Project-Specific Frameworks

Supported and funded by:

About the Handbook

A 'how-to' action guide to empower legislators, ministries, regulators, and NOC officials for understanding the policies, rules, and best practices that countries can adopt and implement for CCUS.

Available here:

cldp.doc.gov/carbon-capture-utilization-and-storage-ccus-resources

Carbon Capture, Utilization, and Storage

Handbook for Policymakers

About the Handbook (Cont.)

- Sponsored by **U.S. Department of State, Bureau of Energy Resources.**

- Drafted over one week in an intense session with eight expert co-authors.

- Co-written by authors representing:
    - Government
    - NGOs
    - Multilaterals
    - Industry
    - Academia

Project-Specific Frameworks
Key Takeaways

- At the project level, policymakers and regulators should understand the suite of contracts that a typical CCUS project requires, and how these contracts allocate risks.

- Most if not all of these contracts will refer to the laws and regulations of a country, even if these are not CCUS-specific.

- The bankability of CCUS projects will likely be determined by the nature of the property rights granted by a domestic framework, such as the rights to the pore space, or the rights to the carbon credits generated by the project.

Key Considerations for a CCUS Framework

- ✓ Objective for CCUS deployment in country
- ✓ Emission reporting requirements (capture air emissions, CO_2 leakage, hazardous waste, etc.)
- ✓ Property rights, land use, and access for transportation and storage
- ✓ Storage liability
- ✓ CCUS Supply Chain Permitting
- ✓ Monitoring, verifying, quantification
- ✓ Reporting requirements and documentation retention
- ✓ CO_2 classification (waste, commodity, hazardous/toxic)
- ✓ CO_2 stream composition and characterization requirements
- ✓ Short- and long-term stewardship and liability of potential storage sites
- ✓ CO_2 ownership and private-party contracts
- ✓ Environmental Assessments
- ✓ Community engagement, including environmental justice considerations, community benefits plans
- ✓ Matching sources of CO_2 with permanent geological storage sites (also known as 'Hubs and Clusters')
- ✓ Local content requirements
- ✓ Taxes for CCUS projects (e.g., depreciation rules and tax incentives)

Project-Specific Frameworks
Case Studies

Case Study: Norway's Sleipner Project

CO_2 has been injected offshore in a subsea saline formation for 25+ years.

The project separates CO_2 from natural gas produced at an offshore platform. The CO_2 is then injected and stored in the adjacent offshore Utsira formation beneath the sea floor.

This project was initiated in 1996, long before Norway implemented a dedicated CCUS regulatory framework in 2014.

After the framework was passed, the project sponsors applied for, and were granted, an updated permit.

The project successfully transitioned project operations under the new framework.

Sleipner Project
(Photo Courtesy of Gullfaks B. Av Ole Jørgen Bratland)

Tomakomai CCUS Demonstration Project
(Photo Courtesy of IEA)

Case Study: Japan's Tomakomai Project

In 2012, this offshore CCUS demonstration project was commissioned.

Because Japan did not have a CCUS-specific law when the project was launched, existing laws and regulations governing the operation were applied or amended.

Provisions for long-term liability, site closure, and the transfer of such liability have not yet been established in Japan but are being developed as part of the government's ongoing regulatory program.

