

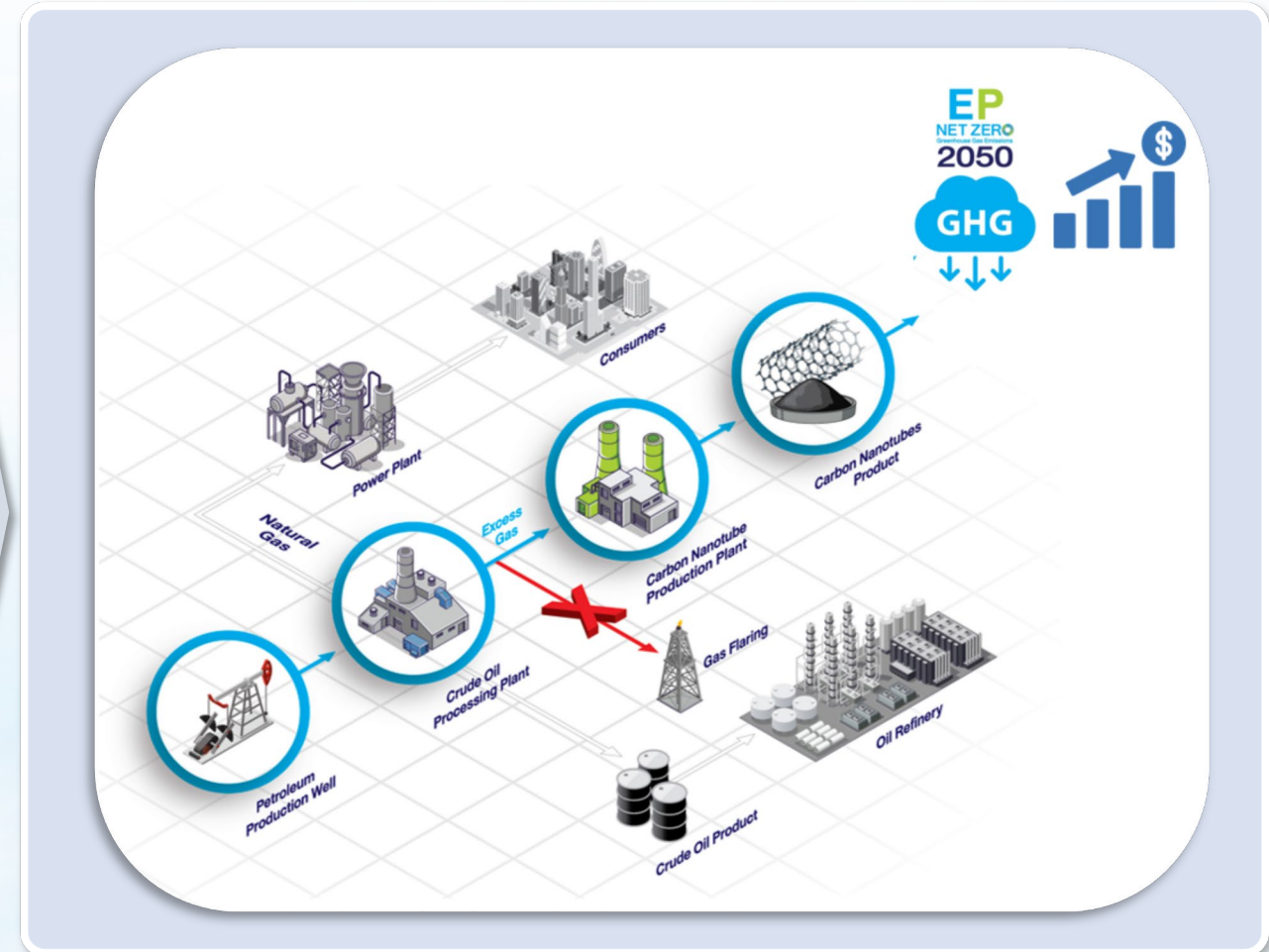
# Flare Gases Conversion to Carbon Nanotubes (CNTs) : project supports EP Net Zero Target

