

NO STATE BENEFITS MORE THAN TEXAS FROM FEDERAL ACTION ON METHANE

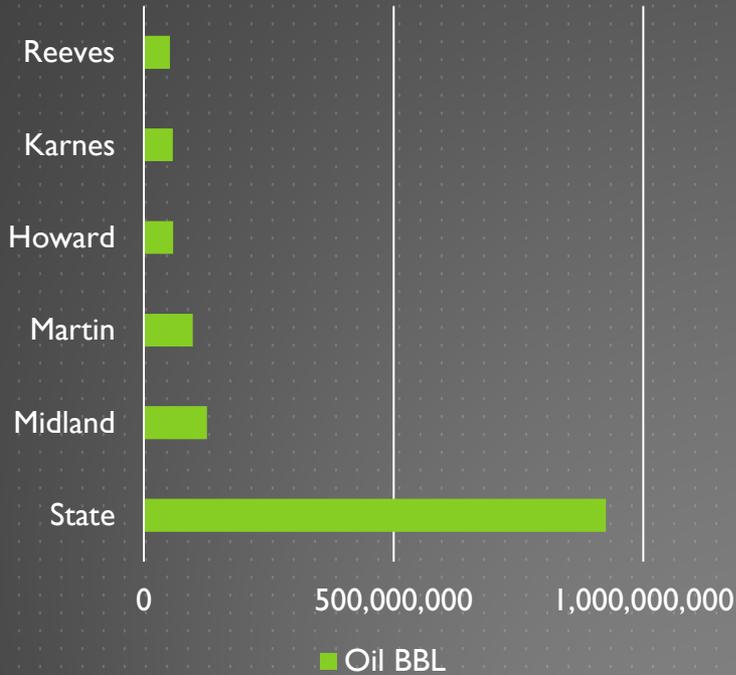


- ▶ Cyrus Reed, PhD, Lone Star Chapter, Sierra Club
- ▶ Alliance for Clean Texas Presentation
- ▶ November 19, 2021

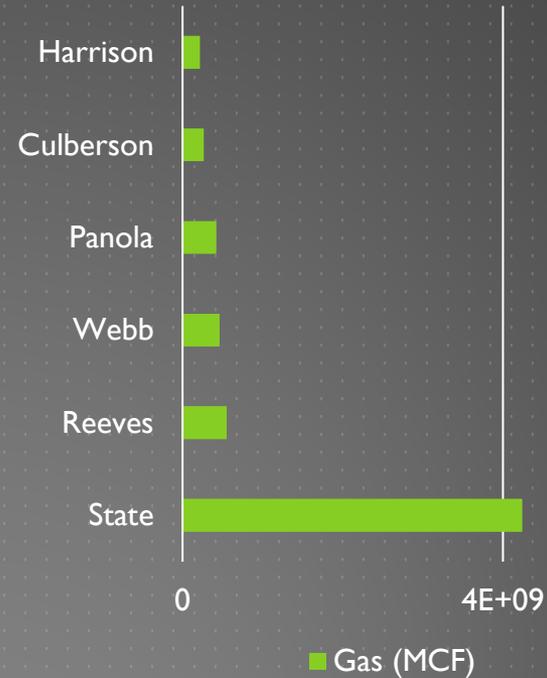
TEXAS HAS OIL & GAS EVERYWHERE

(PLUS CONDENSATE PLUS CASING HEAD GAS)

