

# International Incentives for CMM Projects

Clark Talkington  
Advanced Resources International

---

Global Methane Initiative Coal Mines Subcommittee  
Meeting

November 7, 2019



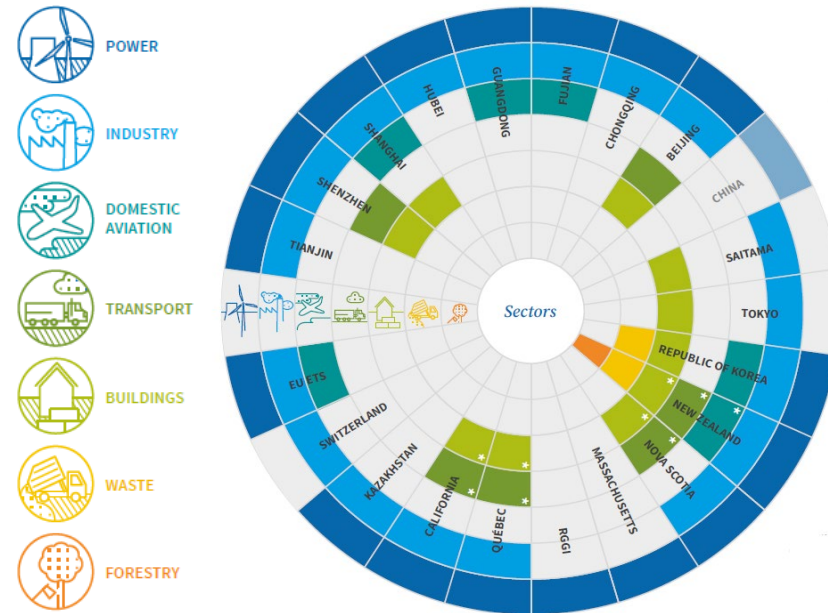
# Types of CMM Project Incentives

---

- Emission reductions credits
- Tax credits
- Renewable energy credits (RECs/AECs)
- Feed-in or “Green energy” tariffs
- Subsidies
- Import waivers
- Exploration grants
- Regulatory incentives
- Research grants
- Other policy-based initiatives

# Emissions Markets: Market Coverage

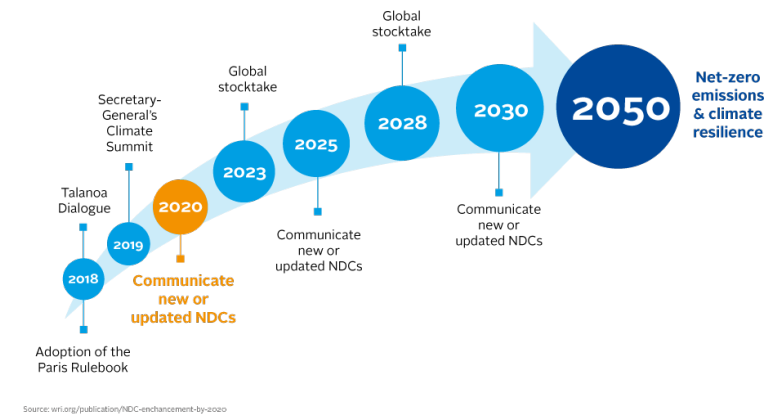
- Allowances - larger sources in covered sectors.
- May allow offsets for price containment.
  - CMM is usually an offset
- Specific national/sub-national policies and voluntary carbon markets may be applicable to CMM projects.



