

# Developing New Mexico's Oil and Natural Gas Methane Strategy

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NEW MEXICO ENVIRONMENT DEPARTMENT

NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES  
DEPARTMENT

June 2019

# Developing New Mexico's Methane Strategy

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***“EMNRD and NMED shall jointly develop a statewide, enforceable regulatory framework to secure reductions in oil and gas sector methane emissions and to prevent waste from new and existing sources and enact such rules as soon as practicable.”***

- Governor Michelle Lujan Grisham

# Developing New Mexico's Methane Strategy

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**Science:** Using the best available science to inform our decision-making in protecting public health, the environment and minimizing waste.



**Innovation:** Employing creative engineering and technological solutions to address the public health, environmental and waste challenges.



**Collaboration:** Engaging communities and interested stakeholders in our methane strategy decision-making.



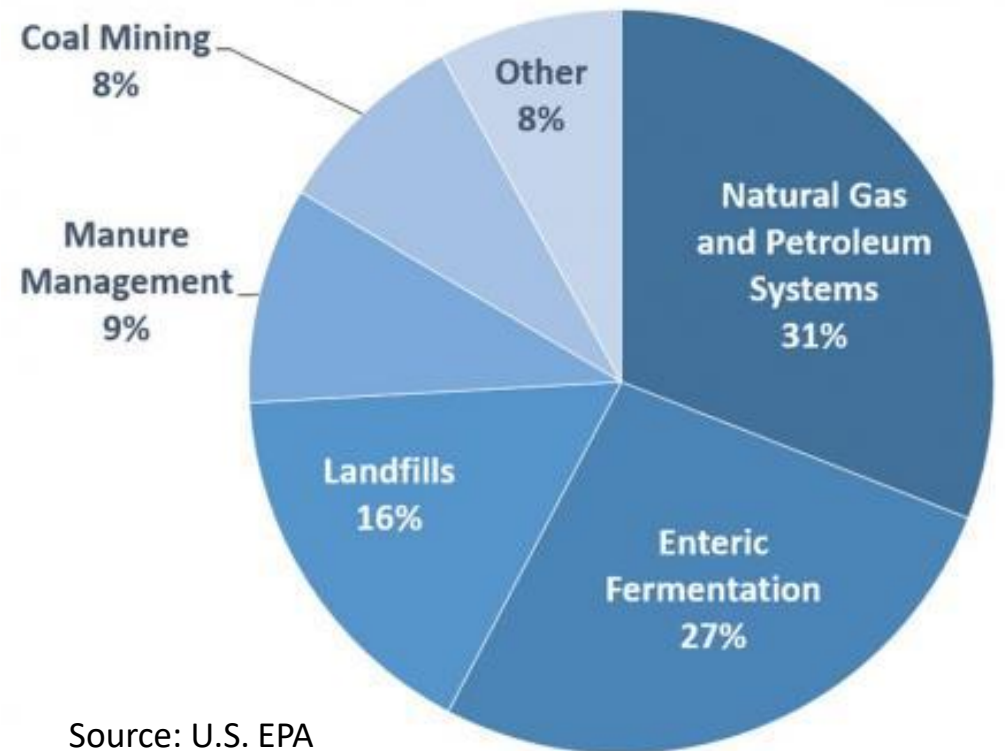
**Compliance:** Ensuring meaningful compliance with state regulations and permits.

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Methane is a **potent greenhouse gas** with a global warming potential more than 25 times greater than that of carbon dioxide.

Methane is the **second most prevalent greenhouse gas emitted** in the United States from human activities, and approximately one-third of those emissions comes from oil production and the production, transmission and distribution of natural gas.

