

# Pore Space as a Resource: A Discussion of the Policy and Regulatory Framework for CCUS

Carolyn Milne (Shell Canada)

Kimberly Howard (McCarthy Tétrault)

Ashley Wilson (McCarthy Tétrault)

Kerri Howard (McCarthy Tétrault)

Ashley Urch (McCarthy Tétrault)

June 15, 2023  
CELF Jasper Research Seminar

# Presentation Overview

1. Overview of CCUS
2. Panel Discussion on “Hot Topics”
  - Sequestration Lease Agreements and Pore Space Tenure
  - Generation of Carbon and Clean Fuel Credits
  - Potential Sources of Liability
  - Policy and Legislative Considerations

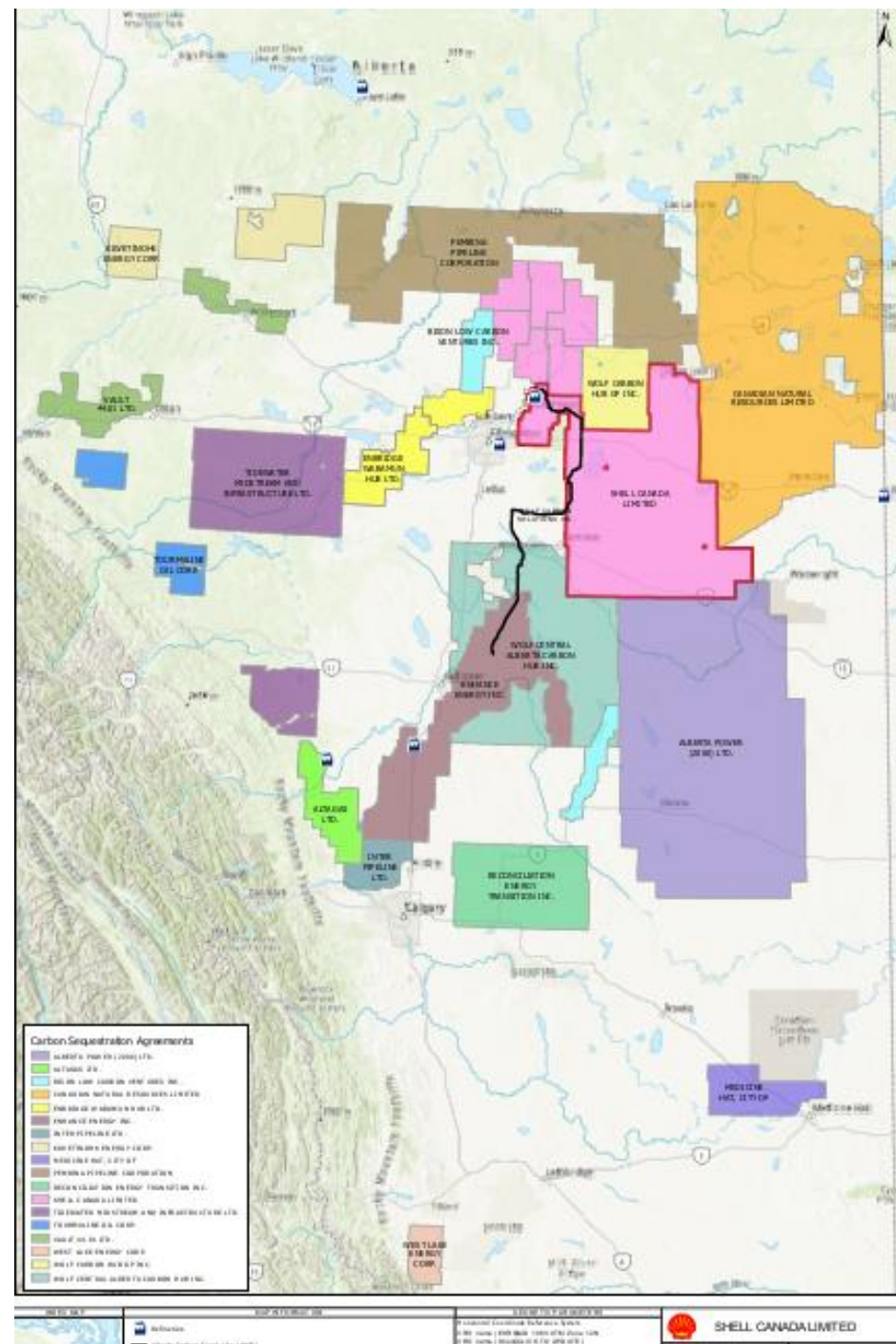
# What is CCUS?