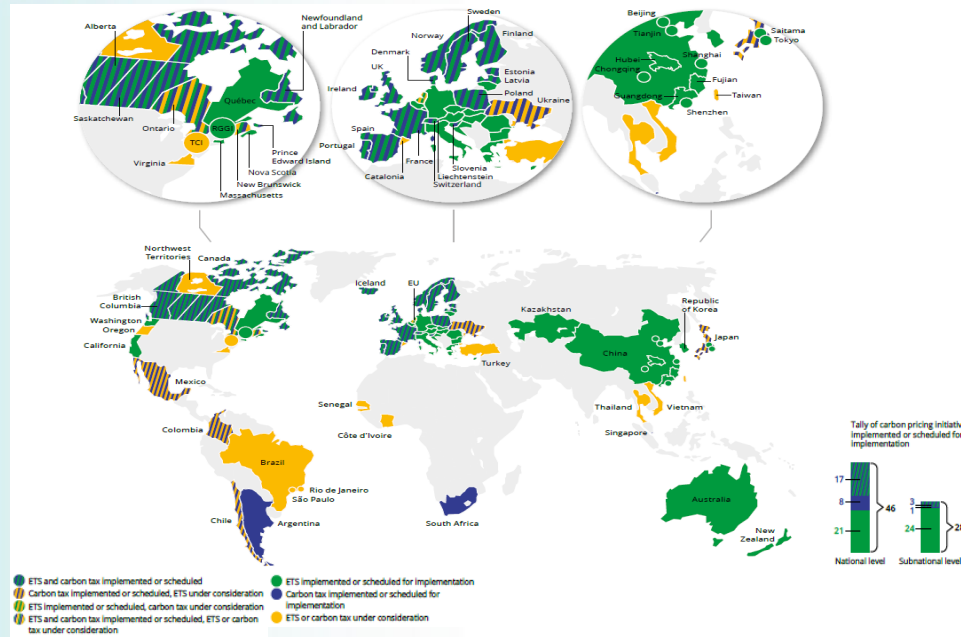
# Current State of Paris Agreement

- Adopted 2015
- Ratified by 187 of 197 signatories.
- Relies on NDCs – bottom up rather than top down.
  - 175 countries included methane in scope of their NDCs
  - Only 2 mentioned CMM specifically
- The next round of NDCs will be submitted in 2020.
- Major commitments announced at 2019 Climate Action Summit.

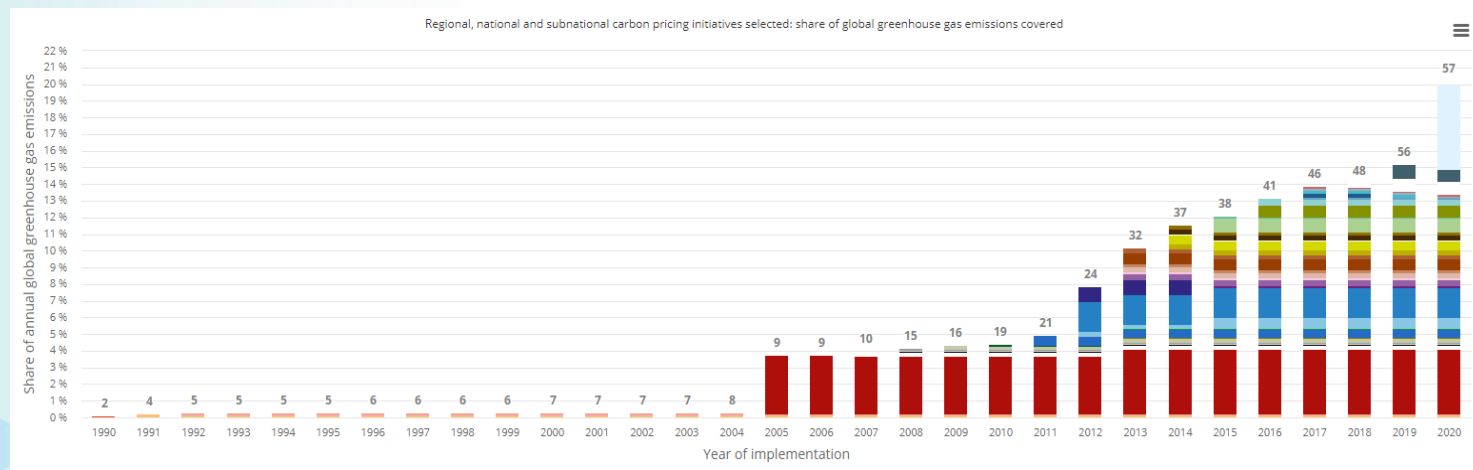
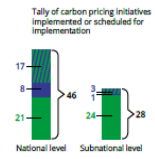
AMBITION MECHANISM IN THE PARIS AGREEMENT



