

Energy & Carbon Management Commission - Permitting Process

Legislative Interim Committee on Ozone Air Quality

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Management Commission

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CO L O R A D O

**Energy & Carbon Management
Commission**

Department of Natural Resources

What is an OGD?

OGDP is an Oil and Gas Development Plan:

- Created from ECMC overhauling the oil and gas permitting process as directed by SB 19-181, Protect Public Welfare Oil And Gas Operations
- Robust permitting process that ensures the protection of public health, safety, welfare, the environment and wildlife resources
- Requires ECMC hearing for a final decision after staff review
- Requires ECMC decision for a proposed surface location or locations (each has a Form 2A in the OGD) and, if approved, operator must then request a staff decision for the associated permit to drill a well or wells (Form 2)



SENATE BILL 19-181

BY SENATOR(S) Fenberg and Foote, Court, Gonzales, Lee, Moreno, Story, Williams A., Winter;
also REPRESENTATIVE(S) Becker and Caraveo, Arndt, Benavidez, Bird, Buckner, Duran, Gonzales-Gutierrez, Gray, Herod, Hooton, Jackson, Jaquez Lewis, Kennedy, Kipp, Lontine, McCluskie, Melton, Michaelson Jenet, Mullica, Roberts, Singer, Sirota, Snyder, Sullivan, Tipper, Valdez A., Weissman.

CONCERNING ADDITIONAL PUBLIC WELFARE PROTECTIONS REGARDING THE CONDUCT OF OIL AND GAS OPERATIONS, AND, IN CONNECTION THEREWITH, MAKING AN APPROPRIATION.

What is an OGD?

What is included with an OGD?

- Form 2A for each location, Form 2B to collect estimated cumulative impacts from the proposed development, Form 2C certification, and documentation to address, as appropriate:

304.b.(7).C.- Wildlife habitat drawing	304.c.(8) - Coordination with local emergency response units
304.b.(7).J - Map of DI Communities proximate to proposed location	304.c.(14) - Topsoil Protection Plan
304.b.(11) - Best management practices	304.c.(15) - BMPs to reduce stormwater run-on/off and erosion impacts
304.b.(14) - Evidence of EPA 404 wetlands permit if applicable	304.c.(17) - Wildlife Plan
304.b.(15) - Consult w/ Schools & child care centers if variance request	304.c.(18) - Water Plan
304.c.(2) - Noise Mitigation Plan	304.c.(19) - Cumulative Impacts Plan
304.c.(3) - Light Mitigation Plan	304.c.(20) - Community Outreach when proximate to a DI Community
304.c.(4) - Odor Mitigation Plan	304.b.(1) & (13) - Local & proximate government information & siting
304.c.(5) - Dust Mitigation Plan	304.b.(2) - An Alternative Location Analysis if any Rule 304.b.(2).B criteria are met
304.c.(6) - Coordination with local gov't traffic/transportation planning	304.c.(12) - Gas Capture Plan for beneficial use if no pipeline

OGDP Review Process

- Pre-Application Consultation between Operators and ECMC
 - Consultations with CDPHE, CPW, local government, and any other relevant entities based on the circumstances of the project
- Initial OGDP Submittal by Operator
- Staff (OGLA) Review or Reviews and Operator Resubmittal or Resubmittals
- Completeness Determination, which initiates the notice of hearing, a public comment period, and formal consultation period with CDPHE as appropriate
- Director's Recommendation
- Hearing and Final Agency Decision - public comment can be submitted throughout the process, including up to the hearing

OGLA Technical Review

- Components of an OGDP Application - 303.a
 - E-filing:
 - Hearing application (which may include spacing and/or a variance request)
 - Permitting Review (500-series rules, spacing, geologic testimony, correlative rights)
 - Engineering Review (engineering testimony, reservoir characteristics, wellbore configuration)
 - OGLA Review (for consistency with Form 2A, 2B, 2C)
 - Webforms:
 - Form 2A (Oil & Gas Location Assessment) - 304.b.,c., & d.
 - Form 2B (Cumulative Impacts Data Identification) - 303.a.(5).B
 - Form 2C (OGDP Certification) - 303.a.(7)
 - OGLA Review (siting, operations, surface impacts, consultations, BMPs)
- Staff identifies any issues that need to be addressed and lists these in a spreadsheet for the operator
- Application is returned to the operator along with the spreadsheet