The country continues to work towards a more comprehensive CCUS framework.
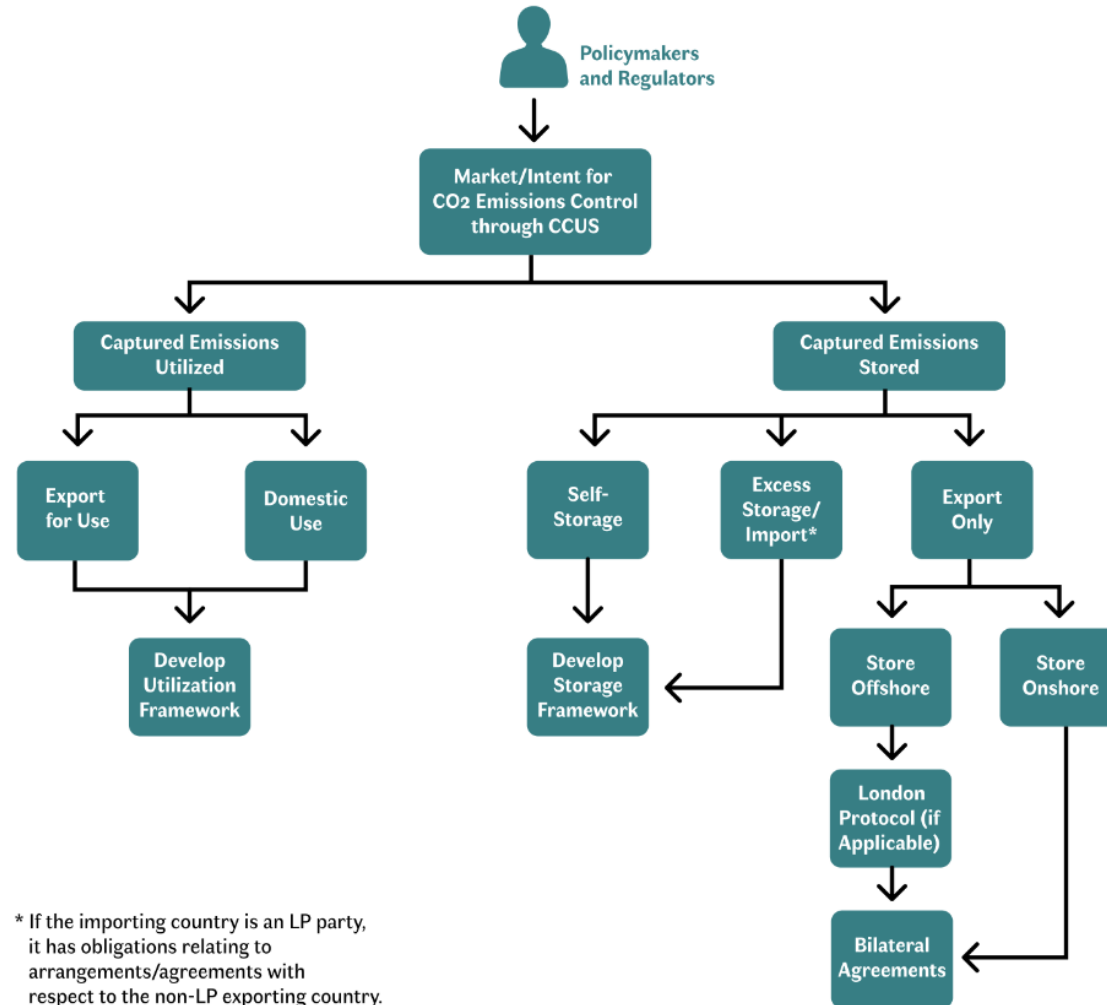
Key Components to Approach Legislation Drafting

