third-party vendor and is accurate as of 5:30 pm Eastern time.

NYMEX PROMPT MONTH FUTURES CONTINUATION



Note: The entire wick of the candlestick depicts the high and low daily front-month Henry Hub futures price range. The body of the candlestick depicts the price range between the open and close, with a red candlestick indicating a close on the downside and a green candlestick indicating a close on the high end.
Source: S&P Global Platts

US GAS STORAGE SURPLUS vs ROLLING 5-YEAR AVERAGE



Duke Energy Kentucky
Quarterly NYMEX Price Calculation
December 2016 - November 2018

	Dec 2016 - Feb 2017		Mar 2017 - May 2017	
NYMEX Close on :	11/7/2016		2/7/2017	
	Dec-16	$2.816	Mar-17	$3.130
	Jan-17	$2.978	Apr-17	$3.192
	Feb-17	$3.011	May-17	$3.246
	Average	**$2.935**	Average	**$3.189**

	Jun 2017 - Aug 2017		Sep 2017 - Nov 2017	
NYMEX Close on :	5/9/2017		8/7/2017	
	Jun-17	$3.227	Sep-17	$2.801
	Jul-17	$3.315	Oct-17	$2.840
	Aug-17	$3.349	Nov-17	$2.926
	Average	**$3.297**	Average	**$2.856**

	Dec 2017 - Feb 2018		Mar 2018 - May 2018	
NYMEX Close on :	11/6/2018		2/6/2018	
	Dec-17	$3.134	Mar-18	$2.759
	Jan-18	$3.232	Apr-18	$2.723
	Feb-18	$3.231	May-18	$2.735
	Average	**$3.199**	Average	**$2.739**

	Jun 2018 - Aug 2018		Sep 2018 - Nov 2018	
NYMEX Close on :	5/8/2018		8/6/2018	
	Jun-18	$2.732	Sep-18	$2.860
	Jul-18	$2.760	Oct-18	$2.866
	Aug-18	$2.767	Nov-18	$2.903
	Average	**$2.753**	Average	**$2.876**

Note: Source Documents included in STAFF-DR-03-022(a)

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-023

REQUEST:

Refer to Duke Kentucky's response to the Attorney General's First Request, Item 3. Confirm that the spreadsheet containing the projected monthly income and dividends are stated in terms of millions of dollars.

RESPONSE:

The information in the spreadsheet for "projected" monthly income and dividends are in terms of thousands of dollars.

PERSON RESPONSIBLE: Robert "Beau" H. Pratt

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-024

REQUEST:

Refer to Duke Kentucky's response to the Attorney General's First Request, Item 29.

a. Explain the methodology that was used in generating the additions and retirements that appear on the Excel spreadsheet provided in this response.

b. Provide specific details concerning the forecasted plant additions and retirements for the forecasted period, included separately identified projects and their locations, and associated costs. Also, include the projected construction start and completion months for each identified project.

c. For additions on the schedule that are listed as Completed Construction Not Classified, provide an explanation as to why these cannot be classified.

RESPONSE:

a. The additions and retirements provided for actual months up to May 2018 were generated by our plant accounting system based on actual activity. The additions for forecasted months were generated by our capital modeling software based on capital spend projections and assumptions related to the closing of capital spend to plant in-service from the business functions. Retirements for forecasted months are generated by our capital modeling software based on historical retirements by account, adjusted for specific known retirements where necessary.

b. For details of forecasted plant additions by month, see STAFF-DR-024(b) Attachment. Retirements are forecasted by plant account based on historical averages, adjusted for discrete retirements where necessary. Retirements by plant account are included in the response to Attorney General's First Request, Item 29.

c. The company does not forecast capital spend at the account level, therefore forecasted additions are not classified to specific accounts.

PERSON RESPONSIBLE: Robert H. "Beau" Pratt
Cynthia S. Lee

KYPSC CASE NO. 2018-00261

STAFF-DR-03-024(b) ATTACHMENT IS BEING ELECTRONICALLY FILED AND PROVIDED ON CD

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-025

REQUEST:

Refer to Duke Kentucky's response to the Attorney General's First Request, Item 62. Explain why depreciation expense increased over $11.2 million from 2018 to 2019.

RESPONSE:

The $11.2 million increase in depreciation and amortization expense from 2018 to 2019 reflected in FR 16(7)(h) is primarily driven by increases within the electric business. Forecasted amortizations resulting from the recent electric rate order and the new ESM rider account for $4.4 million of the total increase. Increased electric plant in service accounts for $5.9 million of the total increase, while increased gas plant in service accounts for the remaining $0.9 million increase.

PERSON RESPONSIBLE: Robert H. "Beau" Pratt

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-026

REQUEST:

Refer to Duke Kentucky's response to the Attorney General's First Request, Item 89, Attachment 1, page 3, and Attachment 2, pages 2-3.

a. For calendar years 2014, 2015, 2016, and for the months available in 2018, provide a comparison of the budgeted versus actual net periodic benefit costs for Duke Energy Corp. in the formal listed in the table on AG-DR-01-089 Confidential Attachment 1 (2017 actuarial report), page 3.

b. Provide a breakdown of Duke Kentucky's pension costs for the base period and the forecasted test year in the format listed in the table on AG-DR-01-089 Confidential Attachment 1 (2017 actuarial report), page 3. Provide a breakdown of Duke Kentucky's costs and those passed through by affiliates.

c. For 2018, provide a monthly comparison of the budgeted versus actual net periodic costs for Duke Kentucky's costs and those passed through by affiliates. Consider this an ongoing request throughout this proceeding.

d. Explain in detail how the pension costs for the base period and forecasted test year were determined.