OGLA Technical Review

- Alternative Location Analysis (ALA)
 - Does the proposed Location naturally emerge as the most protective Location? Are all alternatives ID'd and fully evaluated? Is there consolidation with existing Locations?
- Potential receptors (people, water, air, wildlife, etc.)
 - Does the proposed Location avoid receptors? What are the potential impacts? What is the level of risk?
- Best Management Practices (BMPs)
 - Are they enforceable? Meaningful? Doable? Do BMPs effectively minimize and mitigate those impacts that cannot be avoided?

OGLA Technical Review

- Disproportionately Impacted (DI) Communities
 - Was adequate outreach conducted and is it well-documented? Why is this in a DI Community?
- High Priority Habitat (HPH)
 - Was CPW adequately involved in consultation? Did CPW have all the necessary information to make their recommendation? Are there direct/indirect mitigation fees, timing steps, COAs?
- Fluid (oil, gas, produced water) takeaway
 - Is there planned and timely takeaway for all phases of produced liquids? Why or why not?
 - HB23-1242 requires water use and water production reporting, to include the volume of recycled produced water used in operations

OGLA Technical Review

- Electrification or emissions-reductions consistent with electrification
 - Is the applicant planning to use an electric rig? Highline power?
- Variances, Exceptions, Exemptions
 - Is the variance request justified?
 - Are other agencies or affected persons supportive or concerned?
 - Is it documented in hearing application and all supporting materials?
- Cumulative Impacts
 - Is the applicant planning to plug existing wells and reclaim existing Locations?
 - Can additional consolidation occur?
 - Are there significant beneficial impacts that offset adverse impacts?
 - How does the plan collectively address cumulative impacts?

CDPHE Consultation

- ECMC Rule 309.a
 - Sets the CDPHE consultation timing
 - The consultation period is 45 days if a proposed location is outside a Disproportionately Impacted (DI) Community and 60 days if a proposed location is within a DI Community.
- ECMC Rule 309.f
 - Describes the formal CDPHE consultation process
- ECMC Rule 309.f.(1).C
 - CDPHE has informed ECMC Staff that it is reviewing every proposed location under its new Enviroscreen tool to determine whether or not a full consultation is necessary.

OGDP Review Process

- Director's Recommendation
 - Synthesis of all application materials
 - Director's written Recommendation - Rule 306
 - ECMC sends notifications per Rule 306.c
 - Published to ECMC website 2 weeks prior to Hearing
- Commissioners Review and Informal Q&A
 - Commissioners may individually meet with Permitting Manager (or her delegate) to ask questions about the application or OGLA review
- Commission Hearing
 - OGDP-specific public comment may be taken at the start of the Hearing
 - Applicant Presentation
 - Staff Presentation or Response
 - Questions, Comments, Deliberation
 - Commissioner Vote
- Administrative Processing if approved

Energy & Carbon Management Commissioners



OGDP Denials

- Longs Peak OGD: “In conducting its ALA, [the Operator] prioritized avoiding stranding minerals, ensuring it had legal rights to surface access, and that it could access the minerals using the company’s preferred drilling techniques. Only once these criteria were met did [the Operator] appear to seek a location with fewer potential adverse impacts to surrounding resources. As a result, [the Operator] did not identify and analyze all potential alternate locations from which the targeted minerals can be accessed, as required by Rule 304.b.(2).C.” ECMC Order No. 407-3302, Paragraph 43.
- Sumac OGD: “The Commission determined that [the Operator’s] refusal to consider development from either of the existing Oil and Gas Locations did not comply with the Act’s mitigation hierarchy requiring the Commission to prioritize the opportunity to avoid adverse impacts before approving an Application that relies upon minimization or mitigation of adverse impacts.” ECMC Order No. 535-1415, Paragraph 52.

