



Clean Energy for a Secure Future

FutureGen 2.0

CO₂ Pipeline and CO₂ Storage Site

DOE EIS Scoping Meetings
Taylorville, Illinois
June 7, 2011

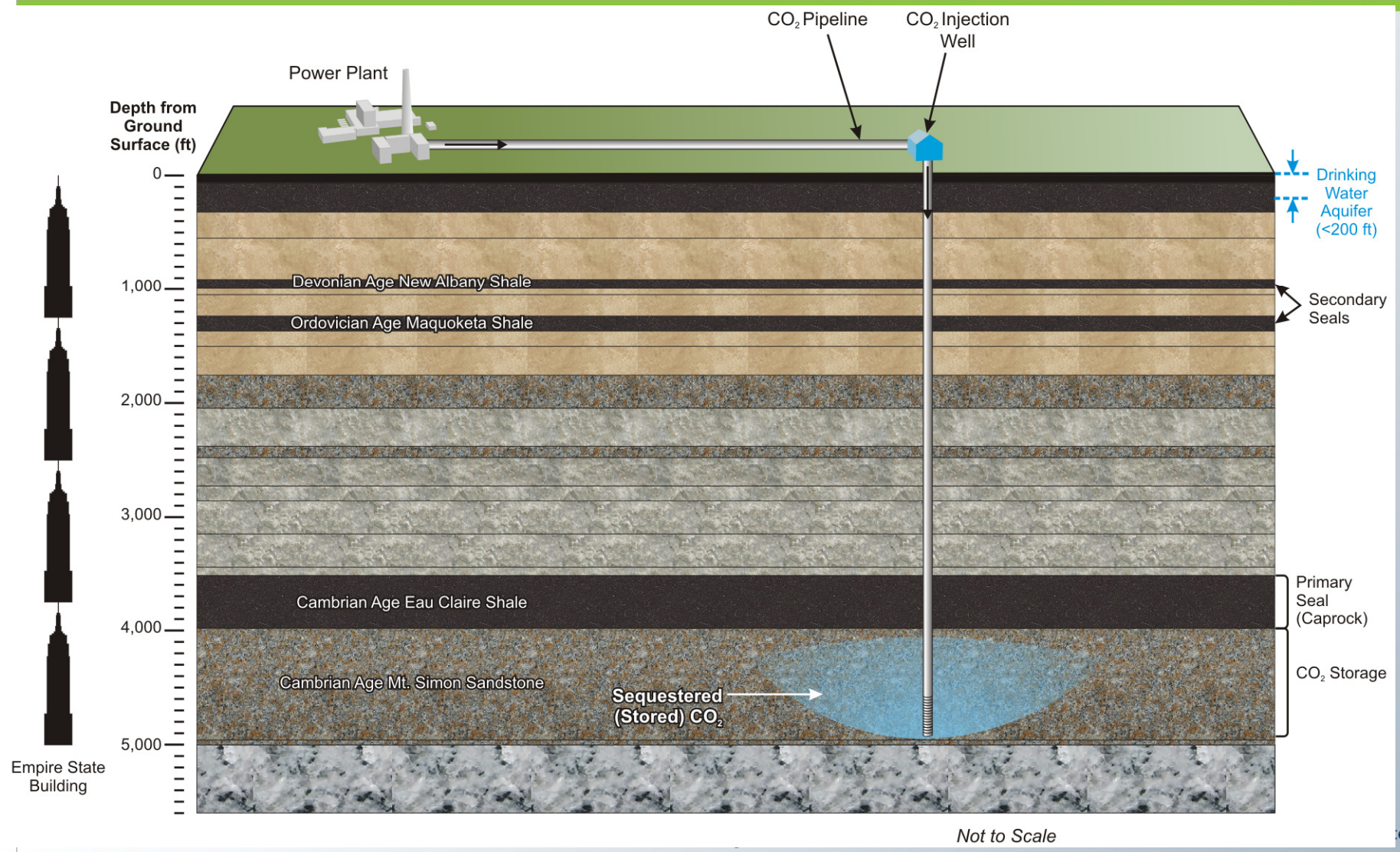
FutureGen Alliance

International Non-Profit Consortia



Project Description

Project Concept



Project Description

Project Goals

- Demonstrate an approach for siting, permitting, insuring, and operating CO₂ storage sites that are fully integrated with an upstream power plant
- Store 39-million metric tonnes of CO₂ that would otherwise be emitted to the atmosphere
- Demonstrate a suite of comprehensive monitoring technologies, verification techniques, and accounting protocols for stored CO₂
- Establish visitor, research, and training facilities that advance carbon capture and storage technologies
- Provide a pathway to the future siting of commercial CO₂ storage sites in other locations across the country and around the world