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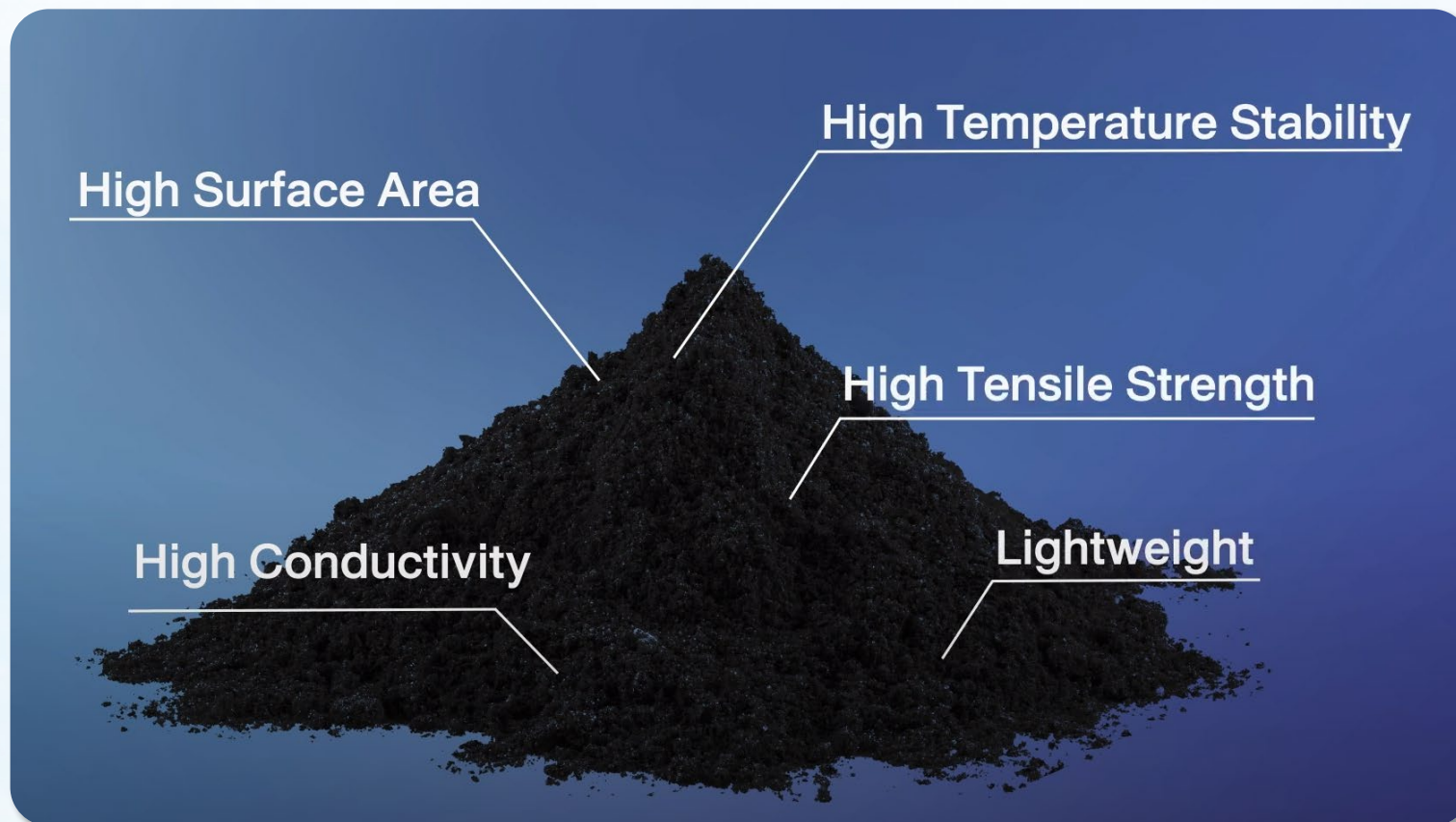
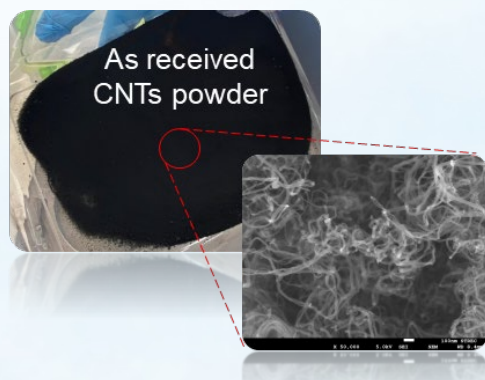
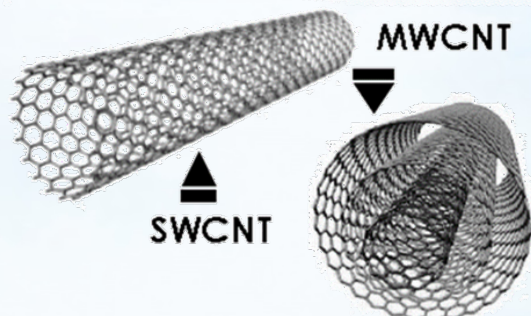






