



PIPELINE AUTHORITY  
November 23, 2019

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Greetings!

My apologies for the delay in getting this version of our bi-monthly newsletter out.

### **Wyoming Pipeline Authority Activity**

- The WPA presented its budget to Governor Gordon on November 2. As requested, the budget was in line with the current fiscal year. We did request incremental dollars for legal fees associated with WY Energy Authority (WEA) work as well as anticipated Federal Energy Regulatory Commission (FERC) regulatory work.
- We continue to work, in conjunction with The Enhanced Oil Recovery Institute (EORI), on a mapping system to identify CO2 pipelines operating and proposed in the state. A preliminary map is available on both the EORI and the WPA websites. We are hoping to align infrastructure with fields having the highest potential for incremental production in the State. To the extent CO2 infrastructure does not align with “highest potential” reservoirs, the WPA and EORI will look at the design and cost of infrastructure necessary to move CO2 supplies.
- The WPA attended the Western Regional Carbon Capture Deployment Initiative meeting in Denver November 12th. Wyoming is in a very good position to sequester CO2 and capture the benefits of 45 Q carbon capture tax incentives offered by the federal government. The credits are worth \$35 to \$50 per ton of CO2 stored and could pave the way forward for incremental royalty revenue from sequestration of CO2 in enhanced oil recovery projects as well as carbon capture and sequestration projects on coal fired generation units. Jeff Brown from Stanford University believes the tax credits can be monetized via a tax equity sale to provide financing, in conjunction with bonding for future projects.
- The WPA continues to take a complete inventory of all major pipelines being proposed or under construction within Wyoming and Kellie Vlastos integrates the information with our graphic information system. The system is accessible via the following link <https://www.wyopipeline.com/wp-login.php> . If you do not have a login ID or password, call Kellie or sign up at <https://www.wyopipeline.com/sign-up/request-access-to-pipeline-database/> .
- As a member of the Western States and Tribal Nations Natural Gas Initiative ([www.westernnaturalgas.org](http://www.westernnaturalgas.org)) the WPA was invited to meet with Sempra Energy in San Diego on November 18, 2019 to discuss the potential for liquefaction at Sempra’s Costa Azul facility in Baja, Mexico. Sempra appears to have memorandums of understanding in place with Total, Tokyo Gas and Mitsui to build a small liquefier (0.5 Bcfd) on the existing site and first gas could flow as early as 2024. On a larger scale, Sempra would

like to build a very large scale liquefaction project (2.5 Bcfd) and is targeting an in-service date of 2027. This project would need incremental pipeline infrastructure as there is insufficient infrastructure to move this incremental gas through existing pipelines. The target mission of our group was to rally Sempra around sourcing at least a portion of the supply from Wyoming and other Western States. Sempra is receptive to the idea. However, Permian producers with better balance sheets and a need to move growing gas supplies to new markets are best positioned to support a “producer push” project to Baja if support materializes for another west coast LNG project.

- The Jordan Cove LNG project in Oregon moved a step closer to fruition when FERC issued its Final Environmental Impact Statement November 15, 2019. Jordan Cove still needs Air and Water permits from the State of Oregon which has been fighting the project. This project is really key to supporting Wyoming production growth as the Ruby Pipeline originating near Opal is the linkage to Jordan Cove. An illustration of the project and its Wyoming nexus is shown below.



### **Wyoming Energy Authority**

The WPA and WY Infrastructure Authority (WYIA) boards and ex-officio board members met on October 11 to discuss the WEA. There is great enthusiasm among all board members about the potential for the WEA and the importance of supporting a larger budget that will provide for greater emphasis on value added opportunities for energy in the State of Wyoming. A second meeting was held on November 14<sup>th</sup> in Cheyenne.

### **An East/West Divide**

Growing production across the border in Colorado (DJ Basin) and in the Powder River Basin and continued growth in production in the Marcellus (pushing back Rockies supply) is creating bottlenecks for gas in SE Wyoming. As you can see below, the difference in pricing between Cheyenne and Opal was \$0.70/MMBtu on October 2, 2019. Pipelines traditionally flowing West to East are working to reverse traditional flows. Weakening finances for producers and limited capital market access is hindering the traditional “producer push” to finance long term contracts necessary to fund expansion and reversal projects in the Rockies. Tallgrass Energy is focused on its Cheyenne Connector project which will move 800,000 MMBtu/day initially from the DJ Basin in Colorado to Cheyenne where supplies will interconnect with Rockies Express Pipeline as well as other interstate pipelines in the area. Discussions with Wyoming Interstate Pipeline and Rockies Express Pipeline indicate that westward flowing capacity can be designed but it comes at a cost of approximately \$0.15 on REX and WIC, Additionally, in order to get to the Opal area and interconnect with Kern and Ruby pipelines an expansion of Overthrust Pipeline is necessary. Overthrust recently held an open season for approximately 130,000 MMBtu/day of

westward flowing capacity but does not have sufficient subscriber interest in the project to economically justify the expansion.