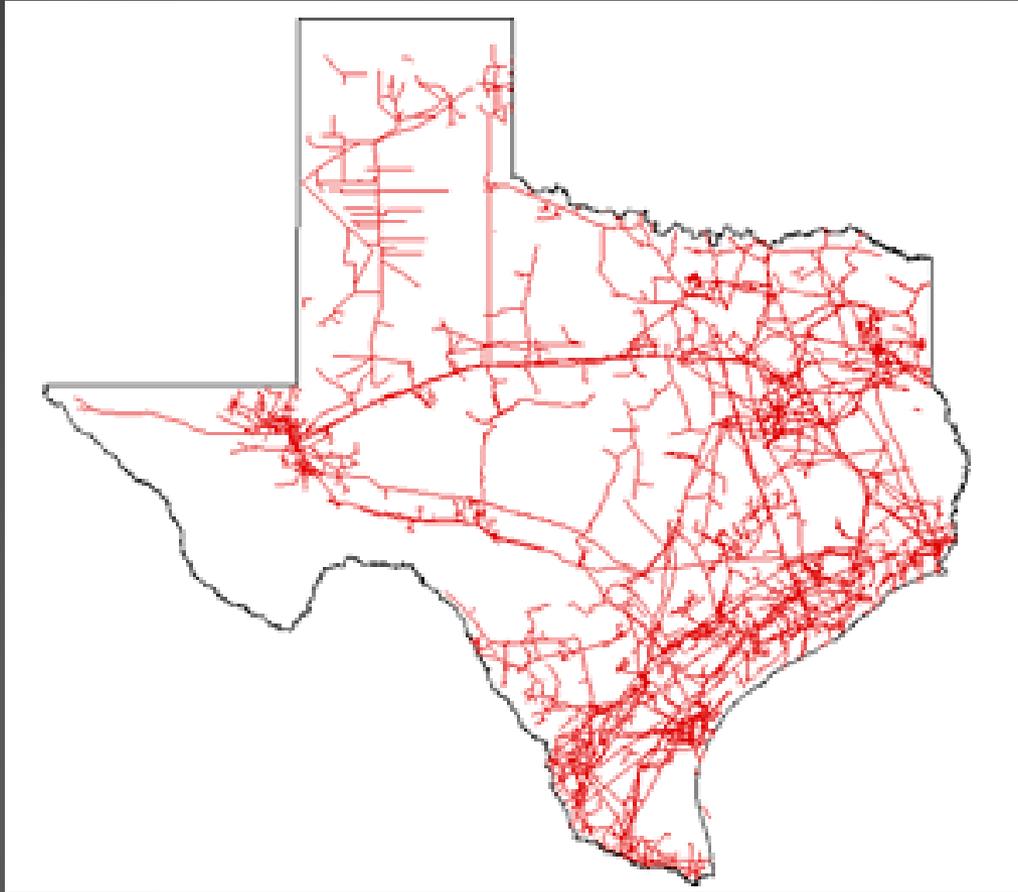
Crude Oil BBL, 2021



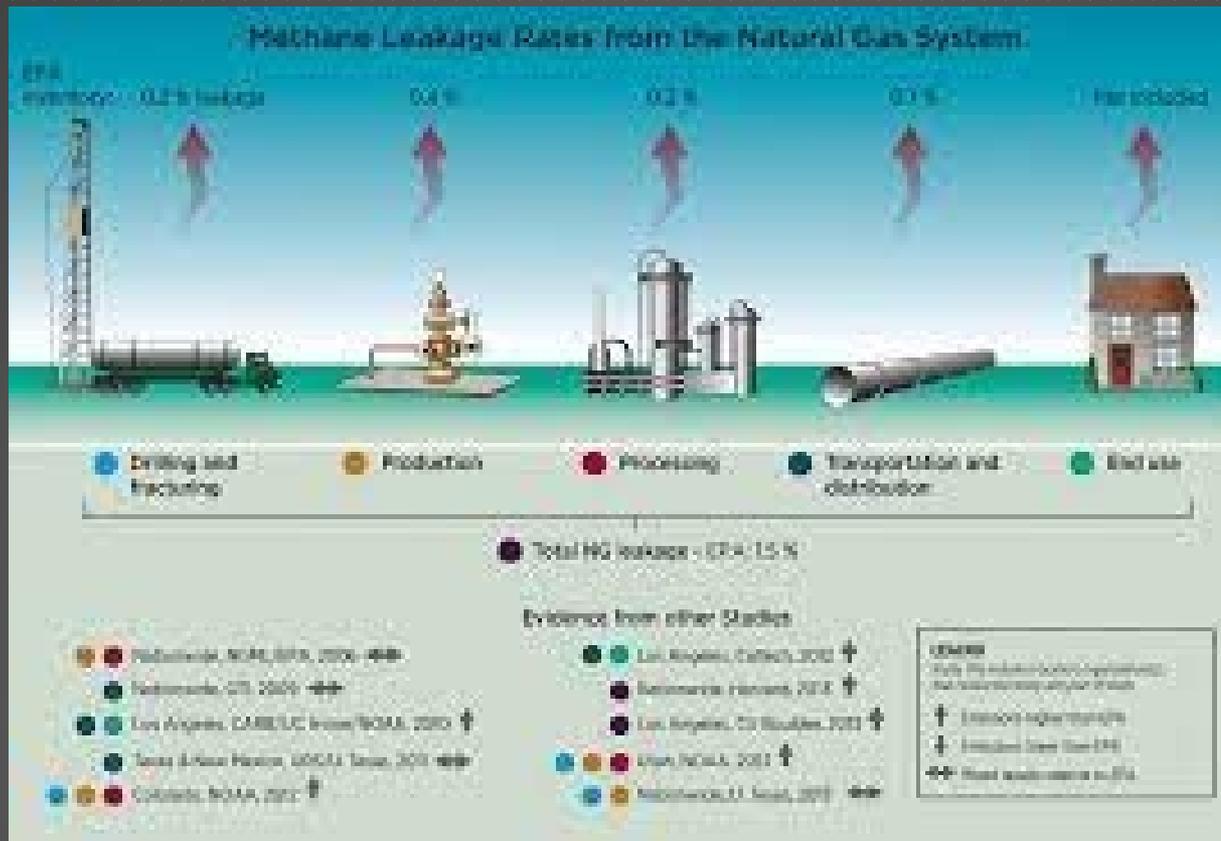
Gas (MCF), 2021



AND GAS PIPES EVERYWHERE



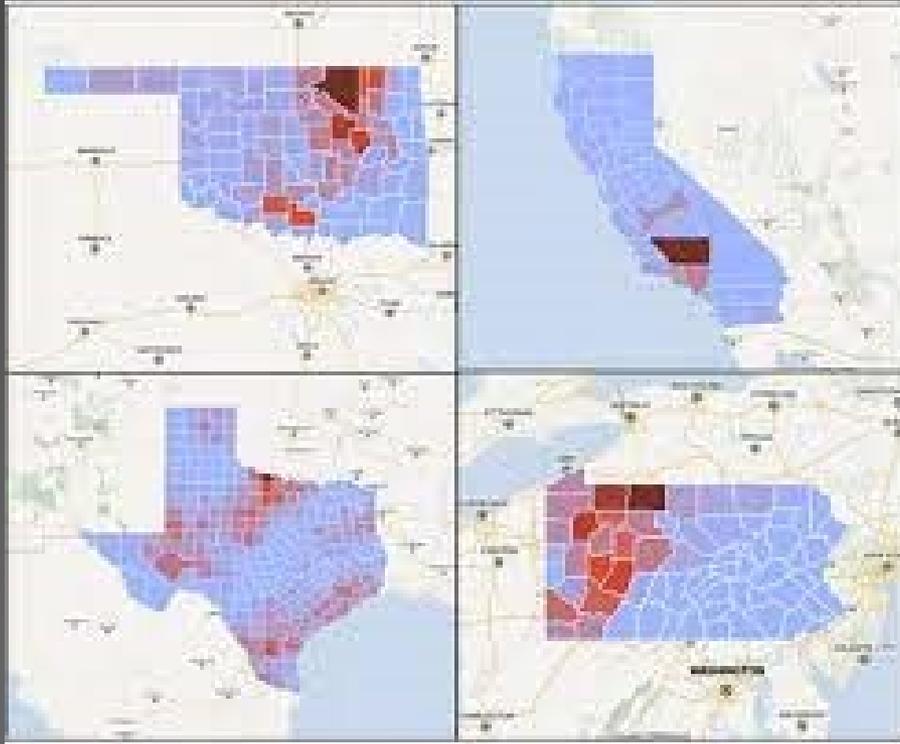
METHANE LEAKS FROM IT ALL



AND ORPHANED/ABANDONED WELLS

- ▶ Explanatory Measure: Number of Orphaned Wells Approved for Plugging with the Use of State Funds. October 157
Fiscal Year-to-date 359
Performance Measure Goal 1,000
- ▶ Explanatory Measure: Number of Known Orphaned Wells in Non-compliance with the Commission's Plugging Rule. October 7,436
Performance Measure Goal 6,500
- ▶ Explanatory Measure: Number of Wells Plugged, by Operators, Without the Use of State Funds.
- ▶ October
Fiscal Year-to-date Performance Measure Goal
- ▶ 1,203 1,844 6,500
- ▶ Explanatory measure: Numbered shut-in/inactive wells. October 147,928
Performance Measure Goal 140,000