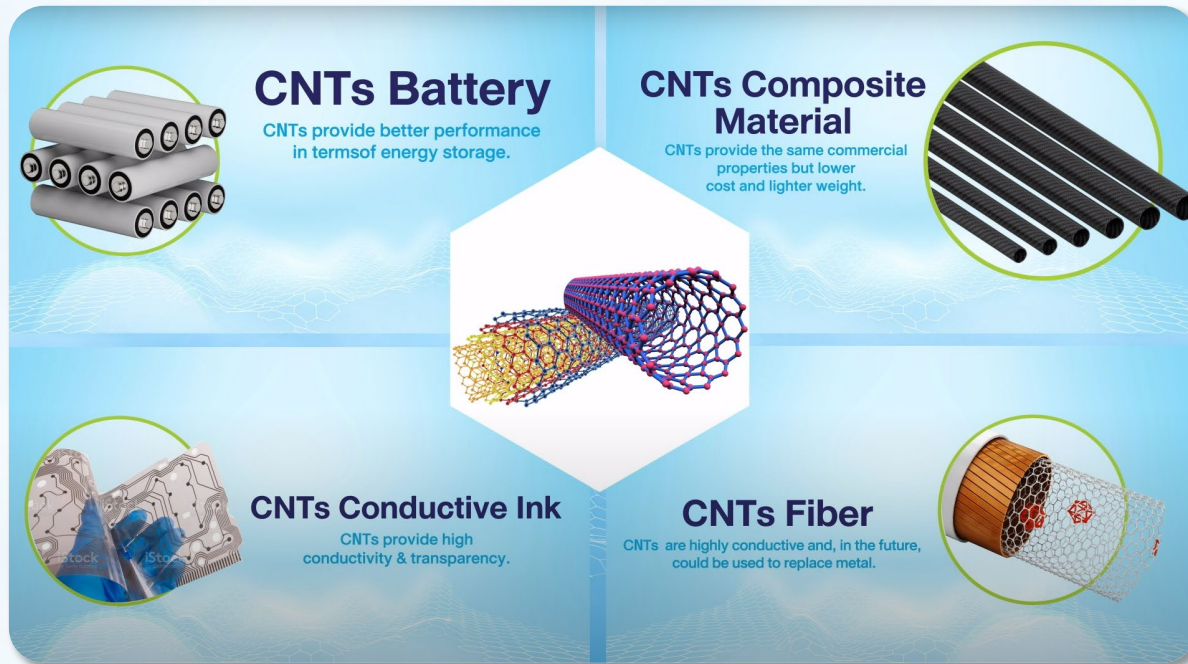
# Flare Gas Conversion to Carbon Nanotubes (CNTs)

CNTs having high potential properties



# The Future Materials for Advanced Technology

High potential properties leading to broad applications & interesting market growth