1. *Legalize* – achieve the intended legal effect

2. *Formalize* – choose the right legislative vehicle

3. *Integrate* – relate new law to existing law

4. *Organize* – arrange the legislative text appropriately

5. *Clarify* – achieve clarity of expression

Decision Tree for Developing a Framework
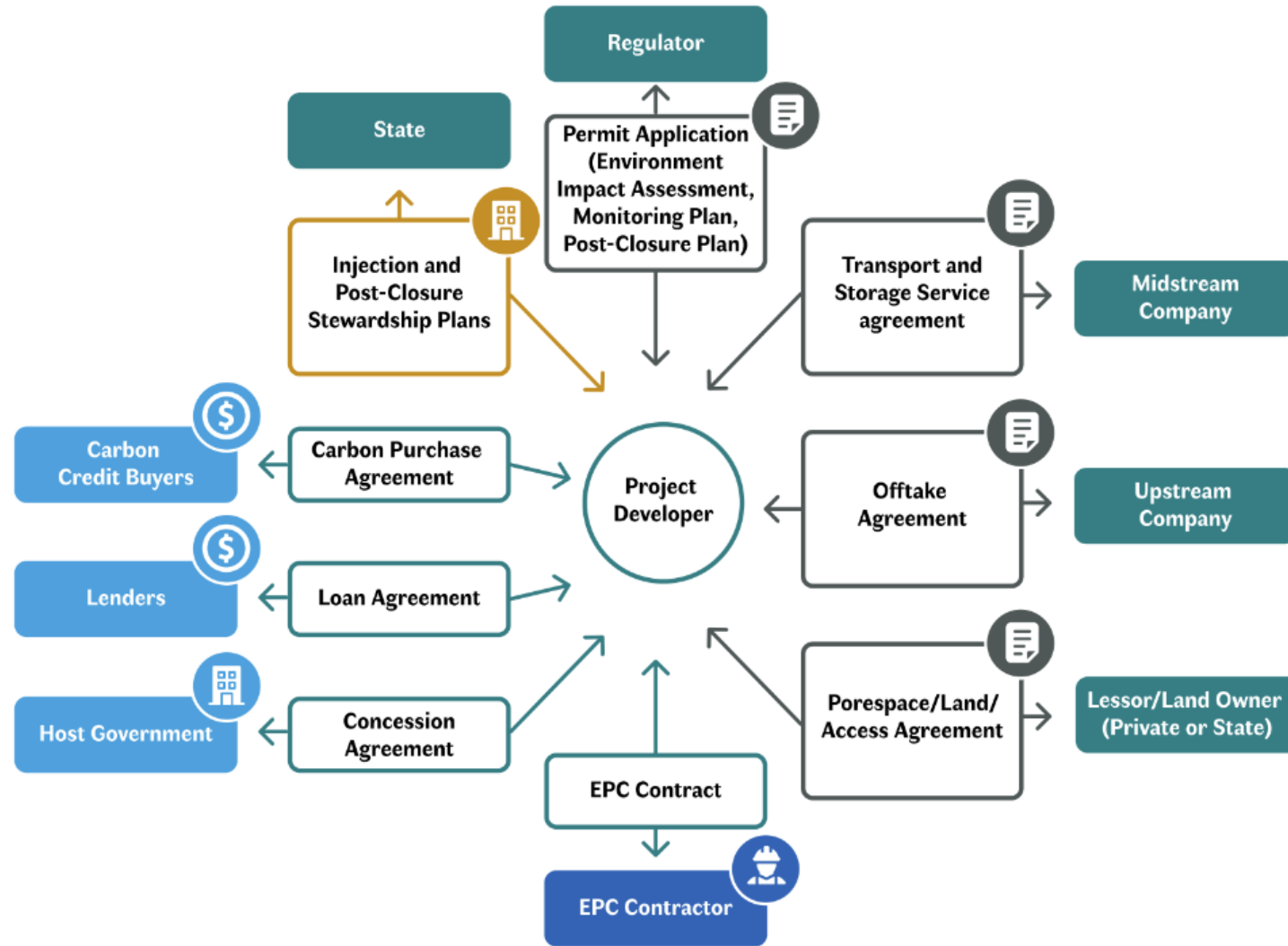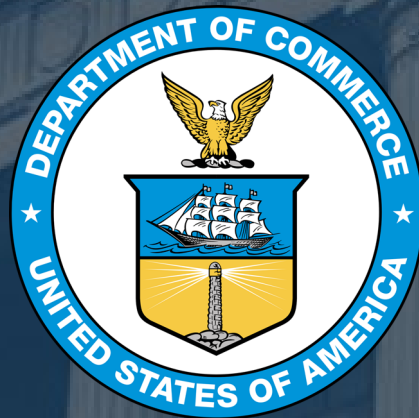
Best Practices for Project-specific Frameworks

- ✓ ***Permits & Related Documents*** – grants project developer the right to inject CO_2 for permanent storage
- ✓ ***Transport & Storage Service Agreement*** – obligates the developer to obtain necessary permits to conduct operations at the site as a condition of the midstream company providing CO_2
- ✓ ***Offtake Agreement*** – obligates the upstream company to provide CO_2 at specific specifications and volumes
- ✓ ***Pore Space/Land/Access Agreement*** – governs the lease/concession for the access of surface property or pore space where the storage site is to be developed
- ✓ ***Engineering, Procurement, and Construction (EPC) Contract*** – sets the terms and conditions for storage site design, procurement of materials and equipment, and site construction
- ✓ ***Loan Agreement*** – creates the obligation of the lenders to finance the storage project
- ✓ ***Carbon Purchase Agreement*** – governs the terms between the developer and the buyer of carbon credits generated from the storage project
- ✓ ***Concession Agreement*** – grants the project developer the right to develop, finance, construct, and operate the storage project
- ✓ ***Injection and Post-closure Stewardship Plans*** – prior to injection, project developer may be required to show proof of financial security to the state

Project-Specific Frameworks
Key Players & Types of Contracts for CCUS Projects

Tel: +1 202 482 2400

1401 Constitution Avenue, NW, Washington, DC 20230

www.cldp.doc.gov

Commercial Law Development Program

Office of General Counsel

U.S. Department of Commerce