

# **3H COMPANY, LLC**

Dr. Liang Hu, President  
1500 Bull Lea Road, Suite R1  
Coldstream Research Campus, University of Kentucky  
Lexington, KY 40511  
Tel: (757) 725-1213

Raise

\$5,000,000 - \$50,000,000

For slipstream and other projects

# MARKET FOR CO<sub>2</sub> CAPTURE

## Market Driving Force

- (1) the global climate change,
- (2) increasing demand on oil.
- In Texas, EOR now accounts for 20% of its oil production, it is estimated EOR production will result in revenue of \$200 billion and will create 1.5 million jobs.

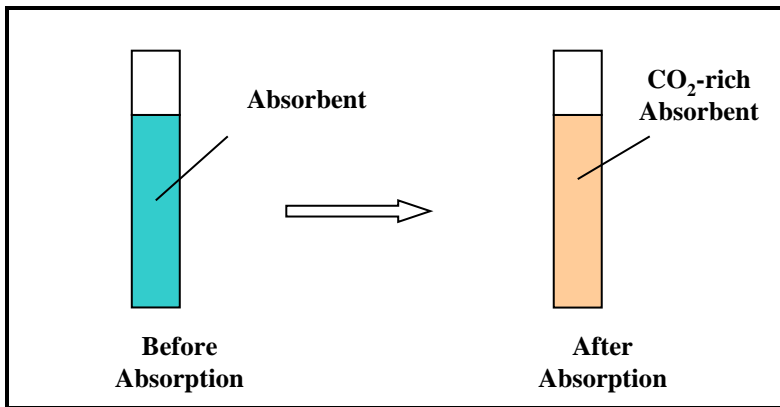
## Demands for CO<sub>2</sub> Capture Technology

- Enhance Oil Recovery
- Natural Gas Production
- Processes in Petrochemical Industry
- Processes in fertilizer Industry
- Power Industry

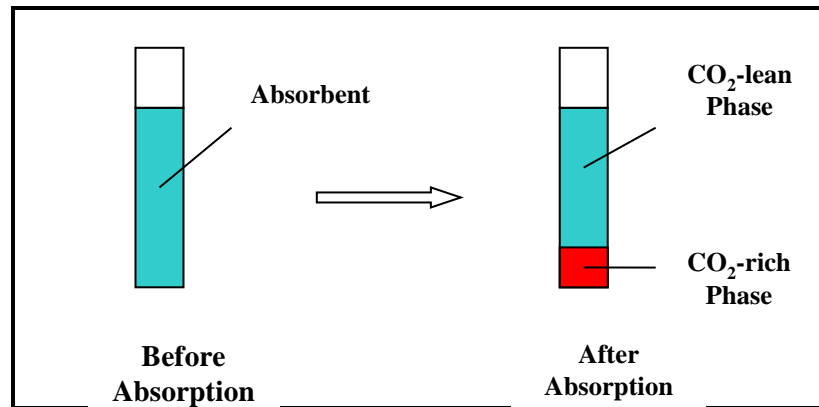
# TECHNOLOGY

❖ Cost is only issue to win the market

❖ DOE Call “90% Carbon Capture with less than 135% increase of Cost of Electricity



Traditional Absorption



3H's Phase Transitional Absorption

❖ DOE Benchmark Technology – 30% MEA over 180% increase of Cost of Electricity

❖ 3H's Phase Transitional Absorption reached 135% increase of Cost of Electricity

❖ 5 Patents awarded

# COMPETITION

- DOE funded multi dozen technologies last 3 - 4 years
- 3H's technology is one of them

# MILESTONE, TIMELINE & BUSINESS MODEL

## MILESTONE & TIMELINE

3 Key Milestones:

1. Small Lab Pilot (Completed)
2. Large Scale Integrated Pilot or Slip Stream (1 year duration\*)
3. 0.1 – 10 MW Demonstration (3 months duration\*)

\* Tests on the existing facility. If no existing facility is available, the additional time is needed for building the facility.

## BUSINESS MODEL

- Technology license + absorbent.  
\$5,000,000 + \$ absorbent
- Charge absorbent royalties of \$5 to \$10 per ton of CO<sub>2</sub> captured. The \$5 to \$10 per ton of CO<sub>2</sub> captured is all from the cost saving.  
for each 550MW power plant installation it will collect over \$20 M to \$40 M in royalties per year. Royalties would also be recurring and perpetual as long as the power plant uses the 3H absorbent.

# TEAM

## Team

- Dr. Liang Hu, President
- Business accounting – Kring, Ray, Farley & Riddle, PSC
- Independent auditor – Wilke & Associates, LLP
- Business legal issues – 3 law firms.
- IP – Panitch Schwarze Belisario & Nadel, LLP.
- Advisory board (for commercialization) –  
Carl Bauer (Former Director of NETL)  
Dr. Len Heller (VP of Univ. of Kentucky Commercialization & Economic Development)

## Strategic Partners

- LG&E and KU Energy
- Electric Power Research Institute
- Nexant
- WorleyParsons
- SaskPower
- Etc.

# RISK & SOLUTION

## Risk

1. Regulatory/legislative or market risk – carbon capture as climate change is no longer an issue;
2. Implementation and construction risk – insufficient capacity to carry out the rapid increasing business.

## Solution

1. Develop other CO<sub>2</sub> capture technologies to use in the area of natural gas, petrochemical, fertilizer processes, etc., → Existing multibillion dollar market
2. Raise fund
3. Partner

# Funding Support

- US Department of Energy
- Electric Power Research Institute
- National Science Foundation
- State of Kentucky
- LG&E and KU Energy
- SaskPower