- Carbon capture and storage (CCS) is the separation and capture of CO<sub>2</sub> from the emissions of industrial processes prior to the release into the atmosphere and storage of the CO<sub>2</sub> in deep underground geologic formations
- **CCUS vs. CCS – what is utilization?**
  - Utilization refers to the use of captured CO<sub>2</sub> in other industrial activities, such as the production of technical fluid for feedstock for carbon containing chemicals (e.g. permanent sequestration in cement) or to be later used for enhanced oil recovery (EOR)
- **CCUS vs. EOR - EOR is viewed as a means of non-permanent sequestration of CO<sub>2</sub>**
  - EOR enhances hydrocarbon recovery by injecting CO<sub>2</sub> to increase reservoir pressure. The injected CO<sub>2</sub> is not permanently sequestered and is released along with the hydrocarbon recovery process
  - EOR is regulated under existing oil and gas mineral tenure
  - Long-term liability of CCUS vs. EOR
  - Tax incentives available to CCUS are not available for EOR

# Alberta's Regulatory Framework

- **CCUS Hub RFPP and Proponents**
  - 2 Requests for Full Project Proposals were run for hubs in Alberta (Heartland region and balance of province) with 25 projects being selected
  - Proponents must provide open access to parties subject to *fair and reasonable cost recovery* in providing: (i) carbon sequestration services; and (ii) access by a third party to sequestration pore space to undertake injection
  - Available for deep saline aquifers only – Crown reserved the right to explore the potential for other forms of carbon sequestration including the use of mature oil and gas fields

## 5





# Hot Topic 1

## Pore Space Tenure

# Sequestration Lease: What makes a CCS Hub Investable?

1. **Runway**: length of primary term that enables staged development
2. **Independence**: SLA renewal as a matter of course so long as proponent in compliance, limited discretionary decisions
3. **Market-based Mechanisms**: unregulated tariffs that allow for a just and reasonable return on capital expenditure, reflect risks
4. **Owners Access**: clarity on terms governing open access to third parties; priority for project founders
5. **Liability Certainty**: include typical Crown mineral indemnity but also a right for proponents to obtain Closure Certificate after meeting requirements

# Analogous Tenure Agreements

Key Provisions	Quest Lease Agreement	GoA's Special Mineral Lease	GoA's PNG Lease
<b>Term / Renewal</b>	Initial Term: 15 years Renewal process governed by section 11 of the CSTR	Initial Term: 15 years  Renewable at discretion of Minister upon request for a further 15 years provided Lessee is using subsurface caverns for storage and is not in default	Initial Term: 5 years  Continues after expiration so long as permitted under MM and PNGTR
<b>Termination</b>	Silent s. 120 of MMA (closure certificate)	May be terminated for default of a condition, term or covenant of the Lessee and if Lessee has not commenced operations.	May be cancelled if Lessee does not meet the requirements for continuation in the PNGTR (i.e. production, drilling activities, etc.)
<b>Changes to AOI / Location</b>	Minister may reduce AOI following application by Lessee	Lessee may at any time surrender any part of the location with consent of the Minister	Silent
<b>Dispute Resolution</b>	Silent	Silent	Silent

