

Update of the Federal Helium Program



Introduction

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http://www.blm.gov/nm/st/en/fo/Amarillo_Field_Office.html
- For last year's presentation see:
- <http://science.energy.gov/np/community-resources/workshops/2014-workshop-on-isotope-federal-supply-and-demand/>



In This Presentation:

- The Helium Stewardship Act of 2013 (enabling legislation)
- Federal Helium System
- Strategic Report Update
- From Shortage to Surplus
- US and World Production and Resources
- Comments and Questions



Helium Stewardship Act of 2013

- Continues the Federal Helium Program to at least the end of FY 2020 – All assets and rights to be sold at that time.
- Federal in-kind program continues.
- Revolving fund w/o yearly limitations continues.
- Federal Government will retain rights to helium beneath federal lands and collect royalties from extraction.
- Instituted four phases for selling helium from the reserve. Matches sales to production capacity.
- Four sections requiring studies/evaluations by USGS, DOE, and BLM.



Phase A, Allocation Transition:

- Began upon passage of the HSA and ended on 10/30/2014.
- This Phase was a continuation of the Helium Privatization Act's sales volumes and conditions.

Phase B, Auction Implementation:

- Began on 10/01/2014;
- Ends when the federally-owned crude helium stored in the FHR is reduced to 3 Bcf.
- Each year, a greater percent of helium is sold by auction until 100 percent auction is achieved.

Phase C, Continued Access for Federal Users:

- Begins when crude helium stored in the FHR is reduced to 3.0 Bcf and lasts a minimum of two years.
- BLM continues to provide crude helium to Federal users.
- No sales or auctions to private entities,
- May still be deliveries to private entities of Phase B helium.

Phase D, Disposal of Assets:

- Requires disposal of assets by no later than 10/30/2021.
- Includes all underground natural resources and the US rights to those assets.



Federal Helium System

- Bush Dome underground storage reservoir
- 450-mile Crude Helium Pipeline System (Storage and Transmission)
- Crude Helium Enrichment Unit (CHEU)



Storage & Transmission

- Helium Storage Contracts
 - *Storage Services*
 - Generated \$3.2 million in 2015
 - Federal Helium in storage 6.6 Bcf (10-1-2015)
 - Private Helium in storage 2.2 Bcf (10-1-2015)
 - *Compression Services*
 - Provides crude helium compression for private demands
 - *Helium Enrichment Services*
 - Recovers 20 percent of all costs associated with crude helium enrichment unit (CHEU)- appx \$4 M in FY 12