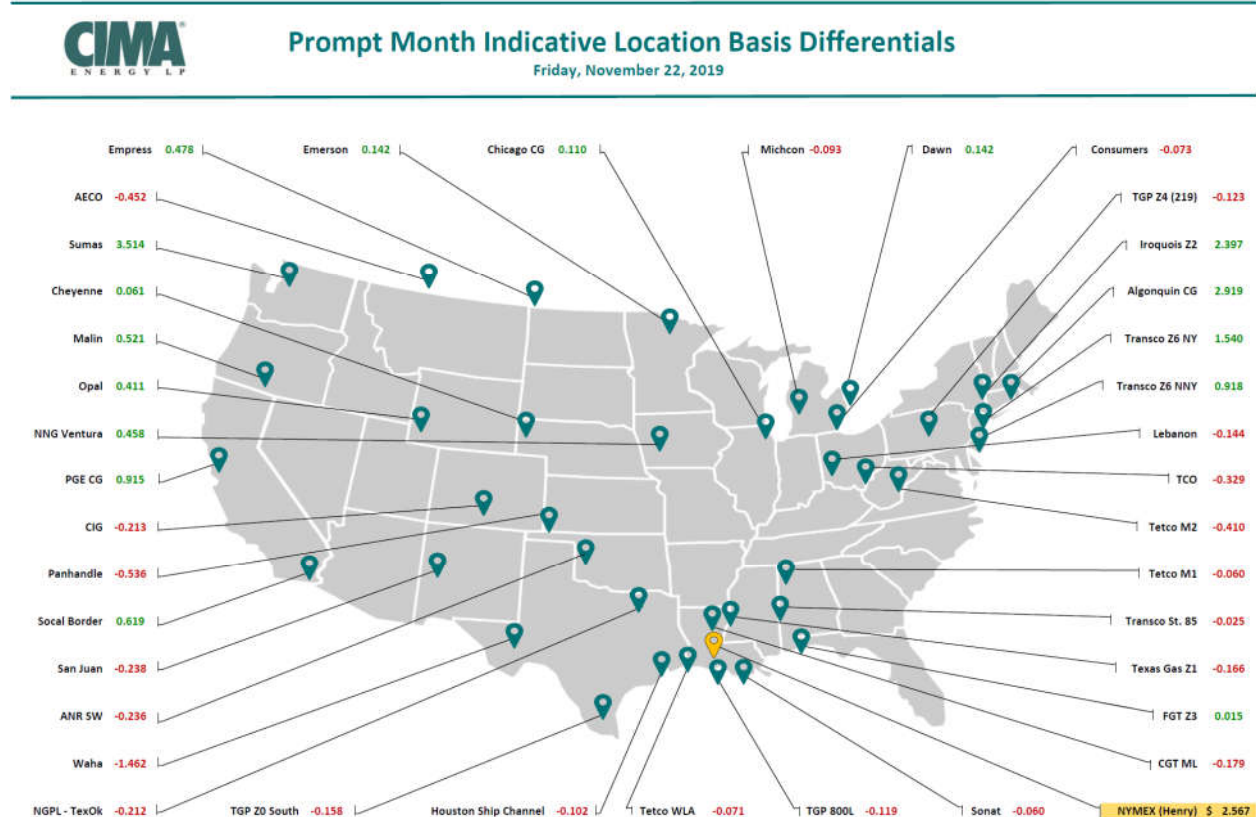
**Pricing**

**For the month of November, 2019, the NYMEX natural gas contract settled at \$2.597 per MMBtu.**

Natural gas prices reported by Platt's Gas Daily for flow on November 25, 2019 are as follows:

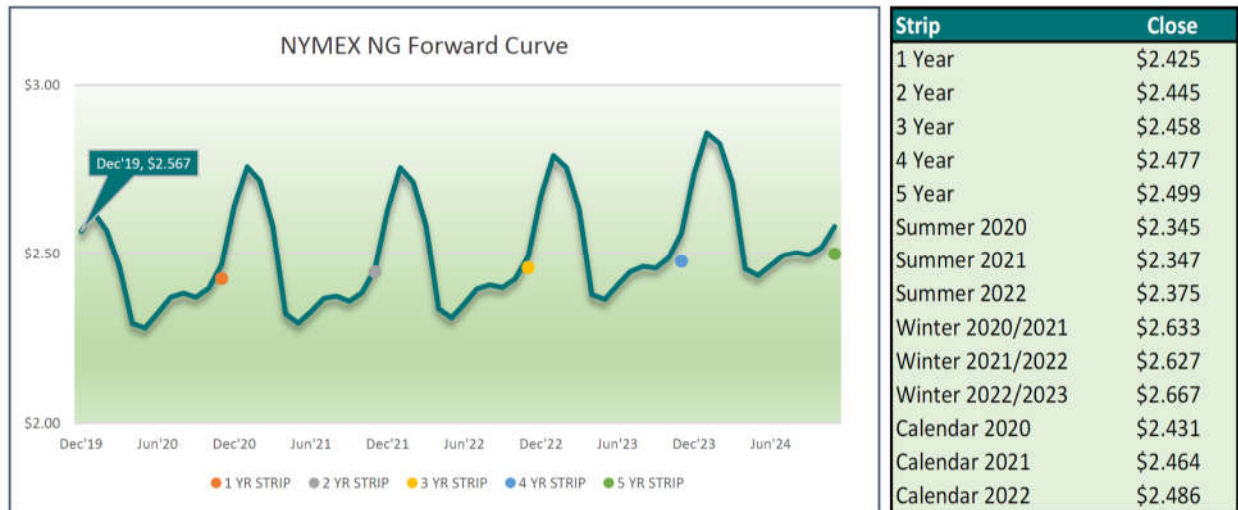
Pricing Point	Price (\$/MMBtu)	Basis to NYMEX
• Henry Hub	\$2.55	
• Cheyenne Hub (SE Wyoming)	\$2.22	-\$0.33
• Opal Hub (SW Wyoming)	\$3.59	\$1.04
• Sumas (Washington/British Colombia)	\$5.91	\$3.36
• Chicago	\$2.48	-\$0.07
• SoCal (Southern California)	\$3.37	\$0.82
• SoCal (City Gate)	\$6.74	\$4.19
• Waha (West Texas)	\$1.55	-\$1.00
• Asia (January delivery LNG)	\$5.89	+\$3.34
• Central Mexico (Tula)	\$4.14	+\$1.41

Indicative spreads across the country are illustrated below:



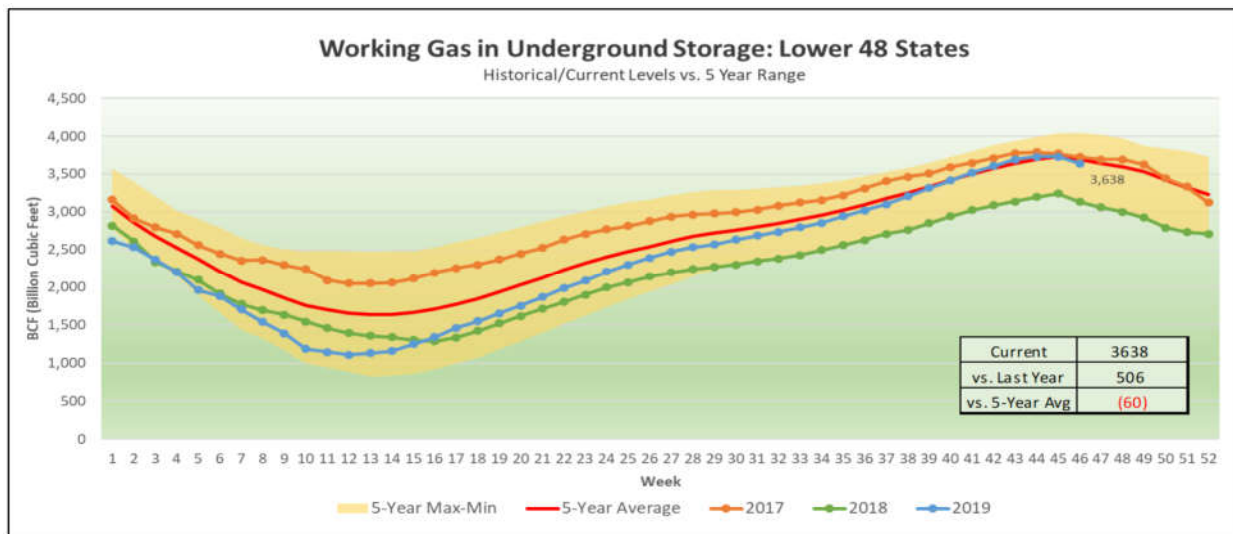
Early cold weather has given natural gas prices a rally over the last few weeks, but a return to normal weather has caused prices to settle back. 5-year pricing is still insufficient to support profitable growth for natural gas producers. Continued growth in LNG and Mexican exports will be necessary to provide any pricing relief outside of cold weather.