2017 U.S. Methane Emissions, By Source



Source: U.S. EPA

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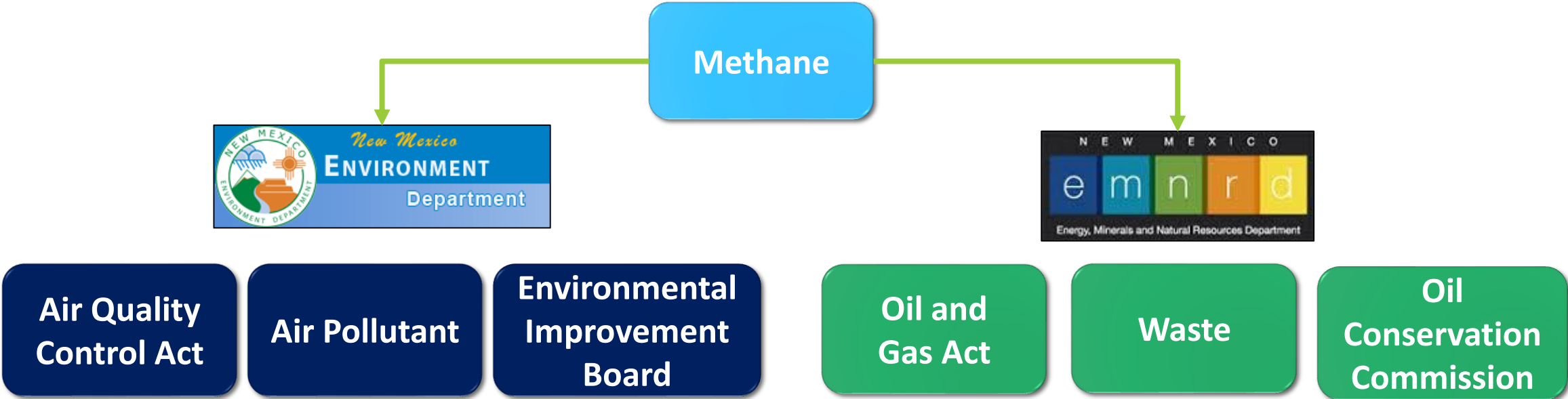
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In 2018, oil and natural gas companies reported over **36 million cubic feet of vented or flared natural gas**. This information was collected using the New Mexico Oil Conservation Division's required production reports (known as C115 reports).

This equated to approximately **\$10 million in lost revenues** to New Mexicans in 2018.