OGDP Denials

- Why haven't there been many denials?
 - Detailed rules and lengthy review process encourage operators to submit OGDPs for locations that can meet the ECMC's stringent rules
 - OGLAs thoroughly review submittals and identify issues that must be addressed to comply with rule requirements - this process coupled with consultations with CDPHE, CPW, and others - have meaningfully reduced impacts associated with a proposal through the staff review process
 - Submittals that do not comply with the minimum rule requirements do not receive a completeness determination and do not move forward in the review process

ECMC Process Results in Less Impacts

- Guanella CAP
 - Original submitted CAP included locations that were in close proximity to people and wildlife
 - Through consultations with CDPHE, CPW, and local government, in addition to work with ECMC staff, Operator submitted a revised proposal with different locations that reduced the total number of receptors, included an extensive ALA, and updated NOx emissions calculation that was ultimately presented to the Commission
- Koolstra OGDP
 - Operator submitted proposal to use a Tier II diesel powered engine and Group II mud for drilling
 - At initial hearing before Commissioners, Commissioner expressed concerns with this proposal
 - Operator, at a subsequent hearing, committed to a Tier IV engine, if possible, and at a minimum committed to a Tier II natural gas engine with battery assist should the Tier IV engine not be available

Operator-Estimated Impact Reductions

Drilling NOX Reductions: Menu

Tier II Diesel:
21.5 Tons NOX

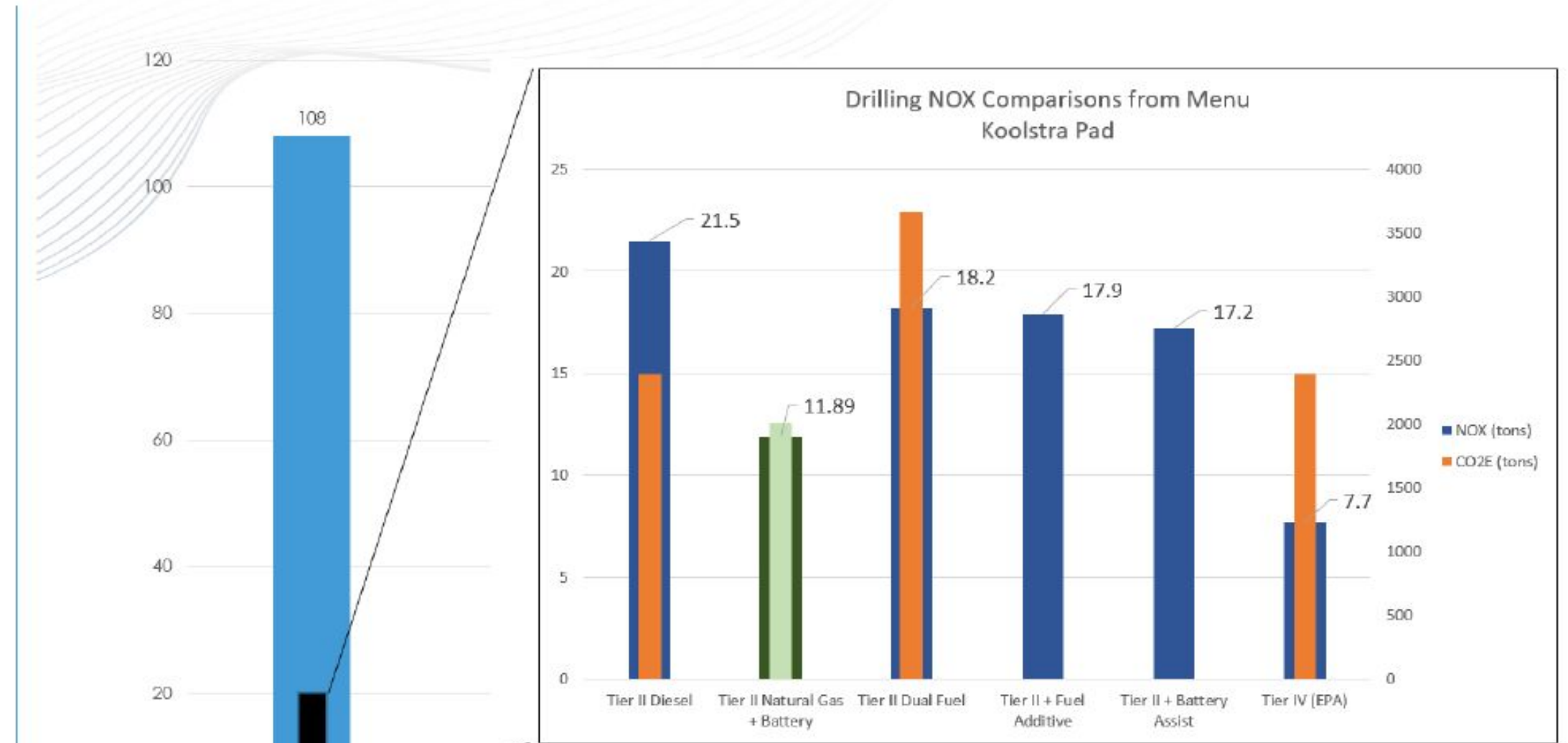
Tier II Nat Gas + Battery:
11.89 Tons NOX