RESPONSE:

a. Please refer to STAFF-DR-03-026(a) Attachment.

b. Please refer to STAFF-DR-03-026(b) Attachment.

c. Please refer to STAFF-DR-03-026(c) Attachment.

d. Duke Energy Corporation maintains, and Duke Energy Kentucky participates in, qualified, non-contributory, pension plans. Pension costs for both the base period and forecasted test year are actuarially determined and require the use of actuarial assumptions, which in accordance with US GAAP, are selected by Duke Energy Corporation. Pension costs are provided in actuarial reports issued to Duke Energy Corporation by its actuary.

Pension costs for the base period reflects one month of costs (12/17) based on the 2017 actuarial report, 5 months of cost (1/18 through 5/18) based on the 2018 actuarial report and six months (6/18 through 11/18) based on the 2018 actuarial budget report. Pension costs from the actuarial reports are adjusted to reflect the effect of actual labor performed by Duke Kentucky and Duke Energy affiliates. To the extent Duke Kentucky provides services to Duke Energy affiliates, a portion of its pension costs are passed to the affiliate benefiting from the services. To the extent Duke Energy affiliates perform services for Duke Energy Kentucky, a portion of the affiliate's pension costs are passed through to Duke Energy Kentucky.

Pension costs for the forecasted test year reflects nine months of costs (4/19 through 12/19) based on the 2019 actuarial budget report and three months of cost (1/20 through 3/20) based on the 2020 actuarial budget report. Pension costs from the actuarial budget reports are adjusted to reflect the effect of actual labor performed by Duke Kentucky and Duke Energy affiliates. To the extent Duke Kentucky provides services to Duke Energy affiliates, a portion of its pension costs

are passed to the affiliate benefiting from the services. To the extent Duke Energy affiliates perform services for Duke Energy Kentucky, a portion of the affiliate's pension costs are passed through to Duke Energy Kentucky.

PERSON RESPONSIBLE: Renee H. Metzler

KYPSC CASE NO. 2018-00261

STAFF-DR-03-026(a) ATTACHMENT IS BEING ELECTRONICALLY FILED AND PROVIDED ON CD

KYPSC CASE NO. 2018-00261

STAFF-DR-03-026(b) ATTACHMENT IS BEING ELECTRONICALLY FILED AND PROVIDED ON CD

KYPSC CASE NO. 2018-00261

STAFF-DR-03-026(c) ATTACHMENT IS BEING ELECTRONICALLY FILED AND PROVIDED ON CD

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-027

REQUEST:

Refer to Duke Kentucky's response to the Attorney General's First Request, Item 130. In 2014, the percent of equity increased from 53 percent to 57 percent and then declined thereafter. Explain the increase in 2014 and the subsequent decline.

RESPONSE:

In 2014, the proportion of equity increased as a result of strong earnings that were mostly weather-driven combined with an absence of dividends paid to the parent. Additionally, there was a small decrease in debt. Debt issuances in 2015 and 2016 decreased the proportion of equity as well as dividend payments to the parent.

PERSON RESPONSIBLE: Michael Covington

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-028

REQUEST:

Refer to the application, Schedule J.

a. Refer to Schedule J-1. The capital structure increases from the base period to the forecasted period by approximately $69 million. Provide an itemized list of each adjustment that comprises the $69 million, justification of the adjustment, and a reference to the application supporting this adjustment. If the adjustment is related to the Tax Cut and Jobs Act, provide the accumulated deferred income tax (ADIT) and Federal Income Tax impacts separately.

b. Refer to Schedule J-3 page 2 of 2. Provide support for the projected interest rate of 4.398 percent for the embedded cost of long-term debt.

RESPONSE:

a. The difference in long-term debt is primarily due to the planned issuance of $130 million of long-term debt in September 2019. The 13-month average of the $130 million planned debt issuance over the forecast period is approximately $70 million as shown in Schedule J-3 for the forecasted test period. The September 2019 debt issuance is to refinance Duke Energy Kentucky's $100 million debt maturity on October 1, 2019 with the balance used primarily to fund capital expenditures. The increase in common equity is accounted for from DEK's projected net income plus a $20 million dividend up to Duke Energy Ohio. The increase in common equity

offsets the decrease in short-term debt in the forecast period which is primarily driven by the 13-month average balance of the $100 million bond maturity on October 1, 2019

b. The requested support for the projected interest rate of 4.398 percent for the embedded cost of long-term debt is on Schedule J-3 page 2 of 2. The rate is calculated by dividing the annual interest rate (col. I) by the carrying value (Col. H).

PERSON RESPONSIBLE: Robert H. "Beau" Pratt

Duke Energy Kentucky
Case No. 2018-00261
Staff Third Set Data Requests
Date Received: November 6, 2018

STAFF-DR-03-029

REQUEST:

Refer to the application, Volume 12.1, Schedule L-2.2, page 61 of 71. Explain how often Duke Kentucky uses its hedging plan to reduce volatility in its gas purchases.

RESPONSE:

Currently, Duke Energy Kentucky does not hedge any of its gas purchases. On March 27, 2015, the KyPSC denied Duke Energy Kentucky's request to continue its hedging plan in Case No. 2015-00025. Since the "Hedging Plan" section of the tariff on Schedule L-2.2, page 61 of 71, references the "approved hedging plan," its effect is nullified while there is no approved hedging plan. Therefore, Duke Energy Kentucky left the language in the tariff in case the market changes and the Commission once again approves a hedging plan. However, Duke Energy Kentucky would not be opposed to eliminating this language from the tariff to reflect the Commission's Order in Case No. 2015-00025.

PERSON RESPONSIBLE: Jeff L. Kern