MAP: ABANDONED/ORPHANED WELLS



TEXAS SPLITS OIL AND GAS REGULATION BETWEEN SEVERAL AGENCIES, WITH OFTEN LIMITED ENFORCEMENT AND COORDINATION

- ▶ **Railroad Commission of Texas** **General Land Office**
- ▶ **Texas Commission on Environmental Quality**

TEXAS HAS NO SPECIFIC METHANE REGS

- ▶ TCEQ only does what EPA forces them to do
- ▶ TCEQ does have regs on oil and gas emissions but they vary by location, size and year of operation
- ▶ RRC has authority to act on waste, but doesn't
- ▶ Other states? Colorado, New Mexico, Wyoming, Pennsylvania, North Dakota have all acted on methane, not Texas

WHAT DOES RULE 32 (GAS WELL GAS AND CASINGHEAD GAS SHALL BE UTILIZED FOR LEGAL PURPOSES) SAY?

- ▶ (b) Activities authorized by this section may be subject to rules and regulations promulgated by the United States Environmental Protection Agency under the federal Clean Air Act or the Texas Commission on Environmental Quality under the Texas Clean Air Act. **(CYRUS COMMENT – I WISH!**
- ▶ (c) General Provisions. All gas from any oil well, gas well, gas gathering system, gas plant or other gas handling equipment shall be utilized for purposes and uses authorized by law, **except** as provided in this section. This section does not apply to gas transmission or gas distribution facilities or operations.

TEXAS COULD BE A LEADER ON FLARING AND METHANE IF OUR STATE AGENCIES DID THEIR JOB

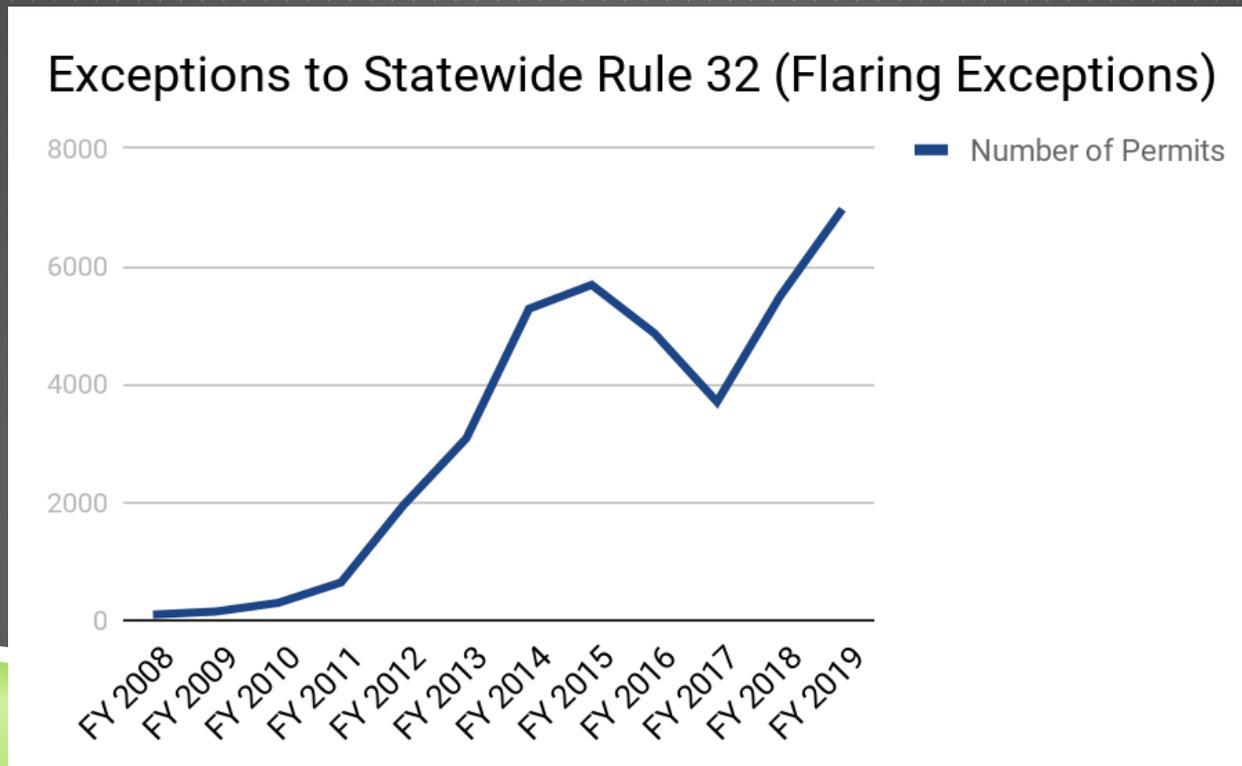
- ▶ Railroad Commission has authority over initial drilling of wells, and flaring and venting of wells and associated equipment and plays a key role in inspection and enforcement
- ▶ Texas Commission on Environmental Quality has well established rules over oil and gas emissions through standard permits, general permits, individual permits and “Permits-By-Rule” that need to be updated, and provides air monitoring, inspection and enforcement activities

