

Western States and Tribal Nations Natural Gas Initiative

Presentation
Wyoming Joint Minerals Committee
November 10, 2023

What Is WSTN?

<u>Western States and Tribal Nations</u> is a unique, trans-national initiative led by sovereign tribal nations, states and counties focused on creating rural economic development, advancing tribal self-determination and a reducing global emissions through the export of clean natural gas from western North American basins to international markets.







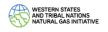


WSTN MOU Membership

- **Ute Indian Tribe**
- **Jicarilla Apache Nation**
- Southern Ute Indian Tribe
- State of Baja California, Mexico
- **State of New Mexico**
- State of Utah
- **State of Wyoming**
- **Western Colorado Counties of** Garfield, Mesa, Moffat and Rio Blanco
- **Province of Alberta (pending)**

Currently Courting

- **State of Arizona**
- **Navajo Nation**



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Sempra LNG and IEnova's planned expansion of the Energia Costa Azul facility is showing encouraging momentum for development of facilities (Phase One and Phase Two) that can serve Asian markets, even as many LNG projects are being delayed due to factors associated with the COVID-19 pandemic

Energia Costa Azul LNG recently signed 20-year agreements with units of Total S.A. and Mitsui & Co. for about 2.5 million tonnes per annum (MTPA) or 0.33 billion cubic feet per day (bcfd) of natural gas and is expected to make the Final Investment Decision (FID) for Phase One of its development in the second

At your convenience, and at the appropriate juncture in these current challenging times, we would like to bring a delegation of western states stakeholders to meet with you and your staff to discuss areas of

collaboration that would mutually benefit both the energy industries and economies of the U.S. western

State of Wyoming

states and tribal nations and Mexico.

guarter of 2020.

Best Regards.





Wyoming – WSTN

Wyoming Membership includes:

- Wyoming Energy Authority MOU member
 - Bobby Rolston is the Wyoming Board member to WSTN
- Jonah Energy
- PureWest Energy
- Converse County
- Sweetwater County
- Lincoln County



Wyoming – Opportunities

- WSTN believes Wyoming is in a unique position, along with other member states, to demonstrate how natural gas, carbon capture, hydrogen and decarbonized ammonia can be part of energy present and future.
- As a major exporter, meeting demands of the market will empower Wyoming's energy sector
- Innovation and telling the market the story of Wyoming's current energy innovations – is a powerful route for Wyoming and other WSTN members to chart their futures
- Examples of innovation happening right now include the low-methane production of Jonah Energy and PureWest Energy, WEA-backed projects in small modular reactor nuclear, carbon capture.



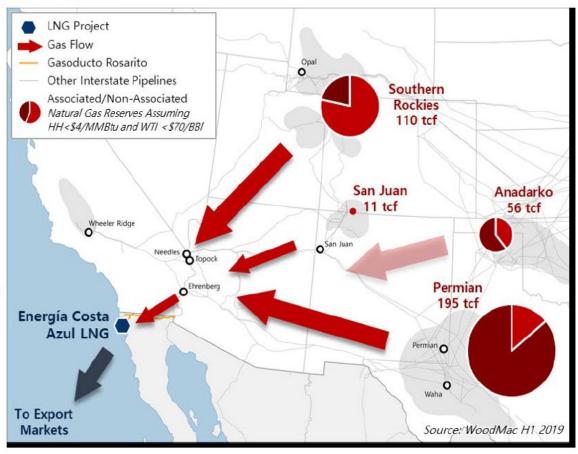
WSTN Customers and Stakeholders – Evolving Trends – Societal, Policy, Economic, Security

- Japan and Asian markets Significant energy security focus; high energy prices and import dependent; they want differentiated (lower-methane) natural gas and looking to be a market maker for decarbonized ammonia
- Biden Administration Inflation Reduction Act (IRA) focus on H2; White House CCUS Task Force includes significant Wyoming and Jicarilla Apache Nation and Southern Ute Indian Tribe representation
- Arizona and Navajo Nation
 — Crossroads of Energy
 Infrastructure and Pipeline Keystone State; Governor
 — centrist on energy but needs to watch her political left
- California High NatGas prices for the foreseeable future, significant anti-fossil lobby, major utilities (Socal, PG&E) are moving to H2
- All of these are Wyoming opportunities.