# Emissions Trading Schemes/Carbon Taxes



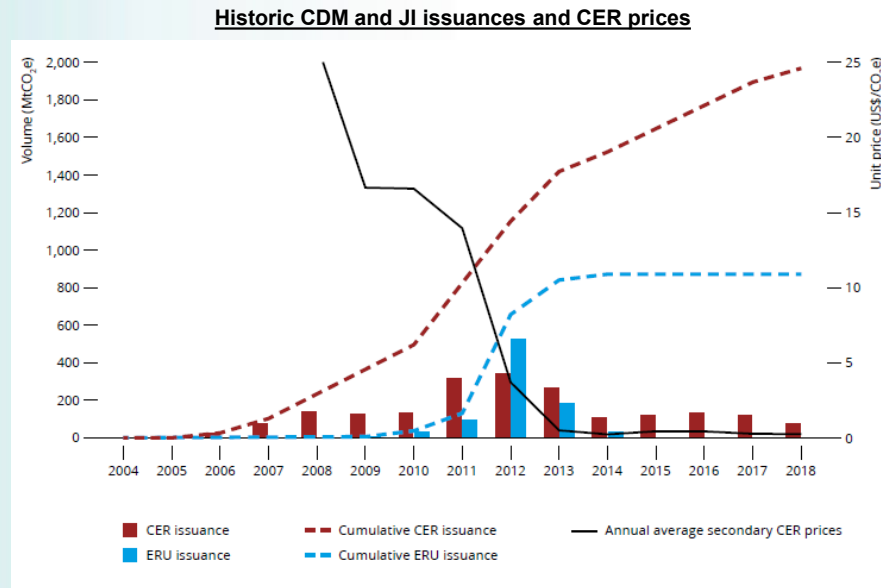
- 57 markets
- 46 countries
- 20% of global emissions
- CMM offsets limited to a small number of markets



Source: World Bank Group, 2019

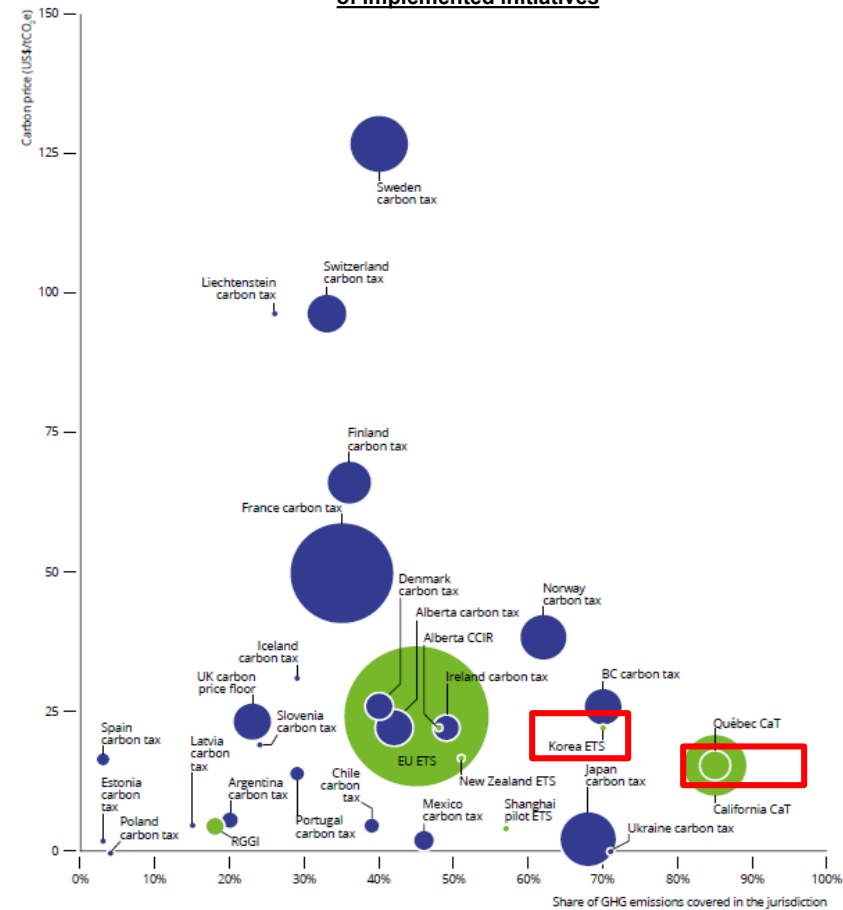
# Carbon Finance: Price Variations

- Sector coverage, allocation and compensation methods and specific exemptions may differ between initiatives.
- Carbon price uncertainty
  - Supply and demand dynamics



