

MARGINAL CONVENTIONAL WELL PRIORITIZATION PLAN

Methane Emissions Reduction Program for Marginal Conventional Wells

November 8, 2024

WORK PERFORMED UNDER AGREEMENT

DE-FE0032423

SUBMITTED BY

Texas Commission on Environmental Quality
P.O. Box 13088
Austin, TX 78711

PRINCIPAL INVESTIGATOR

James Nolan
(512) 239-6634
james.nolan@tceq.texas.gov

SUBMITTED TO

U. S. Department of Energy
National Energy Technology Laboratory

Christopher Cadez
Christopher.Cadez@netl.doe.gov

**Well Prioritization Plan for the
Texas Voluntary Marginal Conventional Well Plugging Program
(TxMCW)**

Updated 11/8/2024



**Texas Commission on Environmental Quality (TCEQ)
Office of Air – Air Grants Division – Federal Grant Section**

**Inflation Reduction Act (IRA) – Methane Emission Reduction Program (MERP)
Mitigating Emissions from Marginal Conventional Wells**

FOA Number: DE-FOA-0003109

Award Number: DE-FE0032423

Assistance Listing Number: 81.089 (Fossil Energy Research and Development)

Primary Contact	
Name:	Sandra Lopez
Title:	Federal Grants Analyst
Department/Office:	TCEQ / Office of Administrative Services / Federal Funds Section
Email:	fgrants@tceq.texas.gov
Phone:	512-239-6354

Technical Contact: TCEQ	
Name:	James Nolan
Title:	Technical Specialist
Department/Office:	TCEQ / Office of Air
Email:	james.nolan@tceq.texas.gov
Phone:	512-239-6634

Introduction:

The Texas Voluntary Marginal Conventional Well Plugging Program (TxMCW) will use Inflation Reduction Act (IRA) funding for mitigating emissions from marginal conventional wells (MCWs), to assist oil and gas well owners and operators in voluntarily and permanently plugging and abandoning MCWs on non-Federal lands. Funding for selected MCWs will support well plugging, methane measurement, and the environmental restoration required for full compliance with well plugging and abandonment standards and regulations in Texas.

In addition to methane, MCW sites can emit volatile organic compounds (VOCs) and Hazardous Air Pollutants (HAPS), including benzene, toluene, ethylbenzene, xylene, and, in certain areas of the state, hydrogen sulfide (H₂S). Reduction of these emissions benefit the citizens of Texas, including those in disadvantaged communities and those living near well operations.

As outlined in the Administrative and Legal Requirements Document (ALRD) for this program, TxMCW funding will target the following goals:

- Mitigate emissions by assisting operators to voluntarily identify and permanently plug MCWs.
- Measure methane emissions from MCWs prior to and following plugging and abandonment to quantify mitigated emissions.
- Support elements of environmental restoration required for full compliance with applicable State or Federal well plugging and abandonment standards and regulations.

Projects will support permanent well plugging and abandonment activities for MCWs, including, but not limited to:

- Preparation of the well pad to permanently plug and abandon the well.
- Removal of well bore casing and other associated equipment or infrastructure.
- Placement of cement plugs.
- Excavation around the well head and capping of the well prior to surface restoration as required by applicable state or federal well plugging and abandonment standards and regulations.
- Support of activities necessary for well plugging.

For purposes of TxMCW, the following definitions are applicable:

Marginal Conventional Well – An onshore conventional well producing less than or equal to 15 barrels of oil equivalent per day (BOED), or less than or equal to 90 thousand cubic feet (Mcf) gas per day (1 BOE = 6 Mcf) over one (1) calendar year. These are producing or idle wells with known operators/well owners.

Conventional Well – A vertical well producing oil or natural gas that is drilled into a geologic formation in which the reservoir and fluid characteristics permit the oil and natural gas to readily flow to the wellbore. This excludes deviated, horizontal, tight-gas, and mudrock or shale wells.

Climate and Economic Justice Screening Tool (CEJST) – An [interactive map tool](#) developed by the Council on Environmental Quality which uses datasets that are indicators of burdens in eight categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development.

PRIMO – An [open-source decision-support tool](#) developed by the National Energy Technology Laboratory (NETL) under the National Methane Emissions Reduction Initiative. This tool was developed to help organizations determine which MCWs or other low-producing wells make the best candidates for plugging utilizing MERP funds, while also optimizing subsequent plugging and abandonment campaigns for both program impact and efficiency.

Small Business – A well operator/owner who owns and operates less than ten wells.

Sensitive Receptor – A school, church, recreation area, or other space open to the general public.

Sour Gas – As defined in the Texas Administrative Code, Title 30, Part 1, Chapter 101, Rule §101.1(96), any natural gas containing more than 1 1/2 grains of hydrogen sulfide per 100 cubic feet or more than 30 grains of total sulfur per 100 cubic feet. This quantity is approximately equivalent to 24 parts per million by volume.

