

New Mexico Closed Loop Gas Capture Pilot Programs (CLGC)

DIRECTOR ADRIENNE SANDOVAL

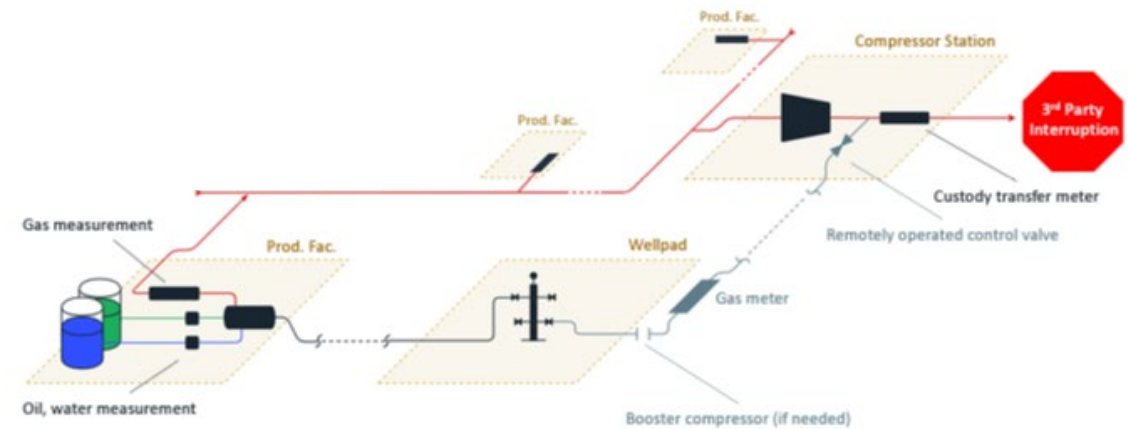
NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

June 2022

CLGC Process as Proposed

- **Method to utilize mid-life and older horizontal wells to alleviate or eliminate flaring by:**
 - Injecting produced gas into production well during third-party takeaway downtime
 - Provides alternative to flaring or shutting in production
 - Shale reservoirs limits gas migration away from wellbore and facilitates subsequent recovery
- **Incentives:**
 - Decreases flaring due to limited midstream takeaway which previously resulted in waste
 - Ability to store then recover gas for sale which prevents waste of the resource
 - Supportive of new venting and flaring regulations
- **This is a Pilot Program because it is a unique approach which did not fit into the existing regulatory framework**



Current Pilot Projects

Division Case No. 20965, 1/31/20

- One-year Pilot Project with one injection well

Division Case No. 21020, 4/16/20

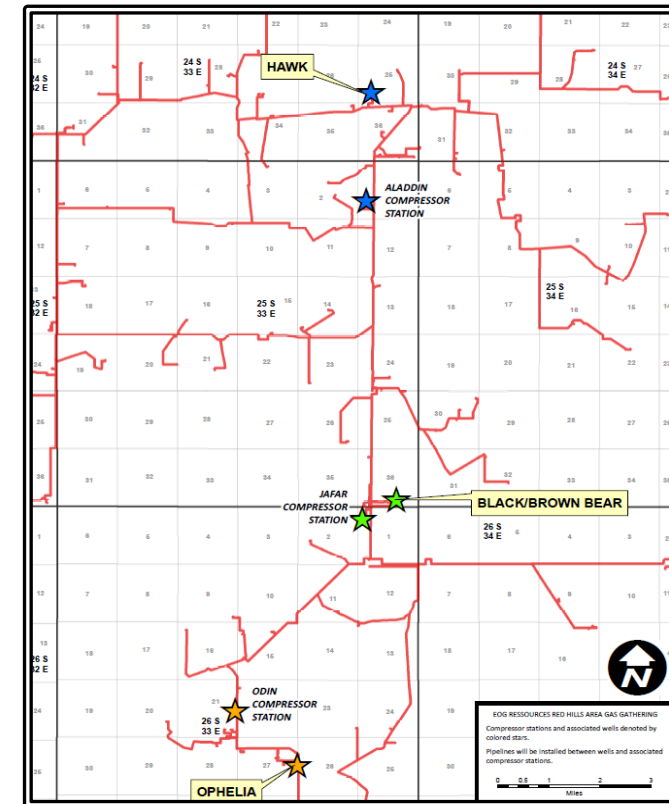
- Single Pilot Project with one injection well
- Two-year authority