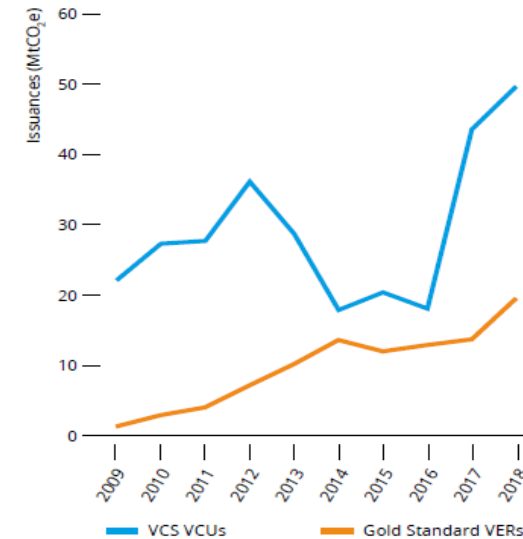
Source: World Bank Group

**Carbon price, share of emissions covered and carbon pricing revenues of implemented initiatives**



# Greenhouse Gas Markets: Voluntary

- Voluntary vs Compliance Markets
  - Allowances and Offsets
- Voluntary markets serve as an important testing ground for piloting new ideas.
- Verra's Verified Carbon Standard (VCS) and the Gold Standard are two of the largest voluntary standards.



United Nations Climate Change  
Carbon Mechanisms



# CMM Project Incentives: Country-Level

\*China and the U.S. addressed by other presenters on the panel

Country	Incentives						
	CMM Offsets	Feed-in-Tariffs	Tax Credits/Exemptions	Royalty Agreements	Grants	Legal/Regulatory	Subsidies
Australia					✓	✓	
Canada	✓					✓	
Colombia				✓		✓	
Germany		✓				✓	✓
India					✓	✓	
Kazakhstan	●		✓			✓	
Korea	✓					✓	

- ✓ Implemented
- In development



# CMM Project Incentives: Country-Level

\*China and the U.S. addressed by other presenters on the panel

Country	Incentives						
	CMM Offsets	Feed-in-Tariffs	Tax Credits/Exemptions	Royalty Agreements	Grants	Legal/Regulatory	Subsidies
Mexico			✓			✓	
Poland			✓			✓	✓
Russia						✓	
Turkey				✓		✓	
Ukraine			✓			✓	
United Kingdom			✓			✓	

✓ Implemented

# Example project: grant incentives

- 45 MW German Creek Power Station
  - Owned and operated by EDL in Queensland, Australia.
  - Initially awarded an \$11 million grant under the GHG Abatement Program (GGAP) in 2001.
  - Operations started in 2006- captures and combusts waste coal mine gas.
  - Project converts gas to electricity for sale into the national electricity market.
  - Abates roughly 1.3 million tonnes of CO<sub>2</sub>e per year.



# International Civil Aviation Carbon Market

- International Civil Aviation Organization (ICAO) passed an Assembly Resolution for carbon neutral growth from 2021 onwards.
- Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).
- Phased implementation: Pilot, First and Second Phase (2021, 2024, 2027).
- 79 states (more than 75% of global aviation performance) have agreed to voluntary participation between 2021 and 2026.
- Expected to offset 2.5 billion tonnes of CO<sub>2</sub>.
- CO<sub>2</sub> price unknown but could generate over \$40 billion (USD) in climate finance from 2021 to 2035



# Acknowledgements

---

- Oleg Tailakov, *Ugletmetan (Russia)*
- Meredydd Evans, *Pacific Northwest National Labs*
- Burke Plater, *ARI*
- Eric Ripley, *American Carbon Registry*

# Thank You!

---

## **Contact Information:**

Clark Talkington  
*Vice President, ARI*  
[ctalkington@adv-res.com](mailto:ctalkington@adv-res.com)  
(703) 528-8420