Agricultural Area – Land that is primarily being used for agricultural use, including but not limited to the following activities: growing crops, raising livestock, beekeeping, and wildlife management.

Well Prioritization Process Requirements

As outlined in the ALRD published by the Department of Energy (DOE) for this program, TCEQ must develop a process and methodology to identify and prioritize MCWs for plugging. The primary goal of prioritization will focus on maximizing the amount of methane emissions mitigated. The prioritization process will include, but not be limited to, the consideration of the impact of plugging and abandoning a qualifying well on the following criteria:

- Methane and other emissions, with priority assigned to wells with greater potential for emissions based on the following considerations:
 - If the owner/operator is aware of any equipment with unauthorized emissions in the past five years, with priority assigned to equipment that has had a fugitive leak in the past five years.
 - Whether the well location has been subject to an enforcement action by TCEQ and/or the Railroad Commission of Texas (RRC) in the past five years, with priority assigned to wells that have been the subject of an enforcement action in the past five years.
- Proximity to disadvantaged communities as identified by the CEJST, with priority assigned to wells closest to disadvantaged communities.
- Location of the MCW on Tribal land, with priority assigned to wells located on Tribal Land.
- Current production rates at the MCW.
- Potential impacts of well plugging on small businesses based on the number of wells operated by owner, with priority assigned to lower number of wells operated.
- Potential human health impacts, based on the following considerations:
 - Whether the well is sour, with priority assigned to sour wells.
 - Whether the well is located within 1/4 mile (1,320 feet) of a sensitive receptor, with priority assigned to wells located within that range.
 - Whether there are surface facilities associated with the well.

- Potential impacts on surface and groundwater quality and flood resilience, based on the following considerations:
 - Proximity of the MCW to a river, lake, creek, or domestic use fresh water well, with priority assigned to MCWs closer to a river, lake, creek, or domestic use fresh water well.
 - Location of the MCW within an agricultural area, with priority assigned to wells located within an agricultural area.
 - If a Groundwater Protection Analysis (GPA) has been conducted at the site in the past five years, with priority assigned to wells that have not had a GPA conducted in the last five years.

The primary goal is to maximize methane emissions reductions and to provide benefits to disadvantaged communities. TxMCW will also identify requirements for operators/well owners to be able to participate in the program in accordance with all necessary state requirements and local requirements for activities of this type.

TxMCW will primarily prioritize well-plugging projects based on efficiency, considering factors such as the location and proximity of MCWs, as well as the number of wells within the area. This approach may involve tools like PRIMO to help identify the most efficient projects for funding.

Application Submission, Scoring, and Selection Process

Applicants will be required to provide the well site information needed to assess each proposed project based upon the prioritization criteria listed above. Applications for eligible projects will be evaluated and scored in accordance with the prioritization criteria. Project scores and ranking will be based upon verification of the representations made in the application at the time of application submission.

Once the application period has closed, TCEQ will complete the scoring and ranking of all eligible applications. Once selected for a grant, any changes made to the representations in the application that reduce the total project score will make any resulting contracts voidable.

Selected applicants will be notified of their selection and invited to execute a contract with TCEQ, committing to implement all required grant activities within a predetermined timeframe. Once the contract is executed by both the grantee and TCEQ, project information and status will be posted on the TxMCW website and updated when appropriate.

PRIMO

The PRIMO tool was designed by the NETL to provide a transparent selection assistance tool for voluntary MCW plugging grant programs utilizing MERP funding. PRIMO will utilize required project data to calculate and determine scores based upon the prioritization criteria scoring metrics. For factors where the corresponding data are numerical (e.g., well age and well depth), scores are normalized to a scale of 0 to 100 using the min-and-max method.

$$v^P = m^P \times \frac{(a - a_{min})}{(a_{max} - a_{min})}$$

$$v^P = m^P \times \frac{(a_{max} - a)}{(a_{max} - a_{min})}$$

Symbol	Description
a	The original data associated with the priority factor of a well
a_{max}	The maximum original data associated with the priority factor among all wells

a_{min}	The minimum original data associated with the priority factor among all wells
m^P	The relative weight assigned with the priority factor
v^P	The metric score of the priority factor for a well

For factors where the corresponding information is either a yes or no, indicating whether the well meets the qualification (e.g., leaks), wells receive either full score or a zero.

The tool also includes an agglomerative clustering method that will group wells together based off their location, age, and depth. The ranking and grouping functions may be used to determine which groups of nominated wells are both an effective and efficient use of grant funds.

Data Reporting

The TxMCW website will be updated with information on the process and status of identifying and prioritizing MCWs to be permanently plugged. The TxMCW website will report the operator/well owner, well type (e.g., oil, gas), reported production rate prior to plugging, total cost of well plugging, whether the plugged well is located in a disadvantaged community as identified using the CEJST, a quantification of the amount of methane mitigated by each plugging project, as well as aggregated data for all plugging efforts under the program to determine and report total methane emissions mitigated for the program.

The TxMCW website will also be updated to include any changes to the prioritization process, methodology, and results.