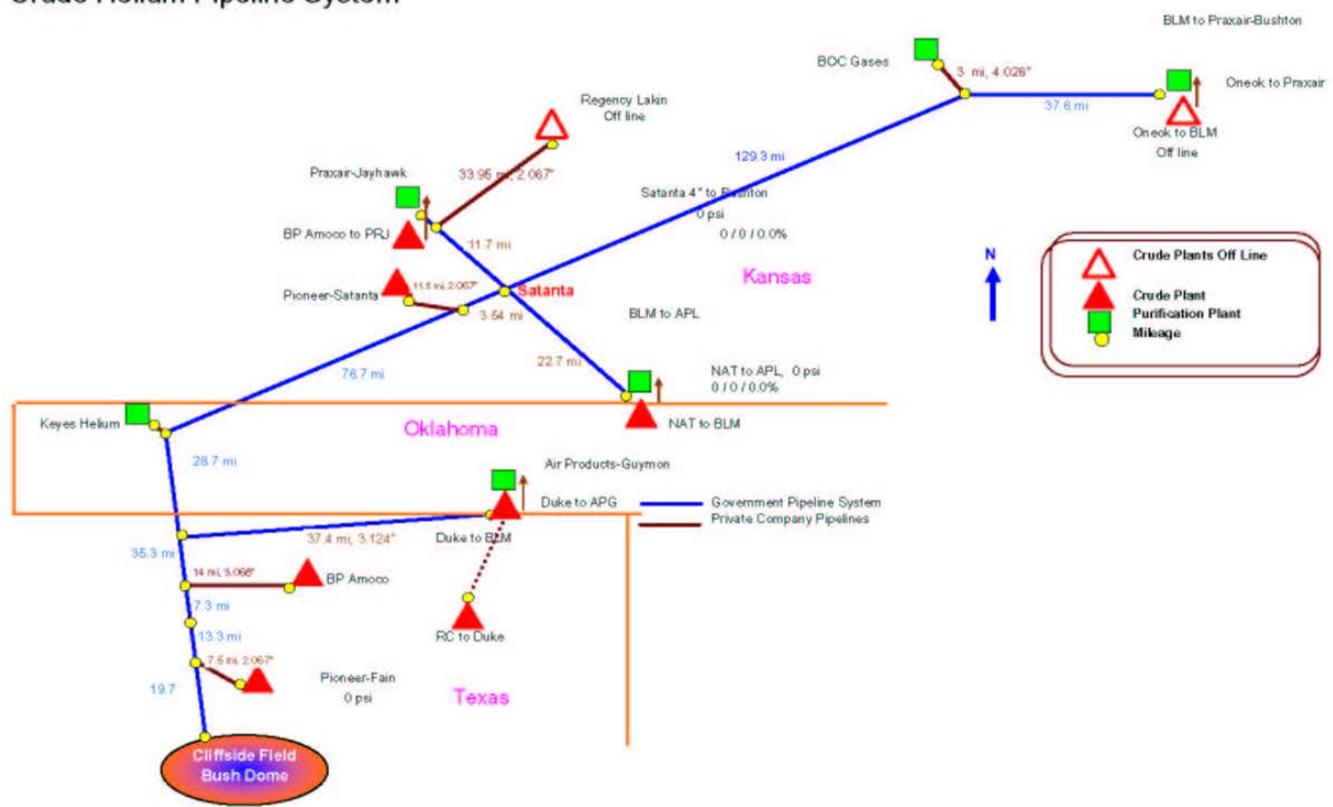


Storage & Transmission (Cont)

- Natural gas sales:
 - CHEU-generated natural gas sales
 - Sales through standard industry contracts
 - ~\$7 million per year
 - 2.4 Bcf (gas) & 800 thousand gallons (NGLs) during FY 2015



Bureau of Land Management
Crude Helium Pipeline System



Crude Enrichment Unit (CHEU)



Crude Helium Enrichment Unit

- Cooperative Agreements with Private Industry – expire in 2018. Private design, purchase & installation. BLM-operated
- Options: renew agreements, purchase by BLM, or replace with another facility.
- Current operating conditions:
 - ~2,200 Mcf/d He, ~14,000 Mcf/d total gas
 - Gas composition from Field
 - 16.7 % (Helium)
 - 51.7 % (Hydrocarbons)
 - 25.0 % (N₂) 0.85 % (CO₂)
 - 0.15 % (H₂)



Crude Helium Sales

- In Kind Sales
 - Authorized by Helium Privatization Act (HPA) of 1996; Started in 1998; continues with Helium Stewardship Act of 2013
 - Averaged 225 MMcf/yr early years
 - ~165 MMcf for FY 2015.
 - Current price = \$84.40/Mcf for FY2016

In Kind definition: Purchases of refined helium with priority pipeline access from persons who have entered into enforceable contracts to purchase an equivalent quantity of crude helium at the in kind price from the Secretary.



Federal Helium Acquisition Strategy

- Secretary, in consultation with Federal Agencies, and w/i two years shall complete and submit to Congress a report that provides for Federal users:
 - ❑ An assessment of the consumption and demand for helium.
 - ❑ 20-year Federal strategy for access to helium.
 - ❑ Determination of a date prior to 9/30/21 for beginning of Phase D.
 - ❑ Assessment of effects of increases in the price of refined helium and methods and policies to mitigate effects.
 - ❑ A process for prioritization of uses as helium availability decreases over time.