Division Case Nos. Approved cases on 8/5/21; 22087, 22088, 22089, Pending cases; 22150, 22151, and 22152

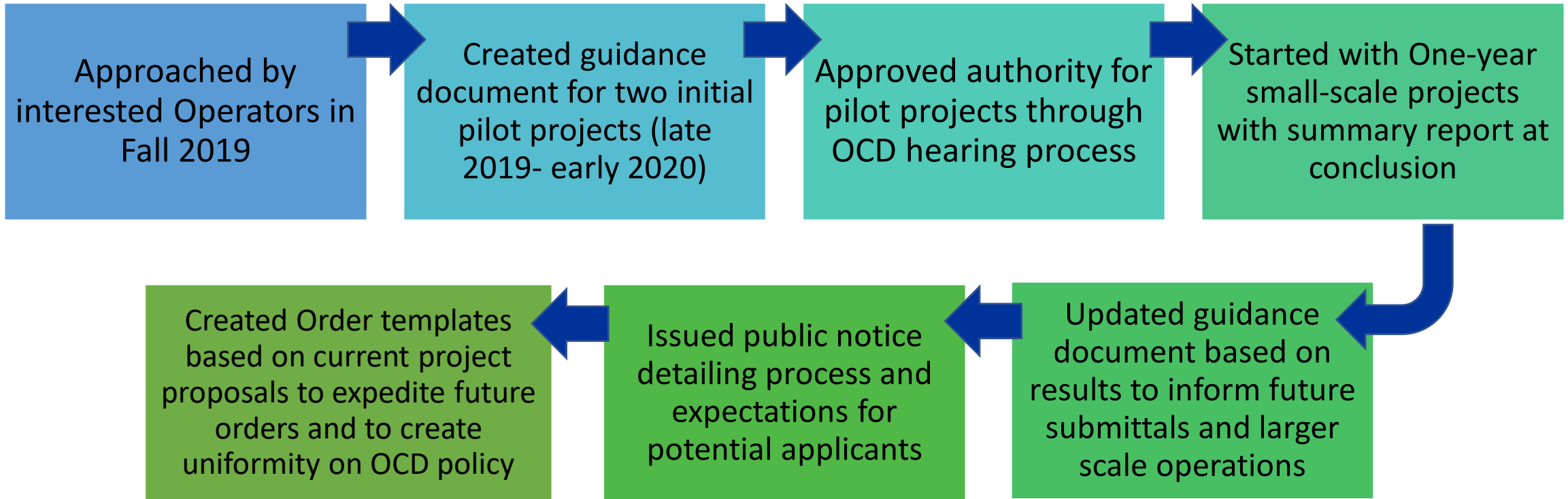
- Six individual Pilot Projects across applicant's operations in the Permian Delaware Basin
- Two-year authority

Division Case No. 21567, 1/7/21

- Full-scale Pilot project with five injection wells servicing production across six townships (As shown below)
- Two-year authority