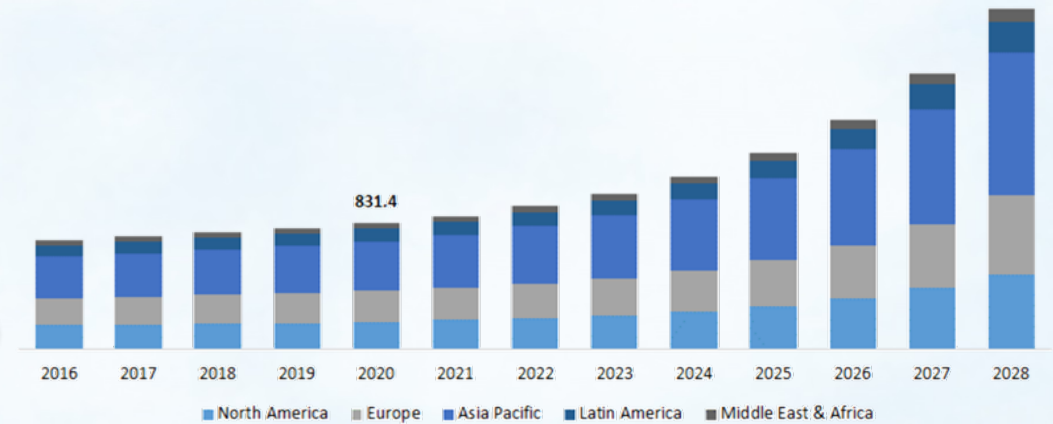
**CNTs Battery**  
CNTs provide better performance in terms of energy storage.

**CNTs Composite Material**  
CNTs provide the same commercial properties but lower cost and lighter weight.

**CNTs Conductive Ink**  
CNTs provide high conductivity & transparency.

**CNTs Fiber**  
CNTs are highly conductive and, in the future, could be used to replace metal.

CNTs Market Size, By Region, 2016-2028 (USD Million)



- Top applications**
- 1) Battery
  - 2) Compositid materials
  - 3) Electronics

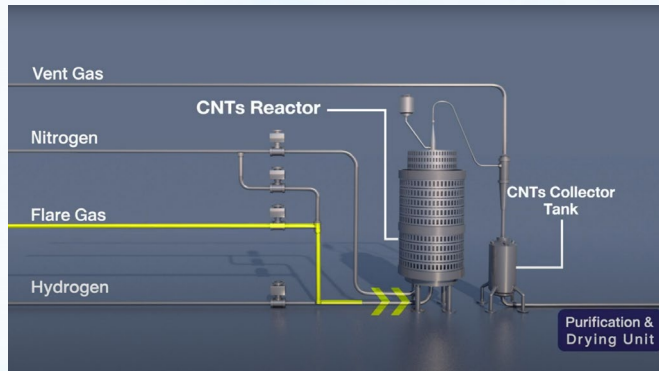


# Flare Gas Conversion to Carbon Nanotubes (CNTs)

Flare Gas Conversion to Carbon Nanotubes project supports EP Net Zero target

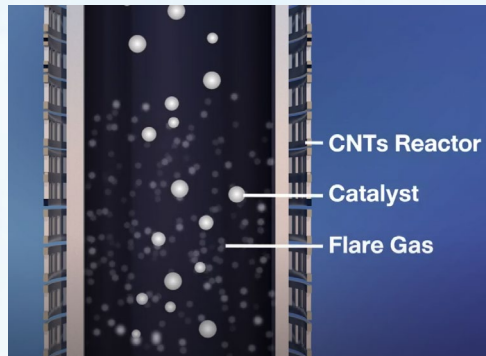
1

Develop CNTs Conversion Process by Fluidized Bed Catalytic Chemical Vapor Deposition (FBCCVD)

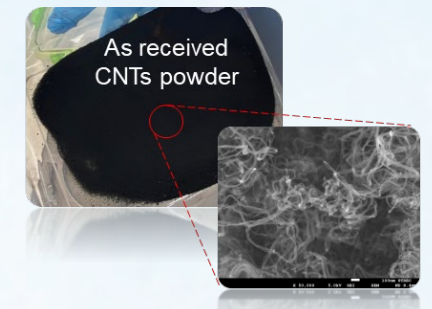
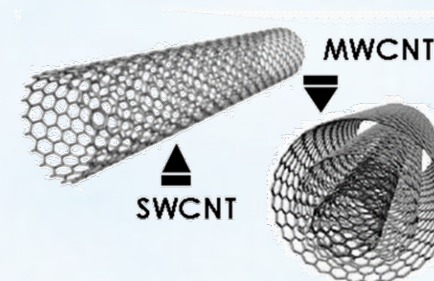
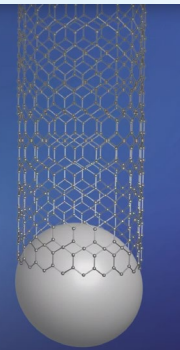