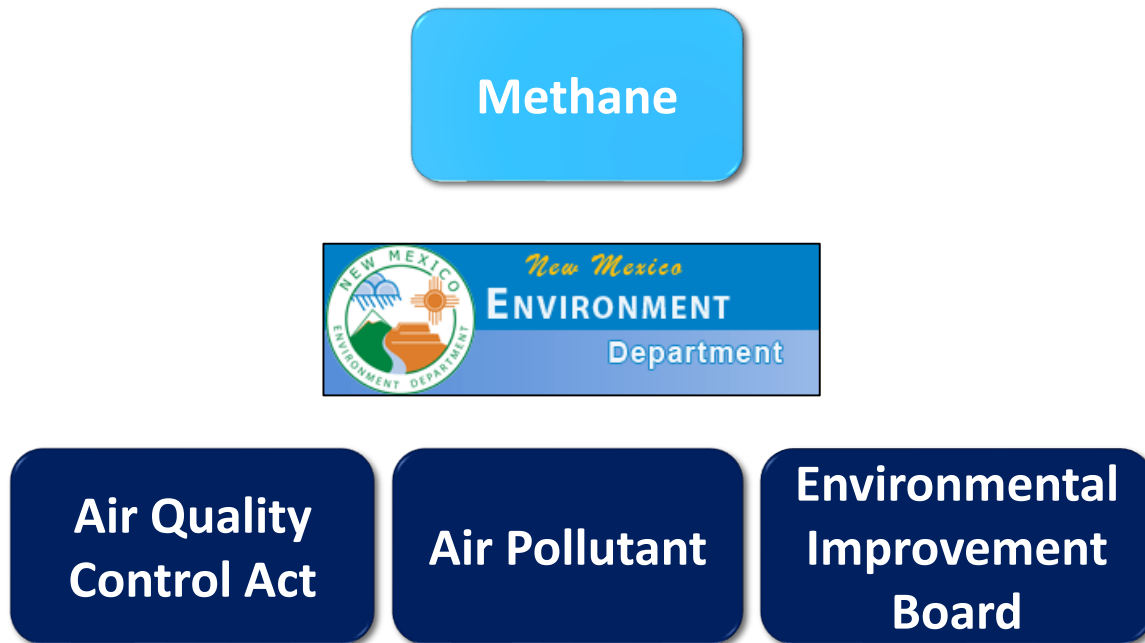


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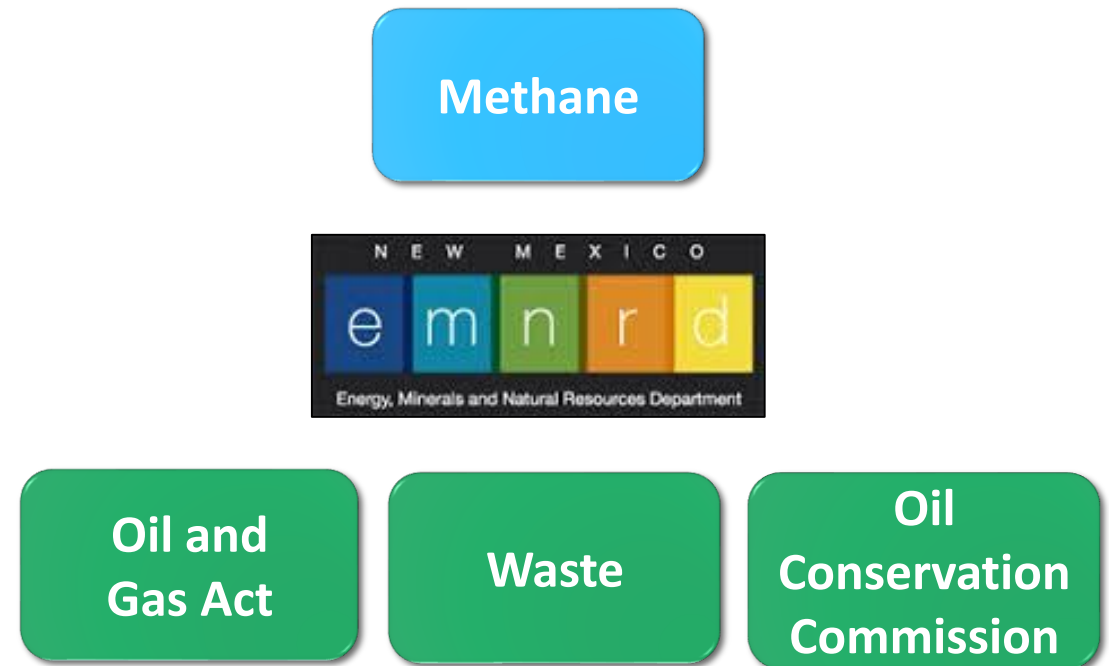


- The New Mexico Environment Department will regulate methane emissions from oil and natural operations.
- The Air Quality Control Act provides the legal authority.
- Proposed rules are reviewed and adopted through Environmental Improvement Board.

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- The New Mexico Energy, Minerals and Natural Resources Department will regulate to prevent the waste of methane from oil and natural operations.
- The Oil and Gas Act provides the legal authority.
- Proposed rules are reviewed and adopted through the Oil Conservation Commission.





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Methane from the oil and natural gas industry is **packaged with other pollutants**: volatile organic compounds (VOCs), which are a key ingredient in ground-level ozone (smog); and a number of other pollutants known as “air toxics” – in particular, benzene, toluene, ethylbenzene and xylene.

Methane can be a **waste product** from the oil and natural gas industry. This occurs through the venting and flaring of methane at various points across the oil and gas value chain. When a resource is wasted, the state of New Mexico is no longer able to collect royalties on the waste and the resource is not available for future beneficial use.

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## Excess VOC Emissions Reported to NMED<sup>1</sup>

Year	VOC Emissions Above Permit Limits <sup>2</sup>
2016	2,148,740
2017	410,929
2018	1,965,977

1. Data for Lea and Eddy County only.
2. Values are in pounds of pollutant

## Waste Reported to EMNRD

Year	Venting	Flaring	Total
2016	3,376,009	21,799,677	25,175,686
2017	2,123,452	14,886,332	17,009,784
2018	3,462,237	32,749,804	36,212,041

- \*Values in Mscf
- \*\*Values reported in C115 form

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- The Air Quality Control Act requires the State to develop a plan, including the adoption of regulations, to reduce ozone precursors (VOCs and NOx) in areas where monitored ozone levels are greater than 95% of the ozone standard.
- NMED is developing rules targeting VOC and NOx reductions in seven counties. **Such reductions in VOCs will collaterally reduce methane.**
- Multiple stages of stakeholder and public engagement are planned.
- Initial outreach to the general public, industry, local and county governments will be followed by draft rules.