Project Timelines & Regulatory Process



CLGC High Level Requirements & Timelines

➤ Prerequisites for Applying for Hearing

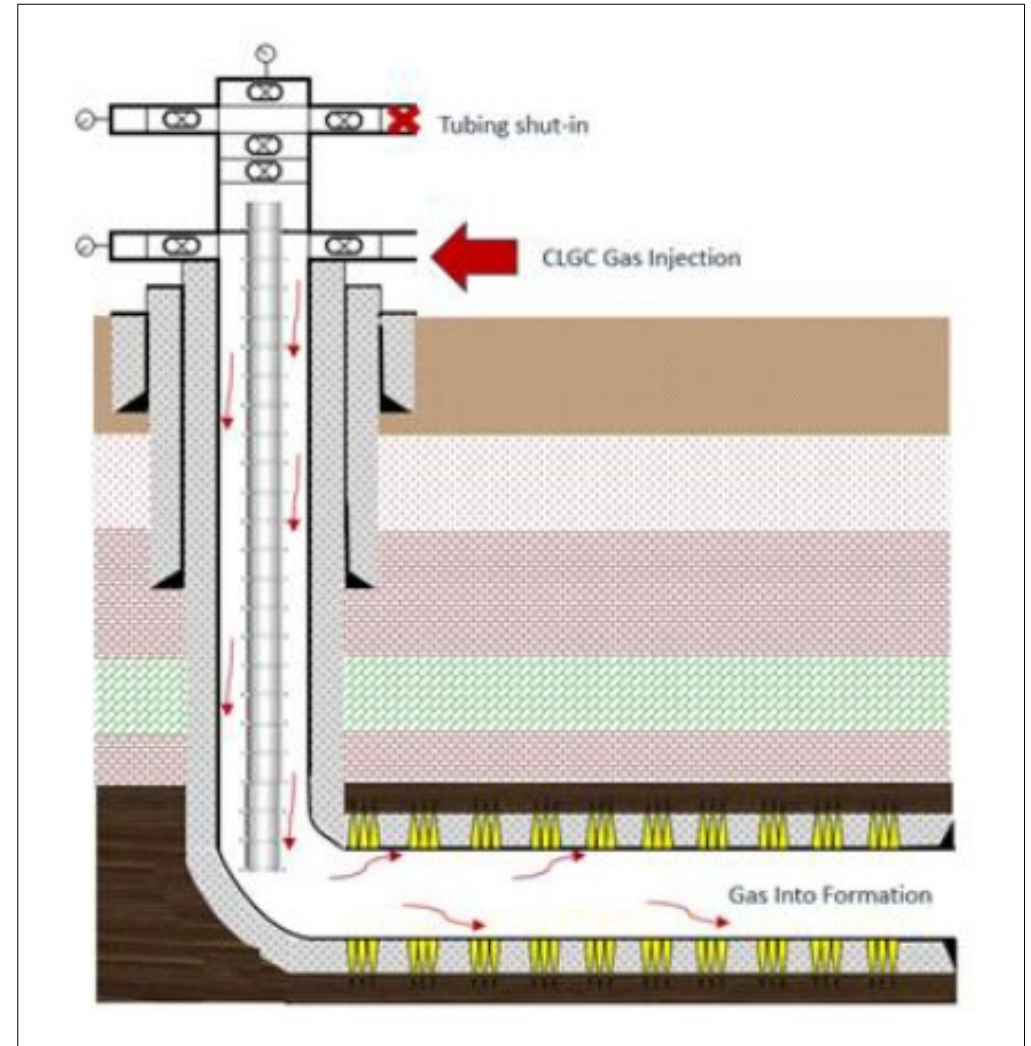
- Only one operator per project
- The gas being injected must be compatible gas composition to the formation and gathering system

➤ Project Summary for Hearing Application

- Application must follow a set of guidelines OCD has provided in a public notice. This includes:
 - General description and specifications of the project, including associated wells and infrastructure.
 - A Gantt chart for the project
 - A plan to verify the well's integrity
 - A detailed map of the project area

➤ Timing requirements

- Two-year authority as pilot projects
- Defined periodic status updates
- Additional time can be granted administratively to extend the project if it is in good standing



Injection Test Results

- **Pilot tests have indicated that the wells will receive injected gas at sufficient rates to respond to most third-party market interruptions. Those rates have been as high as;**
 - Injection rates of up to 15 mmscfd
 - Injection volumes of up to 21 mmscf
- **All gas injected and produced from the well is properly metered to ensure proper allocation to the pilot project. Allocation of recovered gas is determined based on the gas injected and the wells' historical production curve.**
- **25 - 60 days to recover the majority (75-100 %) of injected gas**

Ongoing Evaluations & Future Considerations

Ongoing Evaluations

- Reporting requirements to ensure successful monitoring
- Engineering requirements to ensure mechanical integrity
- Assess simplification of the permitting process either by administrative approval or by hearing
- Continued assessment of the authority of the Pilot Projects with the OCD's UIC Program
- Review of potential time limitations and requirements for projects to transition beyond a pilot stage

Future Considerations

- Establish formal program for these types of projects through rule amendments
- Expansion of the OCD's electronic permitting to facilitate application and easier reporting for these types of facilities

Conclusions

- Pilot Projects have been successful and provided proof of concept
- Second round of projects were larger in scope than the initial proposal
- Ultimately the process has the potential to reduce emissions and waste
- Utilizing capabilities of existing infrastructure that can be accomplished without significant modifications and on a large scale
- All indications have shown positive results, with no negative impacts. Operators are capturing the gas that historically would have been flared, preserving the resource

Questions?