2

Develop Catalyst for converting flare gas to CNTs



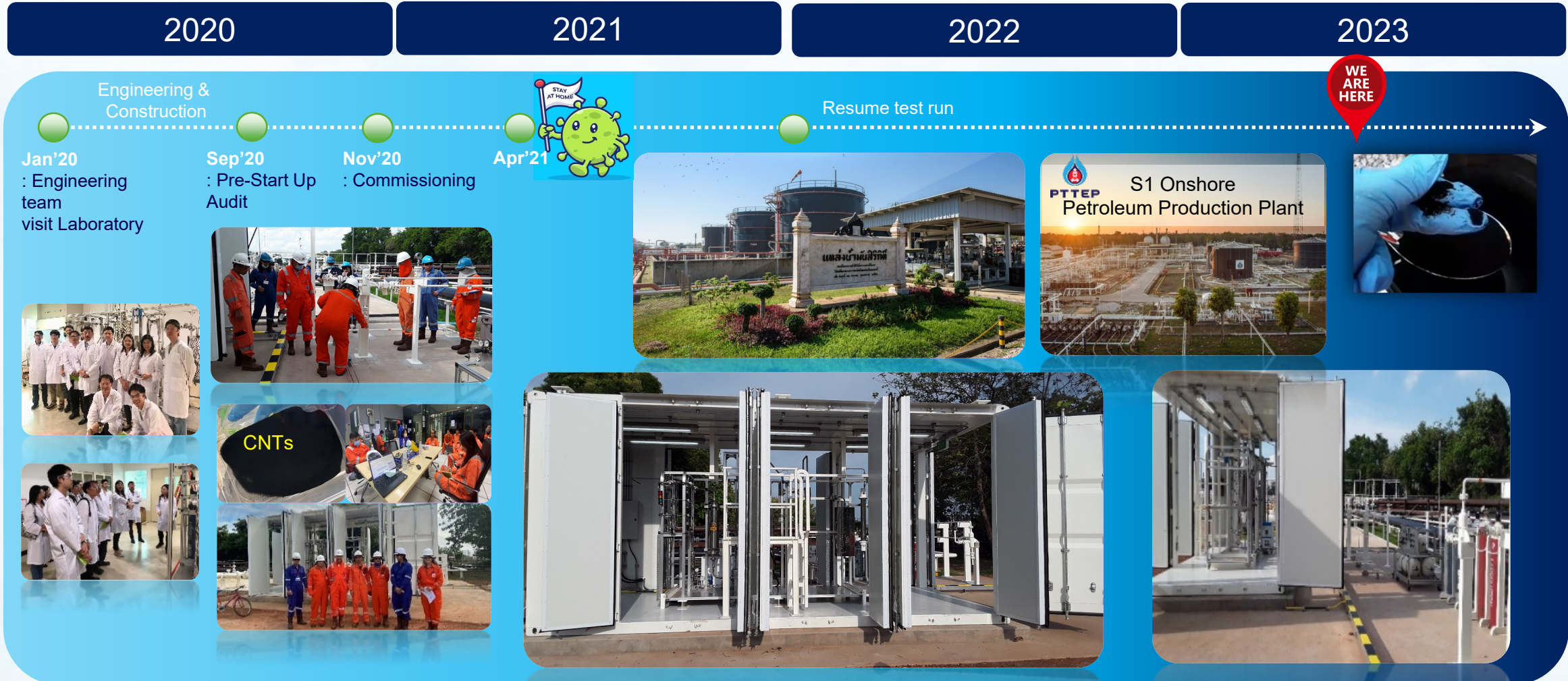
The different CNTs diameters or lengths can be designed via various conditions such as temperature, pressure, etc.





# Flare Gas Conversion to Carbon Nanotubes (CNTs)

## From Lab to Field Trial Test



# Flare Gas Conversion to Carbon Nanotubes (CNTs)



This technology is a decarbonization solution that can be applied across other industries to reduce GHG emissions from their processes.





Thank you very much

PTIC (PTTEP Technology and Innovation Center)



RASC (PTTEP Rapid Scaled-Up Center)

