



# **Updates on the development of a Nationals Carbon Capture and Storage Programme in Trinidad and Tobago**

*“Can CCS Decarbonise Industry in South America and help the oceans”*

**Prof. Andrew Jupiter - University of the West Indies**

**Dr. David Alexander - University of Trinidad and Tobago**

**Dr. Donnie Boodlal – University of Trinidad and Tobago**

*December 4<sup>th</sup> 2019*

# Commitment by the Minister of Planning and the Environment (T&T)

2

- “T&T can benefit from CCS as a means to CO<sub>2</sub> emissions mitigation given the large heavy petrochemical sector as well as the country’s history in enhanced oil recovery. It is encouraged and supported by the ministry for T&T to join in CCS initiatives.”
- “The time is now for us to conduct necessary precise feasibility studies for CCS projects locally and for us to explore opportunities to leverage international support.”
- “CO<sub>2</sub> is an asset that can be used to provide economic benefits to T&T”.
- “The government of T&T will continue to play its part by setting the policy framework and by supporting activities on CCS.”



Minister of Planning and the Environment, 2019

# COP 23 and 24

3

## The Potential of Carbon Capture and Storage (CCS) in Trinidad and Tobago





# Getting it done – October 29<sup>th</sup>, 2019

## – Day 1







# Getting it done – October 30<sup>th</sup>, 2019

## – Day 2





# Summary of CCS Symposium

## INSTITUTIONS THAT PARTICIPATED

- UTT
- UWI
- UTEXAS
- NGC
- MINISTRY OF ENERGY AND ENERGY INDUSTRIES
- BP
- BHP
- SHELL
- COLUMBUS ENERGY RESOURCES LIMITED
- MIC
- MINISTRY OF PLANNING AND THE ENVIRONMENT
- INTERNATIONAL KNOWLEDGE CENTER
- IEAGHG
- SANEDI
- WORLD BANK
- EQUINOR
- ATLANTIC LNG
- EMA
- ENERGY CHAMBER
- TOSL ENGINEERING LIMITED
- MINISTRY OF NATIONAL SECURITY

## FEEDBACK FROM STAKEHOLDERS AFTER DAY 2

### **Outstanding Questions**

- Drop EOR?
- Does a regional opportunity for CCS exist?
- Can T&T become the storage hub for the Caribbean?
- How to make T&T carbon negative?

### **Desired Outcomes, Next Steps**

- Geological storage atlas
- Capex and Opex estimation
- Incentives for private industry (carbon price)
- Infrastructure assessment (pipelines)
- Long term goals (hydrogen, oil & gas, ammonia export)
- Enhancing production (methanol, ammonia & power generation)
- Public outreach
- Repurpose the people decarbonize the mindset
- Utilization of the captured CO<sub>2</sub>
- Potential economic benefits
- Value drivers & values proposition aid for funding
- Exploration + production + development commitment with reductions in emissions

# CERM - Carbon Dioxide Emission Reduction



- ☐ The University of the West Indies
- ☐ The University of Trinidad and Tobago
- ☐ Ministry of Energy and Energy Industries
- ☐ Petroleum Company of Trinidad and Tobago
- ☐ The National Gas Company of Trinidad and Tobago



# Way forward for National CCS programme in T&T 2019/2020

- **Joint Industry and Academia Partnerships - CERM**
- **International Partnerships** (signing of strategic MOU's)
  - Between local universities, UTexas)
- **Funding by International Agencies**
  - World Bank – Letter sent to Ministry of Finance via Ministry of Planning
  - GCF
- **Continue conducting local research**
  - Storage Atlas



# ANY QUESTIONS?