## Seven Counties:

Bernalillo

Chavez

Doña Ana

Eddy

Lea

Rio Arriba

San Juan

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- NMED is currently gathering or developing information related to:
  - Ozone formation science in the seven counties;
  - Ozone-related health effects;
  - Monitoring data (for the entire State, excluding Bernalillo County and Tribal Lands); and
  - Source-specific information (point and non-point emission information).



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- NMED is seeking feedback from stakeholders on options to reduce VOCs/methane.
- NMED must go before the EIB to request adoption of the proposed rule.
- In adopting regulations, the Air Quality Control Act requires the EIB to consider:
  1. Public interest, including the social and economic value of the sources of emissions;
  2. Energy, environmental, and economic impacts;
  3. Efforts by sources to reduce emissions prior to the effective date of the rule; and
  4. The remaining useful life of existing sources.
- In the meantime, NMED is committed to enforcing permitted and emission standards.



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- New Mexico Oil and Gas Act:
  - Written in 1935 and amended to prevent waste, protect correlative rights, and protect public health and the environment (70-2-12 NMSA)
  - The Oil and Gas Act prohibits “waste” from oil and gas production.
    - “The production or handling of crude petroleum oil or natural gas of any type or in any form, or the handling of products thereof, in such manner or under such conditions or in such amounts as to constitute or result in waste is each hereby prohibited.” NMSA 1978, §70-2-2. (1935)
  - The Act requires the OCC and OCD to “prevent waste prohibited by this act.” NMSA 1978, §70-2-11(A).

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- “Waste” of oil or gas is defined, in part, as:
  - “surface waste” as those words are generally understood in the oil and gas business, and in any event to embrace the *unnecessary or excessive surface loss or destruction without beneficial use, however caused*, of gas of any type or in any form, or crude petroleum oil, or any product thereof, but including the loss or destruction, without beneficial use, resulting from evaporation, seepage, leakage or fire, especially such loss or destruction incident to or resulting from the manner of spacing, equipping, operating or producing a well or wells, or incident to or resulting from the use of inefficient storage or from the production of crude petroleum oil or gas, in excess of the reasonable market demand. NMSA 1978, §70-2-3.
- To prevent waste of gas resources, the OCD has a “no vent or flare” rule.
  - Rule 19.15.18.12(A) NMAC, titled “Casinghead Gas” states: An operator shall not flare or vent casinghead gas produced from a well after 60 days following the well's completion.

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- EMNRD will review the current rules governing the prevention of waste, including the limitations on venting and flaring, to determine what changes in rules and procedures are necessary for more effective prevention of waste including methane waste.
- EMNRD will seek feedback from stakeholders on various options to address waste issues
- EMNRD will develop draft rule proposals based on feedback during initial outreach. Draft rule changes will be made available for comment as part of the public outreach

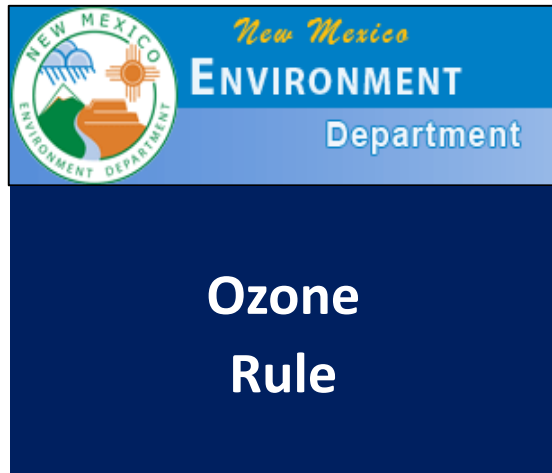


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- To amend the rule on venting and flaring, EMNRD must file an application with the Oil Conservation Commission (OCC). The OCC must determine when to hold a hearing.
- Public notice of the rulemaking must be provided and a public hearing will be held.
- Any action by the OCC on a rule may be appealed to the New Mexico Court of Appeals.

