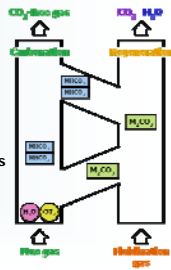


# CO<sub>2</sub> Capture Technologies by Dry Sorbents : Korean Possible Projects to Overcome Barriers to CCS deployment

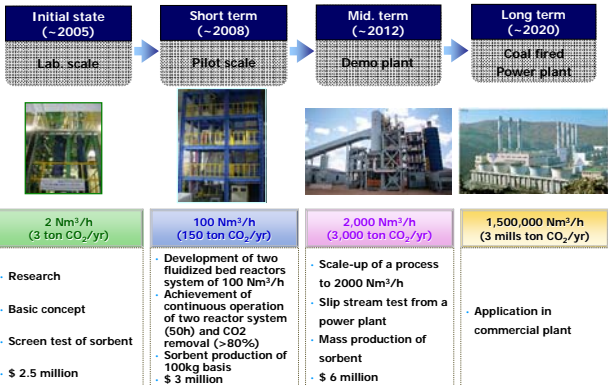
## CO<sub>2</sub> Capture Process from Flue Gas with Dry Regenerable Sorbents

### 1 Project Overview

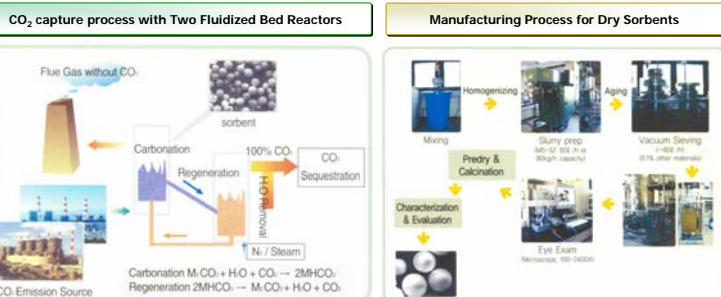
- Background**  
Need for development of cost-effective and energy-efficient CO<sub>2</sub> capture process
- Objectives**  
Development of commercial-grade dry sorbent for CO<sub>2</sub> capture  
Development of CO<sub>2</sub> capture process with two fluidized bed reactors
  - Improving CO<sub>2</sub> removal (>80%) and the extent of regeneration (>90%)
  - Continuous operation of two-fluidized bed reactor system (>50h)
  - Installation and operation of a 100 Nm<sup>3</sup>/h process



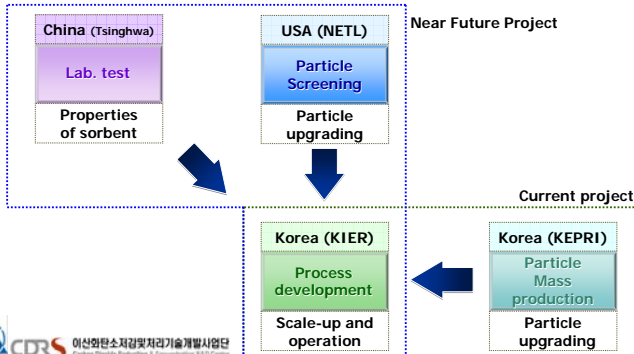
### 2 Roadmap of R&D



### 3 CO<sub>2</sub> Capture Process and Dry Sorbent Production



### 4 International Collaboration



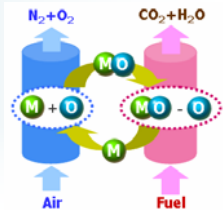
## Inherent CO<sub>2</sub> Separation Technology by Chemical-Looping Combustion System

Homepage: [www.cletech.re.kr](http://www.cletech.re.kr)

### 1 Project Overview

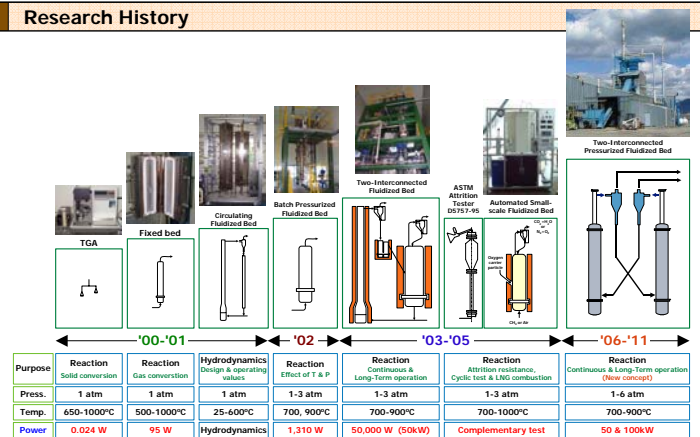
Development of Chemical-Looping Combustion Technology (for Low emission and High efficiency LNG-fired Power Generation System)

- Process scale : 0.1 MW (100kW)
- Performance : Inherent CO<sub>2</sub> separation (>98% ), Low NOx emission (<50ppm)
- Application : Small scale LNG fueled co-generation system
- Research Level : World best !

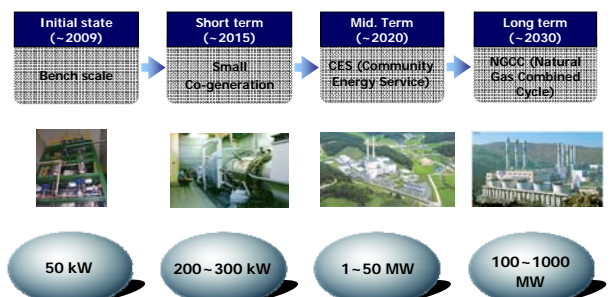


Research Period : September 1, 2006 ~ August 31, 2011  
Total budget : 6.12 million US\$ for 5 years + more

### 2 Research History



### 3 Future Research Direction



### 4 International Collaboration