Tier II Dual Fuel:
18.2 Tons NOX

Tier II + Fuel additive:
17.9 (or less) Tons NOX
**No data for CO2e*

Tier II + Battery Assist:
17.2(or less) Tons NOX
**No data for CO2e*

Tier IV:
7.7 Tons NOX



Assumptions and citations:

- (1) Tier II and Tier IV: EPA AP42 Emission Factors
- (2) Tier II Natural Gas + Battery: Manufacturer Specifications
- (3) Tier II (Dual Fuel): Referenced assumptions from Liberty Frac Fleet Emission Factors that employ Dual Fuel
- (4) Tier II + Fuel Additive: <https://www.nabors.com/for-contractors-ofs/energy-transition-solutions/fuel-enhancers/>
- (5) Tier II + Battery Assist: operational assumptions

OGDP Beneficial Impacts

- Wells to be plugged: 803
- Acres reclaimed: 662
- Equipment slated for decommissioning:
 - 569 oil tanks
 - 20 condensate tanks
 - 340 produced water tanks
- Annual vehicle trips avoided through plugging and reclaiming existing locations and equipment upgrades: 32,168

Comparing Pre- and Post- SB19-181 Permit Approvals

- Pre-SB19-181: 2017-April 2019
 - Locations (Form 2As): 1,180
 - Wells (Form 2s): 10,205
- Post-SB19-181: 2021-August 2023
 - Locations (Form 2As): 172
 - Wells (Form 2s): 914



Post-SB19-181 Year-by-Year

- 2021
 - Locations (Form 2As): 55
 - Wells (Form 2s): 41
- 2022
 - Locations (Form 2As): 78
 - Wells (Form 2s): 465
- 2023
 - Locations (Form 2As): 39
 - Wells (Form 2s): 408

Emissions

Pre SB19-181

- No formal emissions estimates data collected

Post SB19-181

- Form 2B emissions estimates are required per ECMC Rule 303.a.(5).B.i. and ii.
 - AIR RESOURCES
 - Pre-production Emissions Estimates
 - Production Emissions Estimates
 - PUBLIC HEALTH RESOURCES
 - Pre-production Emissions Estimates
 - Production Emissions Estimates

Emissions

Form 2B emissions estimates are required per ECMC Rule 303.a.(5).B.i. and ii.

	Pre-production & Production Emissions Estimates		
AIR RESOURCES	NO _x	CO	VOC
	CH ₄	C ₂ H ₆	CO ₂
	N ₂ O		

	Pre-production & Production Emissions Estimates		
PUBLIC HEALTH RESOURCES	Benzene	Toluene	Ethylbenzene
	Xylenes	n-Hexanes	TMP
	H ₂ S	Formaldehyde	Methanol
	HAPs		

Questions/Discussion

Visit our website:

ecmc.state.co.us



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