**Supported by US EPA under the auspices of GMI**

# Appendix: Country Tables

Country	Incentives
Australia	<ul style="list-style-type: none"> <li>The Direct Action Plan- climate policy supports emissions reductions projects.</li> <li>Recovered CMM is exempt from royalties in New South Wales (NSW) per the Mining Act of 1992 and the Petroleum (Onshore) Act of 1991.</li> <li>The Greenhouse Gas Abatement Programme (GGAP) supported the development of CMM through the direct funding of four electric power projects worth over \$30 million.</li> </ul>
Canada	<ul style="list-style-type: none"> <li>Quebec- Voluntary GHG market: offset credits can be generated in cap-and-trade system through CMM (CH<sub>4</sub>) destruction.</li> <li>Alberta- GHG reduction program requires facilities emitting &gt; 100,000 tonnes CO<sub>2</sub>e/year to reduce emissions intensity by 12%</li> </ul>
Colombia	<ul style="list-style-type: none"> <li>Per Decree 1886 of 2015, Article 59 states mine owners can use methane gas for generation or flaring, in line with internationally accepted practices, if feasible.</li> <li>A 40% reduction in royalties applicable to unconventional hydrocarbons.</li> <li>Regulated entities can achieve emission reductions through recognized voluntary GHG programs (i.e. VCS, CDM, etc.).</li> </ul>
Germany	<ul style="list-style-type: none"> <li>Renewable Energy Sources Act provides a feed-in-tariff for authorized projects to generate electricity with CMM and AMM.</li> <li>The Federal Network Agency will pay a market premium for AMM and CMM generated power.</li> </ul>

# Appendix: Country Tables

Country	Incentives
India	<ul style="list-style-type: none"> <li>• “Ease of Doing Business” initiatives to increase unconventional natural gas production-relaxes rules on extraction of natural gas via CBM and CMM technology.</li> <li>• CMM/CBM production became exempt from price controls in 2017 under HELP.</li> </ul>
Kazakhstan	<ul style="list-style-type: none"> <li>• Recovered CMM is not taxed if coal mines use the gas onsite.</li> <li>• CMM projects are eligible to earn emission reduction credits through the CDM.</li> <li>• Working on a domestic offset system to include non-CO2 GHGs.</li> </ul>
Korea	<ul style="list-style-type: none"> <li>• Korean entities under the Korean Emissions Trading System (KETS) can meet up to 5% of their compliance obligation with international offset credits.</li> <li>• KETS KOC (offset) credit is priced at roughly \$30 per t/CO2e</li> </ul>
Mexico	<ul style="list-style-type: none"> <li>• Carbon tax excludes natural gas (CMM).</li> <li>• Voluntary carbon credit exchange supports a 7.95 Mwh CMM capture and energy-generation project.</li> </ul>
Poland	<ul style="list-style-type: none"> <li>• CMM-based electricity is exempt from excise taxes.</li> <li>• Utilities are obliged to purchase up to 2.3% of electricity from highly efficient cogeneration, like CMM.</li> </ul>

# Appendix: Country Tables

Country	Incentives
Russia	<ul style="list-style-type: none"> <li>• Ratified the Paris Agreement in September 23<sup>rd</sup> 2019, which is expected to stimulate CMM projects.</li> <li>• Major coal producers have made public commitments to minimize emissions and make use of secondary fuels like CMM.</li> </ul>
Turkey	<ul style="list-style-type: none"> <li>• Conditional on a royalty payment, foreign investors can transfer their capital payments after starting production.</li> <li>• Employment of foreign personnel is exempt from Law No 4817 for 6 months or shorter, allowing temporary working permits.</li> </ul>
Ukraine	<ul style="list-style-type: none"> <li>• 2009 Law on Gas from coal beds states that profits from the production and use of CMM are not subject to taxation from 2010 to 2020.</li> <li>• The environmental tax on CMM emissions without utilization was increased by 11.2%, to \$3.50 USD/ton.</li> <li>• Safety standards require degasification measures before coal production in CH<sub>4</sub>-rich seams.</li> </ul>
United Kingdom	<ul style="list-style-type: none"> <li>• CMM and AMM projects are subject to a tax exemption from the Climate Change Levy.</li> </ul>