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## Goals of Oil and Natural Gas Methane Rules:

- Achieve measurable, durable reductions
- Create regulatory certainty
- Promote technology innovation
- Ensure compliance mechanisms

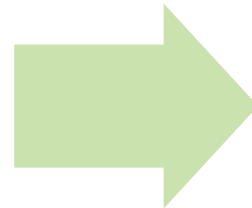


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## Well Development and Production

- Completions/stimulation
- Dehydrators
- Hydrocarbon storage vessels
- Liquids unloading
- Pneumatics (controllers & pumps)
- Produced water storage vessels
- Separators



## Gathering and Processing

- Compressors
- Engines
- Gathering lines
- Hydrocarbon tanks
- Dehydrators
- Pneumatic controllers

Equipment Leaks, Flaring, Venting

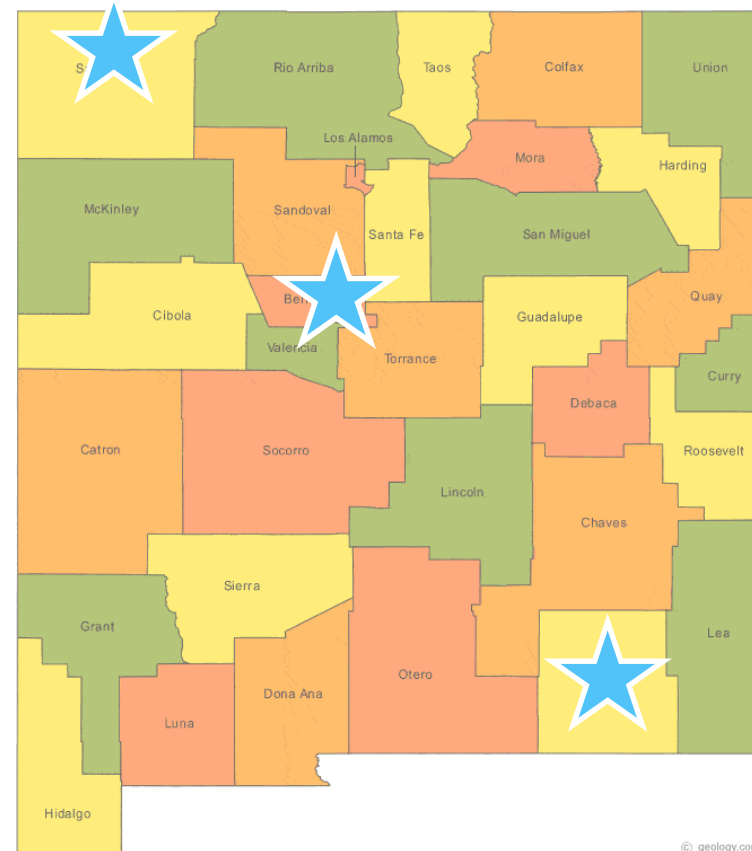
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- Two proposed stakeholder workgroups focusing on the following industry segments:
  - **Workgroup 1: Well Development & Production**
    - Members will include: academia, eNGOs, technology companies, upstream/midstream industry.
  - **Workgroup 2: Gathering & Processing**
    - Members will include: academia, eNGOs, technology companies, upstream/midstream industry.
- Charge to the workgroups:
  - Develop emission- and waste-based standards for equipment/operations
  - Propose monitoring, recordkeeping and reporting structures
  - Workgroups to provide NMED/EMNRD recommendations within three months.

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- Upcoming Stakeholder Meetings:
  - July 29, 2019 – San Juan Community College, Farmington; 1-5 PM
  - July 30, 2019 – UNM School of Law, Albuquerque; 1-5 PM
  - August 7, 2019 – Nuclear Waste Partnership Building, Carlsbad; 8:30 AM to 12:30 PM



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# Acronyms

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AQCA = Air Quality Control Act

CAA = U.S. Clean Air Act

EIB = Environmental Improvement Board

NM EMNRD = New Mexico Energy, Minerals  
and Natural Resources Department

NMED = New Mexico Environment  
Department

OCC = Oil Conservation Commission

OGA = Oil and Gas Act