Project Description

CO₂ Pipeline and Wells



- CO₂ pipeline
 - 12-inch diameter
 - >4 feet deep; greater in agricultural areas and under roads/streams
 - At least 150 feet away from residences and businesses
 - Sensitive environmental features will be avoided
- CO₂ wells
 - Monitoring and injection wells
 - Compatibility with surface uses is critical

Project Description

CO₂ Storage Site Selection

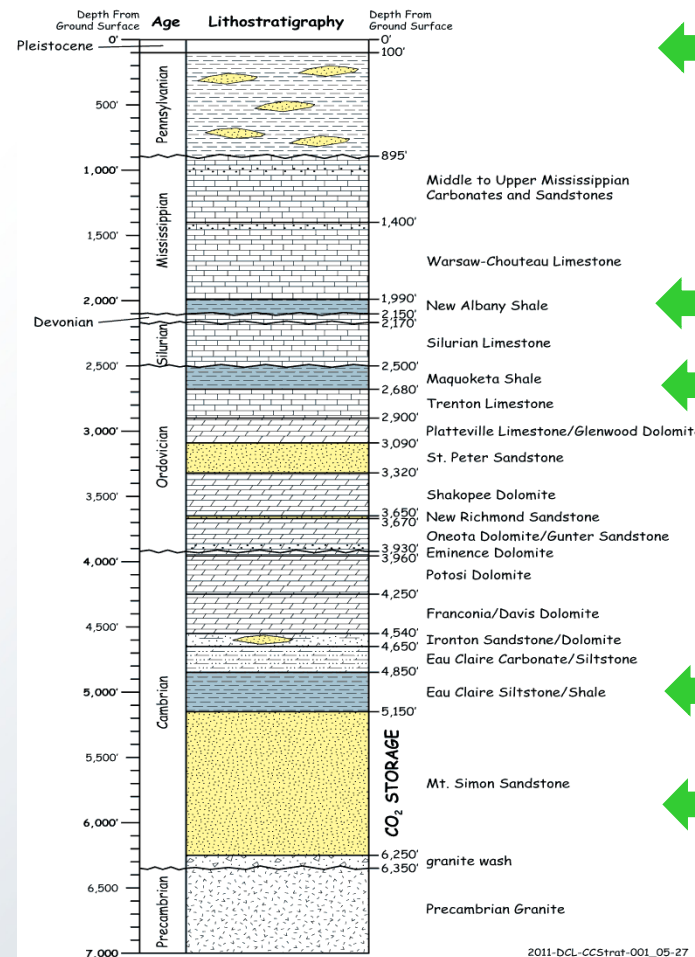
- The FutureGen Alliance has selected Morgan County (near Jacksonville) as its preferred site for the CO₂ storage facility
- There are two alternate sites:
 - Taylorville/Christian County
 - Arcola/Douglas County
- All three sites will be analyzed in DOE's EIS

Project Description

Christian County CO₂ Storage

- CO₂ storage almost 1 mile underground
 - Far below groundwater
 - Below 3 geologic seals
 - Deep in the Mt. Simon formation; known to be a high-quality CO₂ storage formation