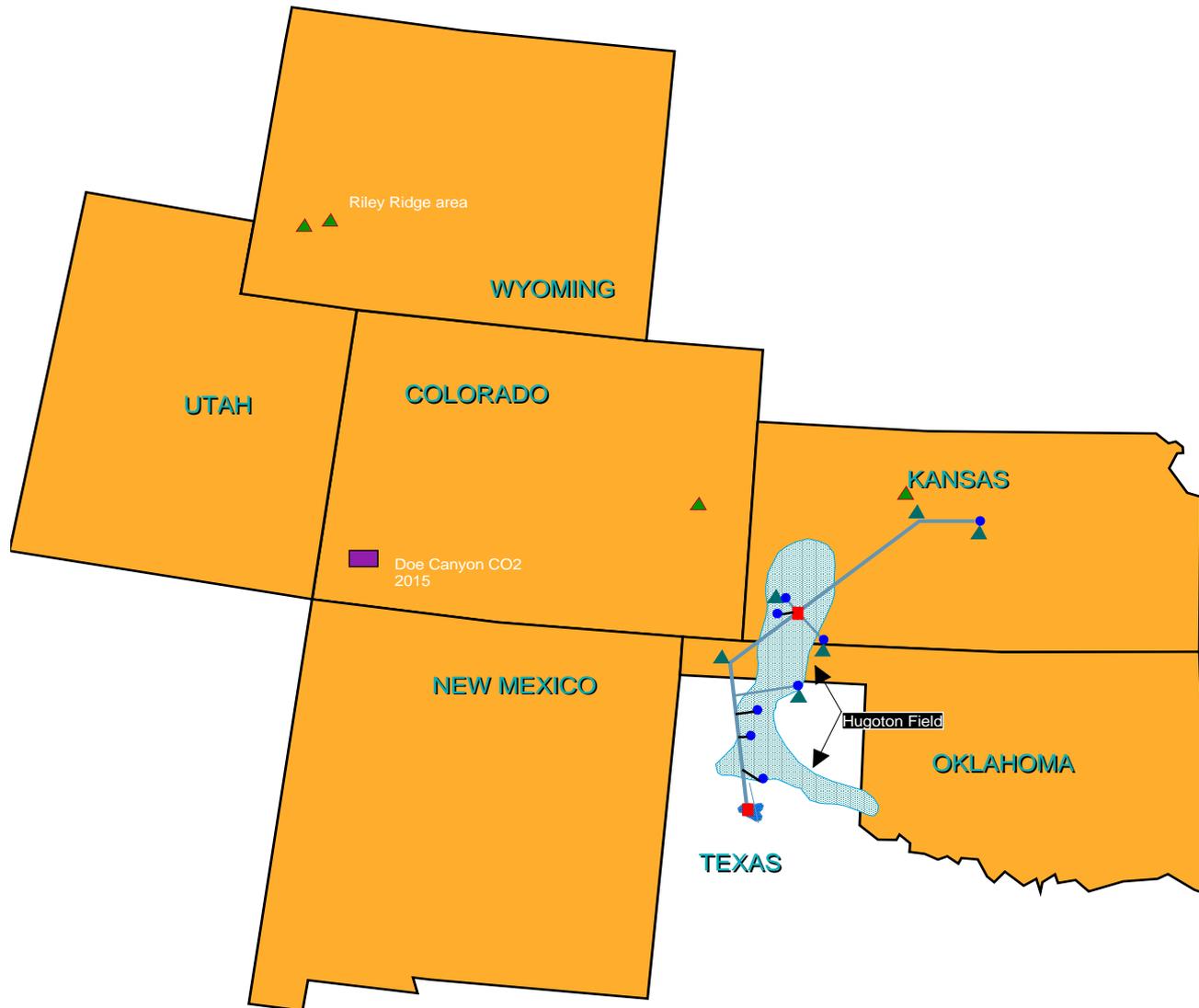
- ***Demand Assessment:*** Federal helium demand is expected to remain relatively flat during the period from 2015 through 2021.
- ***Acquisition Strategy:*** After the helium program ends in 2021, Federal users will have to obtain their helium requirements from other sources.
- Comprised of five parts:
 - Regulations for Royalty-In-Kind helium extracted on Federal lands,
 - Exploring The Federal Strategic Sourcing Initiative as part of an Interagency Working Group.
 - Funding for conservation, recycling, and recapturing efforts,
 - Economic evaluations of options to continue a modified helium program beyond 2021,
 - Interagency working group to monitor above strategies and suggest changes as the helium market evolves.



- **Phase D Start:** Federally-owned helium in the Cliffside Field will reach 3.0 Bcf by about 10/01/2019.
 - ❑ Phase C begins
 - ❑ lasts a minimum of two years.
 - ❑ Phase D begins no earlier than 09/30/2021.
- **Mitigating Price Increases:** The 20-year strategy also mitigates the effects on Federal agencies of higher prices for refined helium in the private market.
- **Prioritization:**
 - ❑ The helium market is in surplus
 - ❑ no immediate need for prioritization.
 - ❑ The working group would monitor and recommend prioritization methodologies.



Helium Production in the US



Global Helium Production (Bcf)

Year	U.S. Prod. (col A)	U.S. Imports (col B)	U.S. Exports (col C)	Apparent Consumption (A+B-C)	World Prod not inc. US (col E)	Total World Prod (A+E)
2010	4.62		2.78	1.84	1.47	6.09
2011	4.69		2.96	1.73	1.43	6.12
2012	4.79		3.06	1.73	1.48	6.27
2013	4.25	0.22	2.92	1.55	1.92	6.17
2014	3.71	0.29	2.49	1.51	2.05	5.76
2015 ^{est}	3.8	0.3	2.4	1.7	2.0	5.8

Note: Our office is still in the process of confirming the 2014 data to assure that world production has decreased. Some economic factors are indicating a downturn in world wide helium consumption.



Thank You.

Questions and Comments

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