RRC HAS FULL AUTHORITY TO LIMIT FLARING BUT DOESN'T

- ▶ *Sec. 85.045. WASTE ILLEGAL AND PROHIBITED.*
- ▶ *Sec. 86.185. PROHIBITION AGAINST GAS IN AIR. No gas from a gas well may be permitted to escape into the air after the expiration of 10 days from the time the gas is encountered in the gas well, or from the time of perforating the casing opposite a gas-bearing zone if casing is set through the zone, whichever is later, but the commission may permit the escape of gas into the air for an additional time if the operator of a well or other facility presents information to show the necessity for the escape; provided that the amount of gas which is flared under that authority is charged to the operator's allowable production.*
- ▶ *Sec. 91.015. PREVENTION OF WASTE. Operators, contractors, drillers, pipeline companies, and gas distributing companies that drill for or produce oil or gas or pipe oil or gas for any purpose shall use every possible precaution in accordance with the most approved methods to stop and prevent waste of oil, gas, or both oil and gas in drilling and producing operations, storage, piping, and distribution and shall not wastefully use oil or gas or allow oil or gas to leak or escape from natural reservoirs, wells, tanks, containers, or pipes.*

RAILROAD COMMISSION HAS LEGAL AUTHORITY TO ACT ON WASTE, BUT HAS CONTINUED TO ALLOW FLARING OF WASTE

- ▶ But as discussed since hydraulic fracturing, RRC has only denied a few applications for Flaring/Venting



RRC ENFORCEMENT AND COMPLIANCE

- ▶ RRC has stepped up its inspection game through increased legislative appropriations last two cycles, but still only covering each well in Texas once every 4 years
- ▶ RRC initiated a special study on flaring and venting recently and found some 25% of operators were not following their permits, or were venting or flaring illegally
- ▶ RRC has increased use of drone technology
- ▶ Important to note RRC has statutory limits on penalties at \$10,000 per violation per day that are 38 years old and have not been updated by legislature meaning for many operators violating the law

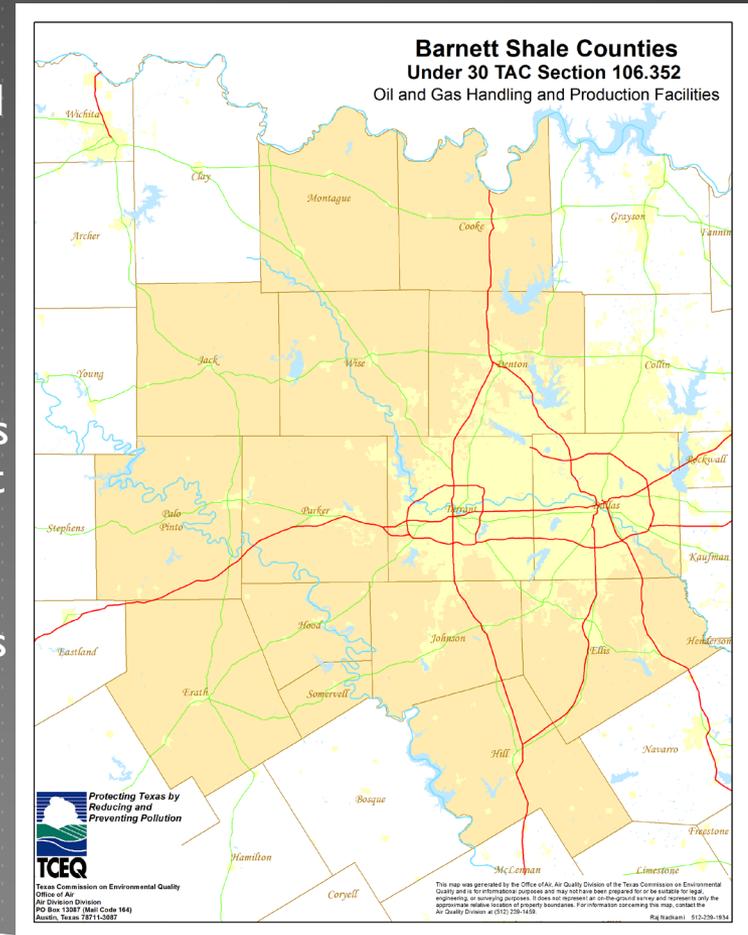
TCEQ: IMPLEMENTS AND ENFORCES STATE AND FEDERAL CLEAN AIR ACT

