

CALIFORNIA GAS QUALITY WORKSHOP

**FEBRUARY 17-18, 2005
SAN FRANCISCO, CALIFORNIA**

PRESENTATION OF LODI GAS STORAGE, LLC

Lodi Gas Storage appreciates the opportunity to make this presentation to both Commissions, the California Air Resources Board, and the California Department of Conservation, and we thank all four state agencies for taking on the important issue of natural gas quality. Our presentation is intended only to point out that your review of current natural gas quality specifications and interchangeability presents you with have the opportunity not only to ensure the maintenance of gas quality as new natural gas supply sources are added to California, but also to advance one of the principle goals enunciated by the CPUC in its Natural Gas Rulemaking, that of ensuring reliable supplies of natural gas to California gas users at reasonable prices.

The Commissions and utilities have done a good job of developing regulations and delivery systems to provide safe and clean natural gas for their consumers.

Why should California be concerned about gas quality? Why can't we just set standards and tell gas producers: "If you don't meet our specifications, we won't take your gas." There was a time we could do that, but we are past that time. California needs to welcome every dth of gas it can use and make every dth it can welcome usable. Your sponsorship of this conference wisely recognizes this.

Greater, and smarter, utilization of all gas-related assets available to California--which today include native production, import pipelines, natural gas storage facilities, and distribution,

and will someday include LNG--will contribute significantly to meeting the State's gas needs. We like to call this "optimization" which means making the most effective use of all gas assets, including production assets that are currently stranded due to gas quality requirements. Optimization will maximize the available gas supply and thereby increase the reliability and lower the price of gas to California consumers.

Why would a gas storage provider want to talk about gas quality? Lodi has a strong interest in ensuring the availability, reliability, quality and reasonable pricing of natural gas and related transportation services in California.

First, what is probably obvious to most of you – natural gas storage facilities can make a significant contribution to both gas quality and gas supply, because they can be used to blend high Btu gas with low Btu gas, and gas with different compositions, to assure the overall quality of California's natural gas supply. Put simply, storage is a vessel, and while we can't physically shake it, we can manage it to physically blend gas of different compositions and Btu contents. Second, even if a particular storage facility is not located such that it can physically blend gas, storage, and particularly multi-turn storage, can be used to balance loads on other facilities, both pipelines and storage facilities.

What I would like to leave you with today is the message that you can do the most good for California consumers by creating a paradigm that, at a minimum, removes barriers to the most efficient use of all the natural gas assets available to serve California and creates incentives to the effective utilization of all of those assets. And when we say "natural gas assets," let me reemphasize that we mean both the natural gas commodity and the infrastructure that produces, transmits, stores, and distributes it.

STORAGE CAN INCREASE THE UTILIZATION OF LOW-BTU CALIFORNIA PRODUCED GAS

We realize that this Workshop is prompted primarily by the prospect of LNG entering California's gas infrastructure with varying compositions and levels of quality. And in this regard, California gas storage, depending on the location of LNG terminals, could be uniquely positioned to help bring more California gas production to market by blending low-Btu California gas with LNG to meet utility gas specifications.

But, the issue of gas quality is also very relevant to California's current underutilization of California-produced gas. This Workshop provides an opportunity to highlight the additional potential to bring greater volumes of California-produced gas to California consumers, independent of the ultimate success of efforts to bring LNG to the state.

In-state gas storage facilities can be used now to blend low-Btu California gas with higher-Btu gas produced in California, other states, and Canada. Multi-turn storage is particularly well-suited to accomplish this because its ability to inject and withdraw gas at very high rates (and thereby cycle, or turn over, capacity multiple times annually) regardless of the season allows the blending of greater volumes of low-Btu gas with higher-Btu gas. This is about as close as one can come to shaking the vessel.

Why is this service not currently being provided by California's gas storage facilities? This is where we get to the opportunity to remove barriers I mentioned earlier.

Under the existing utility infrastructure, all California-produced gas must enter the LDC's pipeline system before going into storage. This requirement creates a chicken and egg situation. The LDCs cannot accept low-Btu gas in many instances because it does not meet their gas quality specifications. But the LDCs also oppose permitting California-produced gas to flow directly from production field to storage facilities where it could be blended to meet the LDCs'

gas quality specifications. So we have a situation where a valuable asset—California gas—is stranded in the reservoir. The solution for bringing that California gas into compliance with the LDCs' gas quality specifications is to blend it with higher-Btu gas in storage, before it is delivered to pipelines for shipment to market. Storage can do that, but only if the low-Btu gas can be delivered directly from the wellhead or gas processing facility to storage.

We realize that direct interconnection to gas storage facilities by anyone other than the LDC is of major concern to the LDCs, because they fear the loss of revenue, but we are talking about incremental volumes of gas that, because it does not meet the LDC's gas quality specifications, is currently not permitted to enter the LDC's transmission system – so LDCs do not currently earn revenue from it.

STORAGE CAN CONTRIBUTE TO GREATER UTILIZATION OF LNG OF VARYING BTU CONTENT

One significant attribute of LNG is that it can arrive on California's shores from all over the world. LNG deliveries from different parts of the world will have different compositions and Btu contents, and much of the imported LNG is forecast to have a higher Btu content than the gas currently in California's gas transmission system. We have always known that California gas storage facilities can help smooth out and balance LNG deliveries compared to demand. And as discussed earlier, storage can assist in blending supplies of gas that have differing heat contents and compositions.

We recognize, however, that in some cases storage will simply be too far from LNG terminals to physically blend the molecules of gas. But this does not eliminate storage – and particularly, multi-turn storage – from the ability to help optimize California's use of gas assets.

Storage can smooth out the lumpiness in deliveries of LNG so that it can mix with flowing gas at a consistently optimal rate.

CONCLUSION

Natural gas storage can be instrumental in increasing not only the reliability, but also the overall usability, and thus the amount, of gas available to California consumers: (1) By serving as a mixing vessel to dilute objectionable characteristics of both imported LNG and locally produced gas that does not meet pipeline gas quality specifications; and (2) by smoothing out the lumpiness of flows of LNG and contributing to the maintenance dependable pipeline load factors of pipeline to increase the ability of pipelines to blend gas from different sources.

The Commissions, the Air Resources Board, and the Department of Conservation can ensure that California's entire natural gas infrastructure is used in an optimal manner so that no natural gas that can be blended and utilized is left in the ground or on the ship. This does not have to wait for LNG to arrive. It can start now with the removal of economic and jurisdictional restrictions that impede the flow of gas to available assets in which that supply can be blended and then transported for consumption.

Better utilizing gas storage facilities to blend low-Btu gas and high-Btu gas so those supplies can be used safely will contribute significantly to California's achievement of a number of its stated policy and regulatory objectives, including:

- Ensuring the integrity and safety of the natural gas pipeline system;
- Ensuring that end use appliances and applications receive a stable natural gas supply within acceptable quality specifications;
- Protecting ambient air quality standards;

- Ensuring that all imported natural gas supplies meet the appropriate quality specifications;
- Maximizing the production of California's domestic natural gas resources; and
- Ensuring reliable supplies of natural gas to California gas users at reasonable prices.

Thank you for providing this opportunity for Lodi to address this important issue.