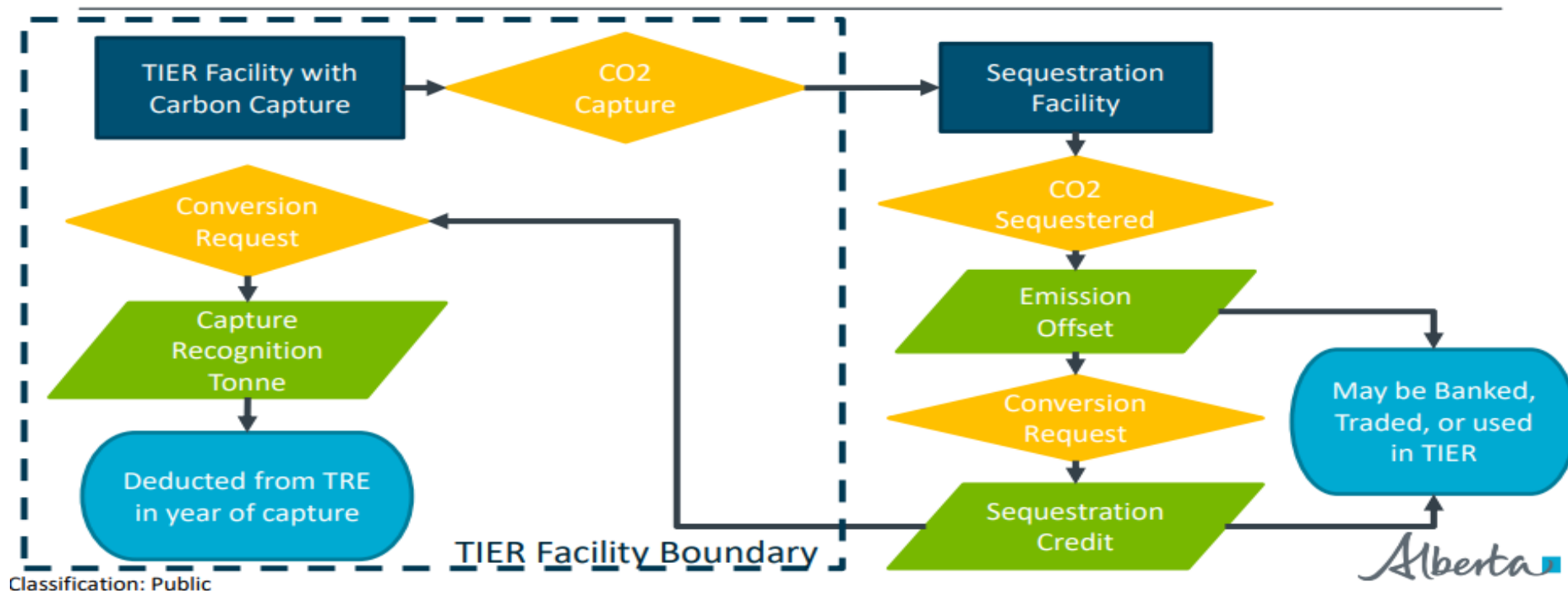


# Hot Topic 2

## Carbon and Clean Fuel Credits

# Generation of Carbon and Clean Fuel Credits

## CCUS Credit Flowchart Example



Alberta Energy and Protected Areas, "TIER Regulatory System Amendments: Overview of system amendments" (webinar) (23 January 2023), online (pdf): <https://www.alberta.ca/assets/documents/epa-technology-innovation-and-emissions-reduction-system-amendments-webinar.pdf>.

# Characteristics of Alberta Credits

	Emission Offset for Sequestration	Sequestration Credit	Capture Recognition Tonne
Stackable with CFR	✗	✓	✓
Can be banked for future use	✓	✓	✗
Can be sold to other entity?	✓	✓	✗
Can be deducted from TRE	✗	✗	✓
Can be used to meet compliance obligation	✓	✓	✗

Alberta Energy and Protected Areas, "TIER Regulatory System Amendments: Overview of system amendments" (webinar) (23 January 2023), online (pdf): <https://www.alberta.ca/assets/documents/epa-technology-innovation-and-emissions-reduction-system-amendments-webinar.pdf>.