- ▶ TCEQ has primacy over most air quality issues
- ▶ During drilling or exploration activities -- Drilling Permits, RRC
- ▶ After Drilling and at Facilities such as Tank Batteries and Compressor Stations, TCEQ Air Permits Division

- ▶ TCEQ has had a “flexible” interpretation of permitting and depending on size of applicant and geography offers applicants different levels of permitting and oversight
- ▶ Loose interpretation of aggregation
- ▶ TCEQ imposed some specific registration requirements and additional requirements for small sources in the Barnett-Shale that only apply to the Barnett-Shale, which means many oil and gas wells and associated equipment do not need to do anything but register with TCEQ

YOU ARE BETTER PROTECTED IN DFW THAN IN THE PERMIAN

- ▶ Under 2011/2012 rules, oil and gas facilities in 15 counties had additional controls placed upon them by TCEQ through stakeholder process;
- ▶ Thus, Texas requires more controls in one part of the state than others.
- ▶ Outside of Barnett shale, registration is required only for sites which handle sour gas (24 ppmv). Construction of PBR sites do not have to wait for a reply from the TCEQ.
- ▶ Registration is not needed for all other sites (sweet). These sites are authorized as long as records are kept which demonstrate compliance with the rule requirements.



PRB VS STANDARD PERMIT

- ▶ Owners and operators of facilities must obtain an authorization for air emissions from the facilities. Facilities may qualify for a permit by rule (PBR)
- ▶ Less than 250 tons per year (tpy) of carbon monoxide (CO) or nitrogen oxides (NO_x).
- ▶ Less than 25 tpy of volatile organic compounds (VOCs), sulfur dioxide (SO₂), or particulate matter of less than 10 microns in diameter (PM₁₀).
- ▶ Less than 25 tpy of any other air contaminant except carbon dioxide, water, nitrogen (N), methane (CH₄), ethane (C₂H₆), hydrogen, or oxygen.

LDAR REQUIREMENTS OUTSIDE OF FEDERAL REQUIREMENTS

- ▶ Texas regulations apply to new sources, relative to either 2000, 2011, or 2012 depending on location and type of permit. Texas requires an LDAR program for certain mid-sized to large oil and gas facilities. The specific requirements vary depending on the facility's location and potential to emit uncontrolled VOC. Most well sites are not subject to LDAR due to the high emissions threshold uncontrolled VOC emissions (>10 or 25 tpy) and distance from a sensitive receptor, such as a home or school, that triggers the application of LDAR. **EDF analysis of Texas Standard Permits found that only roughly 5.5% of well sites in Texas are required to conduct LDAR.**

SO WHAT DOES IT ALL MEAN?

- ▶ TCEQ has relatively low requirements on the use of LDAR (leak detection and repair) requirements in the oil and gas field, unless there are federal requirements
- ▶ It means that TCEQ lacks specific methane control tank and compressor requirements other than whatever is in NSPS
OOOO
- ▶ TCEQ does have important emission events reporting and clean up requirements that are important to protecting public health.
- ▶ No state level requirements on Methane
- ▶ “Emissions from upsets, emergencies, or malfunctions are not authorized by this standard permit. This standard permit does not regulate methane, ethane, or carbon dioxide.”

THE GOOD & NOT QUITE GOOD ENOUGH OF THE BIDEN PROPOSAL

- ▶ **What we like about the rule:**
- ▶ **COVERS EXISTING EQUIPMENT.** It establishes the first-ever federal methane standards for existing equipment. No matter how you cut it, this is a big deal, and will yield substantial emission reductions from the sector.
- ▶ **NO BLEED PNEUMATIC CONTROLLERS.** It requires zero-emitting (i.e., electric or compressed air-driven) pneumatic controllers at all new and existing sites except for the Alaskan north slope. This is a top-level priority for us, and we're grateful to see it in the proposal.
- ▶ **LIQUID UNLOADING REQUIREMENTS.** It includes the first-ever emission reduction requirements for liquids unloading events at both new and existing sources.