Note that Opal pricing is driven by continued outages in Canada as a result of a pipeline explosion last year about this time. Additionally, SoCal Gas continues to struggle to return infrastructure into service as a result of pipeline.



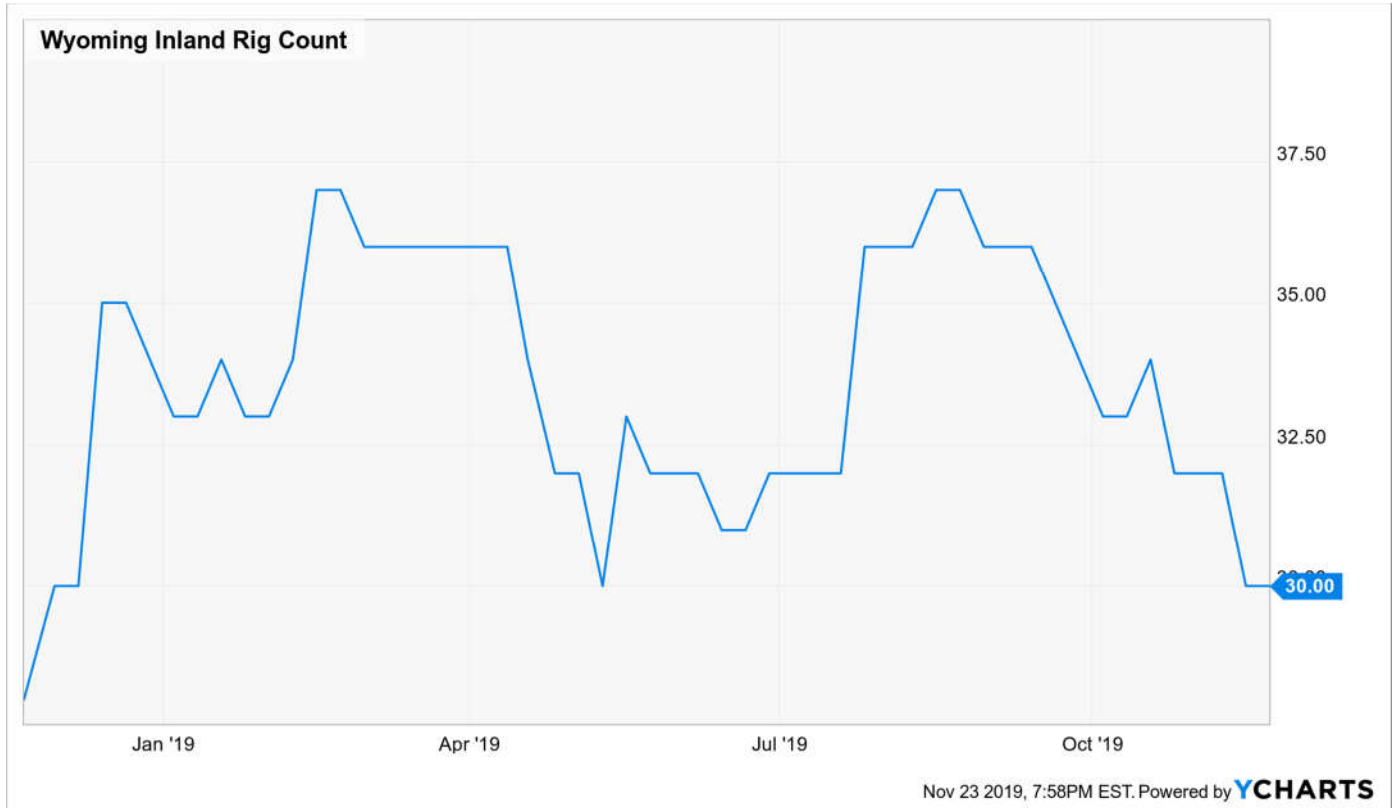
**NYMEX crude oil prices for November delivery settled at \$57.77** on November 22, 2019. Brent pricing for the same period settled at \$62.37. Southwest Wyoming Sweet crude was trading at \$50.83 (Plains All American).

**Natural gas storage inventory for the week ending September 2019 sits at 3.205 Bcf** and is rapidly approaching the five-year average for inventory builds.



## Wyoming Rig Count

The Wyoming rig count has been falling for the last several months and sits at 30 as we near the end of November. A chart of the rig count over the last year is illustrated below.



If there is incremental information you want, need or desire, please do not hesitate to call the Wyoming Pipeline Authority at 307-237-5009.