

Environmental Non-Governmental Organization (ENGO) Perspectives on CCS

Carbon Sequestration Leadership Forum

October 7, 2016

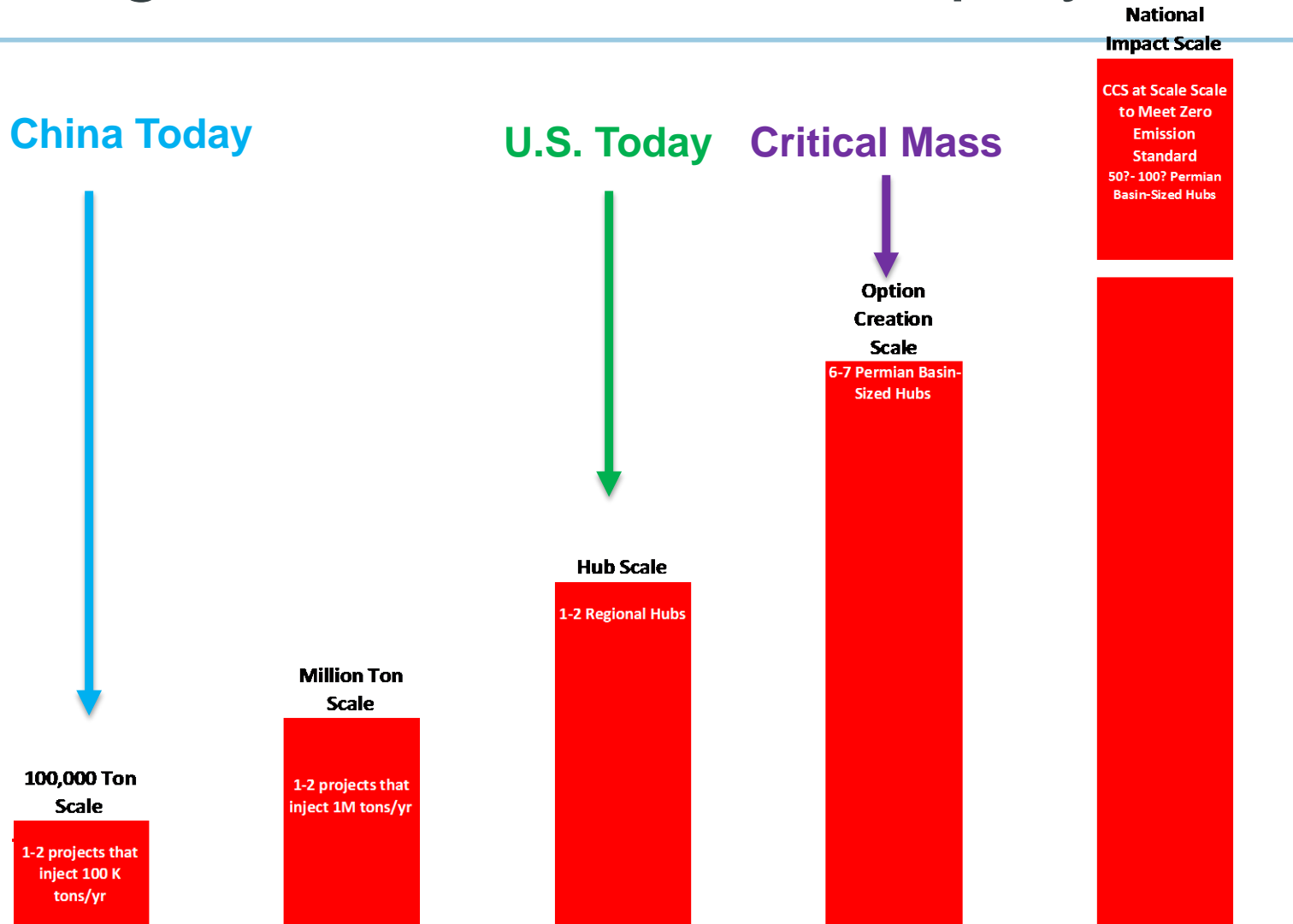
Tokyo, Japan

Policy Group Meeting

John Thompson

Director, Fossil Transition Project

Stages of CCS- CCUS Deployment



These bars are not to scale. This is illustrative of the concept

Where Progress Stalls

- ✓ Technology Assessments
- ✓ Storage Capacity Assessments
- ✓ Sink-Source Matching
- ✓ Technical-Economic Modeling
- ✓ Identify Barriers

Policies

Policy Needs Depend on Stage

Stage

Policy Characteristics

Policy Examples

Demonstration

- ***Incentives/financial policies are key-requested on a project-by-project basis.***
- CCS as compliance option for future regulations also drives demo projects.
- Targets a relatively small number of projects.

State

- Grants (Illinois grants for engineering)
- Tax breaks (Texas exemptions from various taxes)
- Rate-base projects (Mississippi rate base Kemper)

Federal

- Grants (example: Petra Nova, ADM)
- Tax Credits (example: 45Q)
- Loan Guarantees
- Technology Research aimed at lowering costs of CCS/CCUS

Hub

- Incentives/financial policies are still important but existing/proposed regulations also play a key role.
- ***Incentives are “self-activating”***
- CCS reduces regulatory compliance cost

State

- Tax breaks (Texas exemptions from various taxes)
- Rate-base projects (Mississippi rate base Kemper)
- Creating incentives within federal regulatory compliance

Federal

- Tax Credits (45 Q)
- Financing support (Master Limited Partnerships, Private Activity Bonds)
- Regulations (Clean Power Plan, New Source Performance Standards)
- Technology Research aimed at lowering costs of CCUS/CCS

Option Creation

- ***CO₂ regulations are most important to the Option Stage.***
- Federal regulators use the “option” created by building hubs.
- These option stage policies seek deep carbon reductions by mid-century.
- Incentives/financial policies are greatly diminished.

State

- Efficient implementation of federal regulations

Federal

- Cap and Trade
- Carbon taxes
- Sector specific regulatory requirements
- Some incentives