THE GOOD OF THE NEW RULE

- ▶ **MORE LDAR REQUIRED.** It tightens the LDAR requirements from semi-annually to quarterly for all wells except those whose calculated potential to emit methane is below 3 tons per year. Although we dislike that 3 TPY exemption, the tightened standards for all other wells is welcome.
- ▶ **REGULATES STORAGE TANKS.** It establishes methane standards for new storage tanks, which were regulated only for their VOCs in the 2016 rule. This allows EPA to establish standards for existing storage tanks as well, which it has proposed in this rule. (VOC-only new source standards do not establish a legal predicate for existing source standards; only methane requirements do).

WHAT COULD BE IMPROVED

- ▶ **REMOVE SMALL EMITTER EXEMPTION.** EPA must remove the LDAR exemption for well sites that have a calculated potential to emit below 3 TPY of methane. Under the proposal, these wells need only conduct one LDAR inspection to fulfill their obligations; we want them to be subject to no less stringent LDAR requirements than all other wells. At a minimum, if EPA insists on including some form of relaxed LDAR standards for less complex wells, it must limit that exemption more than it has done in the proposal. For instance, EPA could require regular LDAR at all well sites that have certain kinds of malfunction-prone equipment (like storage vessels and separators), even if they otherwise fall below the 3 TPY threshold. Other possibilities also exist as well to limit this exemption.
- ▶ **MONTHLY LDAR.** Quarterly rather than semi-annual LDAR inspections for most well sites are an improvement over the 2016 rule, but EPA should go further and require monthly LDAR for wells and compressor stations.



WHAT COULD BE IMPROVED, CONTINUED

- ▶ **REQUIRE REDUCED FLARING.** EPA must strictly limit flaring of associated gas at oil wells, permitting it only capturing the gas is physically or technically impossible or safety is a concern. Under the current proposal, EPA doesn't significantly limit flaring except where it is already easy for a source to route associated gas to a sales line. EPA must effectively require this. If EPA insists on permitting flaring more broadly than we would like, at a minimum, EPA must increase the required flare efficiency from 95% to 98%.
- ▶ **ABANDONED AND ORPHANED WELLS.** EPA has not yet proposed standards for abandoned or orphaned wells, but has requested comment on this in anticipation of a supplemental rulemaking proposal. EPA must include standards that require owners and operators to plug and control emissions from this category of wells.

MORE IMPROVEMENT NEEDED

- ▶ **MORE ADVANCED LDAR.** EPA has requested comment on advanced technologies for LDAR. We urge EPA to further study this issue and potentially require advanced LDAR technologies if doing so would justify removing all LDAR exemptions that have currently been proposed and would thus result in more emission reductions than would otherwise occur.
- ▶ **COMMUNITY MONITORING PROGRAM.** EPA has also requested comment on whether to establish a community monitoring program, in which third-parties, citizen groups, and others could alert EPA of leaking equipment and spur the agency to require the responsible party to fix it. We strongly support efforts by EPA to develop such a program and urge it to study the relevant legal and technical considerations in order to establish a program on solid footing.
- ▶ **AT LEAST QUARTERLY MONITORING FOR ALL WELLS.** EPA has co-proposed establishing a semi-annual LDAR requirement for those wells with calculated potentials to emit 3 and 8 tons per year. EPA should require *at least* quarterly LDAR inspections for *all* wells (monthly is preferred), and certainly for all those with a potential to emit above 2 tons of methane per year.

HOW CAN YOU GET INVOLVED

- ▶ COMMENT ON THE EPA PROPOSAL
- ▶ SIERRA CLUB ACTION ALERT – SC.ORG/METHANE
- ▶ EPA WEBSITE ON PROPOSAL ON HOW TO COMMENT
- ▶ <https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/epa-proposes-new-source-performance>
- ▶ REGISTER FOR EPA'S VIRTUAL PUBLIC HEARING ON NOVEMBER 30, AND DECEMBER 1
- ▶ <https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/public-hearing-epas-proposal-reduce-methane>