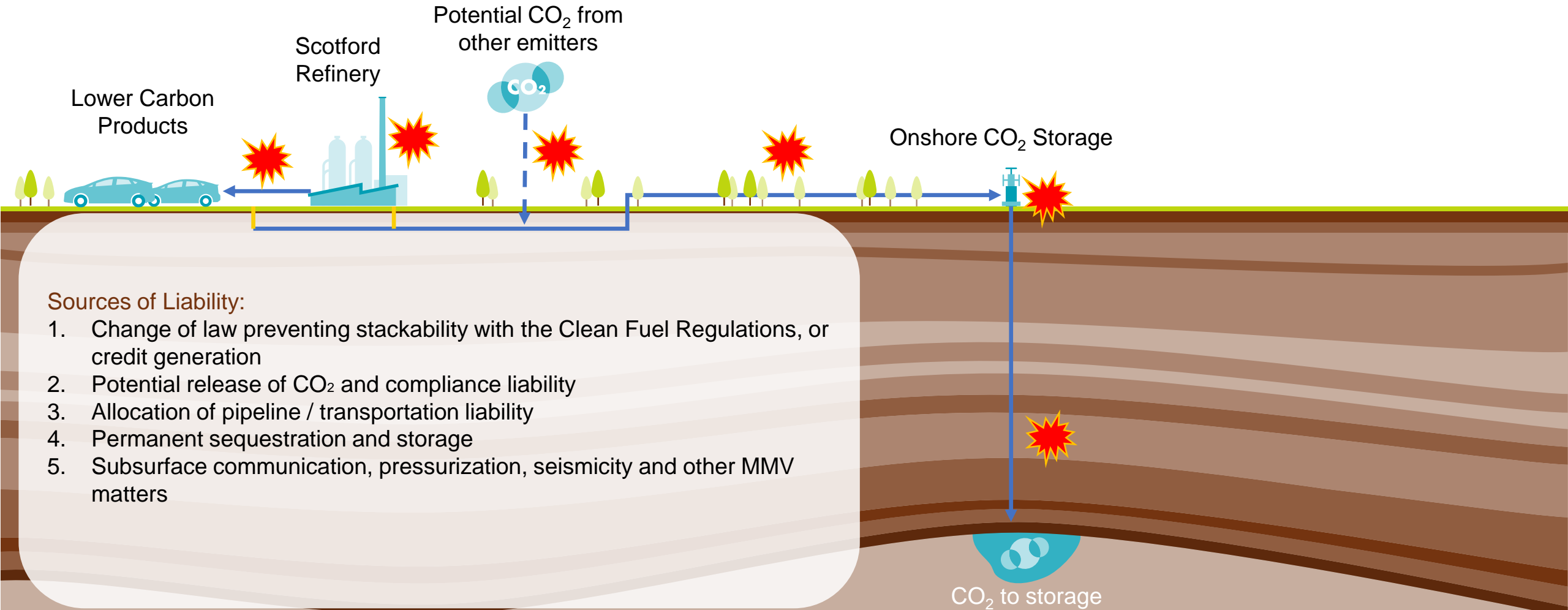


# **Hot Topic 3**

## **Sources of Liability**

# Potential Sources of Liability

## Alberta Hub: CO<sub>2</sub> capture from Refinery



# Policy and Legislative Considerations

- There remain a number of policy and legislative considerations that will need to be addressed as CCUS project development moves forward in Alberta. Three key ones include:
  - Regulatory overlap between AER and Alberta Energy
  - Pressure management requiring industry cooperation and transparency over measurement, monitoring and verification
  - Options for regulating open access – market based vs. common carrier or common sequestration model





# Questions?

## **VANCOUVER**

Suite 2400, 745 Thurlow Street  
Vancouver BC V6E 0C5  
Tel: 604-643-7100  
Fax: 604-643-7900  
Toll-Free: 1-877-244-7711

## **CALGARY**

Suite 4000, 421 7th Avenue SW  
Calgary AB T2P 4K9  
Tel: 403-260-3500  
Fax: 403-260-3501  
Toll-Free: 1-877-244-7711

## **TORONTO**

Suite 5300, TD Bank Tower  
Box 48, 66 Wellington Street West  
Toronto ON M5K 1E6  
Tel: 416-362-1812  
Fax: 416-868-0673  
Toll-Free: 1-877-244-7711

## **MONTRÉAL**

Suite 2500  
1000 De La Gauchetière Street West  
Montréal QC H3B 0A2  
Tel: 514-397-4100  
Fax: 514-875-6246  
Toll-Free: 1-877-244-7711

## **QUÉBEC CITY**

500, Grande Allée Est, 9e étage  
Québec QC G1R 2J7  
Tel: 418-521-3000  
Fax: 418-521-3099  
Toll-Free: 1-877-244-7711

## **NEW YORK**

55 West 46th Street Suite 2804  
New York NY 10036  
UNITED STATES  
Tel: 646-940-8970  
Fax: 646-940-8972

## **LONDON**

1 Angel Court, 18th Floor  
London EC2R 7HJ  
UNITED KINGDOM  
Tel: +44 (0)20 7786 5700  
Fax: +44 (0)20 7786 5702