Generalized Stratigraphic Column for Christian County Well Location



Well Water

Geologic Seal

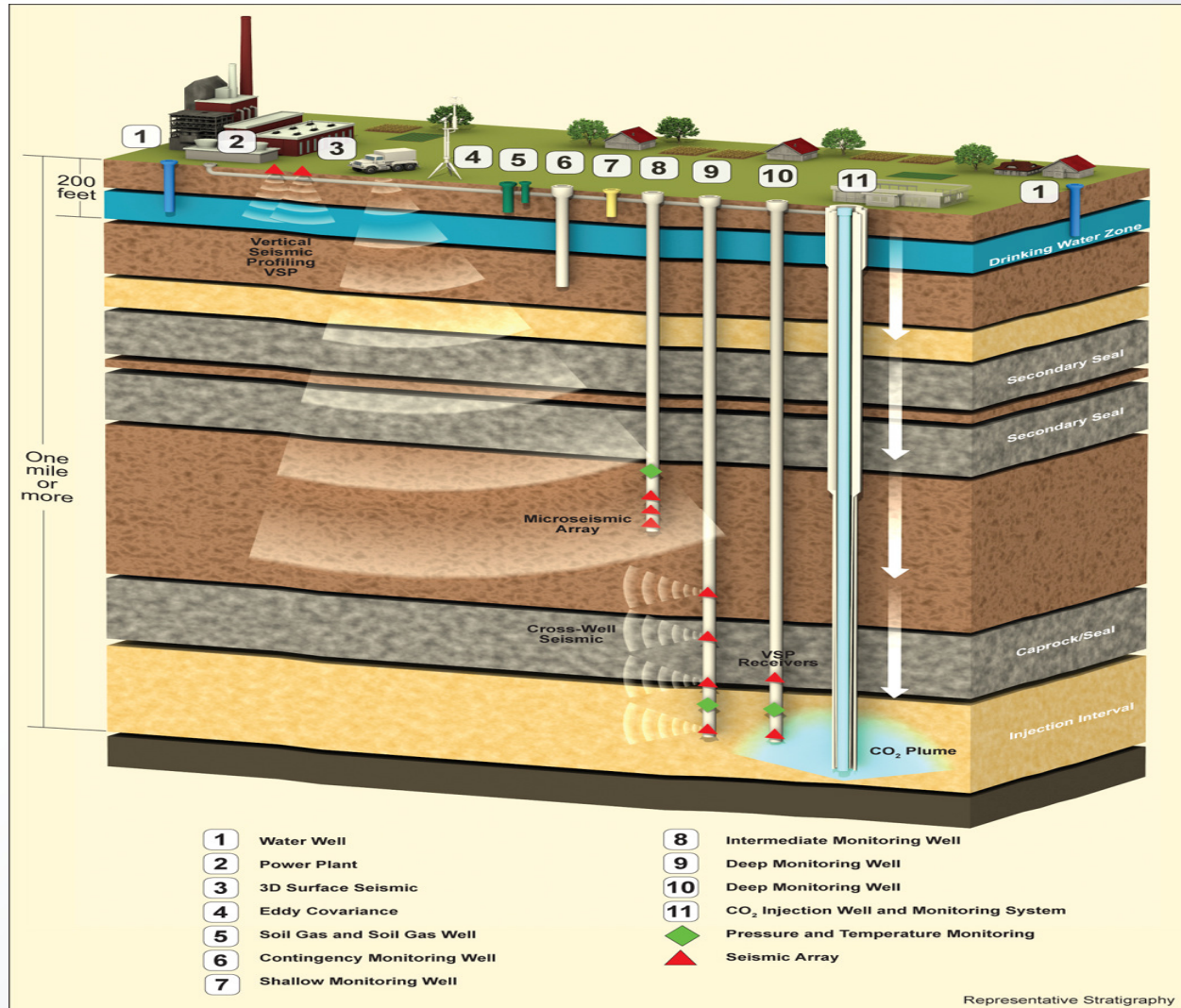
Geologic Seal

Geologic Seal

CO₂

Project Description

CO₂ Monitoring Activities



Summary

- FutureGen 2.0:
 - Is the world's first near-zero emission power plant
 - High rate of carbon dioxide capture (i.e., >90%)
 - Near-zero levels of other traditional emissions
 - Full integration with a CO₂ pipeline and geologic storage
 - Enables the cleaner use of Illinois basin coal
 - Creates construction and permanent jobs
 - Provides additional revenue for those landowners whose deep underground pore space is used for CO₂ storage
 - Increases county tax revenue
 - Constructs \$25M to \$50M in local research and training facilities
 - Increases county tourism/visitors
 - Creates expanded educational opportunities