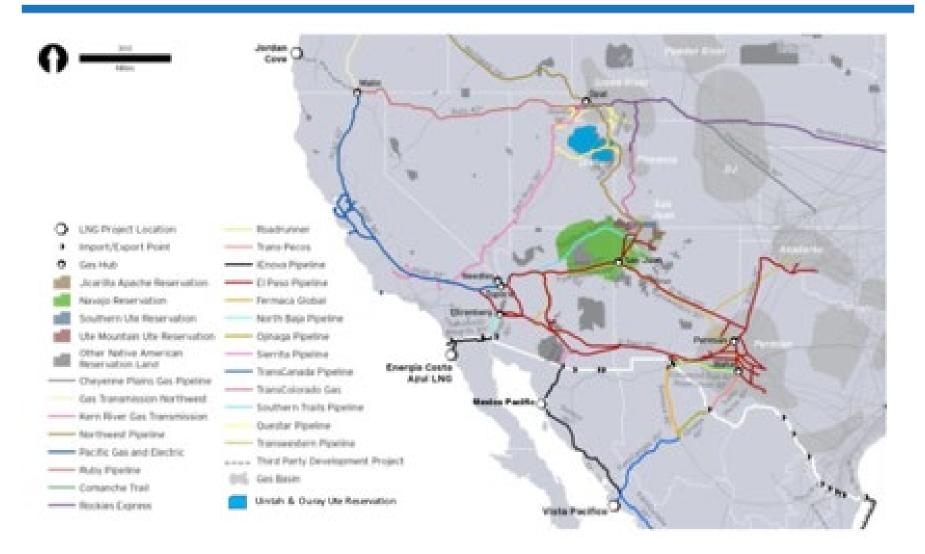


ECA Supply and Pipelines

- ECA Phase 1: ~0.5 Bcfd load will be sourced from a portfolio of western supply basins utilizing existing and expanded transportation infrastructure
- ECA Phase 2: ~2+ Bcfd feedgas demand will likely necessitate a greenfield pipeline to ensure it can fulfil its load and operational requirements
- Evaluating cost / risks / benefits of different routes
- Magnitude of Permian resource & credit-worthiness of key stakeholders make it a candidate for the primary source of feed gas supply but is largely associated gas









WSTN/Wyoming – Asian Outreach

COMMENTARY:

- Currently, there is significant interest amongst producers (Western US States and Tribal Nations), exporters (Mexican states along the Pacific Coast and the Gulf of Mexico) and end users in Asia to secure long term import-export agreements to fuel energy transition.
- After Congress passed, and the President signed, the Bipartisan Infrastructure Law and the Inflation Reduction Act; there is now significant energy behind exports of energy sources beyond simply LNG.
- Significantly, the Russian war against Ukraine is drawing many U.S. energy resources into Western Europe and has left Asia in an insecure position regarding its energy future.
- The current administration has recognized the geopolitical value of LNG exports and has made it official policy in a bilateral dialogue with Japan
- Wyoming and other states and tribes across the Rocky Mountain west have the ability to assist in addressing these supply concerns which have been expressed by Asian nations.



WSTN – Asian Outreach

- 1) WSTN has hosted the Japanese Ministry of Economy, Trade & Industry in Grand Junction, CO (Dec '22) and Washington, D.C. (March '23) with favorable press coverage on Japan's LNG and Energy Security needs (Senator Barrasso spoke at DC event)
- 2) WSTN is an active participant in a working group led by the U.S. Chamber of Commerce's Global Energy Institute, which partners with the American Petroleum Institute, the International Gas Union, Asia Natural Gas and Energy Association, LNG Allies and others on Asia Energy Security, LNG and other related issues
- 3) WSTN hosted the <u>Asia Natural Gas and Energy Association</u> at the Colorado School of Mines on October 19 and 20. Meetings also with Chevron and COPC both members of ANGEA JERA, Mitsubishi and other Japanese energy importers are also members. WSTN looking to partner with Mines on a pre-CERA Week event focused on Clean Energy Exports to Asia (March 2024)
- 4) WSTN will partner with ANGEA on a mission to Singapore either Q3 or Q4 2024 focus will be on ASEA members (India, Thailand, Vietnam, etc.)



WSTN Asian Outreach

- Decarbonization efforts resulting in differentiated gas along the natural gas value chain in the western states is valuable to Asian buyers
- Natural gas resource base (current production, proven and prospective reserves) of western natural gas with a focus on Green River, Uintah, Piceance and San Juan Basins (Mancos Gas)
- Further identify infrastructure needs and options for financing (e.g. state bonding authority support)
 - Wyoming in a leadership position but needs to make its bonding authority clear and usable; lack of State backing complicates value as a financial tool
- Next Steps
 - Responsibly Produced Gas Certification
 - Seize opportunities in Hydrogen & Carbon Capture components from BIL and IRA to bolster current and future Western Energy Development

WSTN Asian Engagement





WSTN at Energia Costa Azul





Japan H2 and Decarbonized Ammonia







www.westernnaturalgas.org

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