NeuVentus

Gulf Coast Hydrogen Midstream:

Open Access Hub & Spoke System at Moss Bluff Salt Dome

University of Houston

Energy Symposium Series

The Gulf Coast Hydrogen Ecosystem

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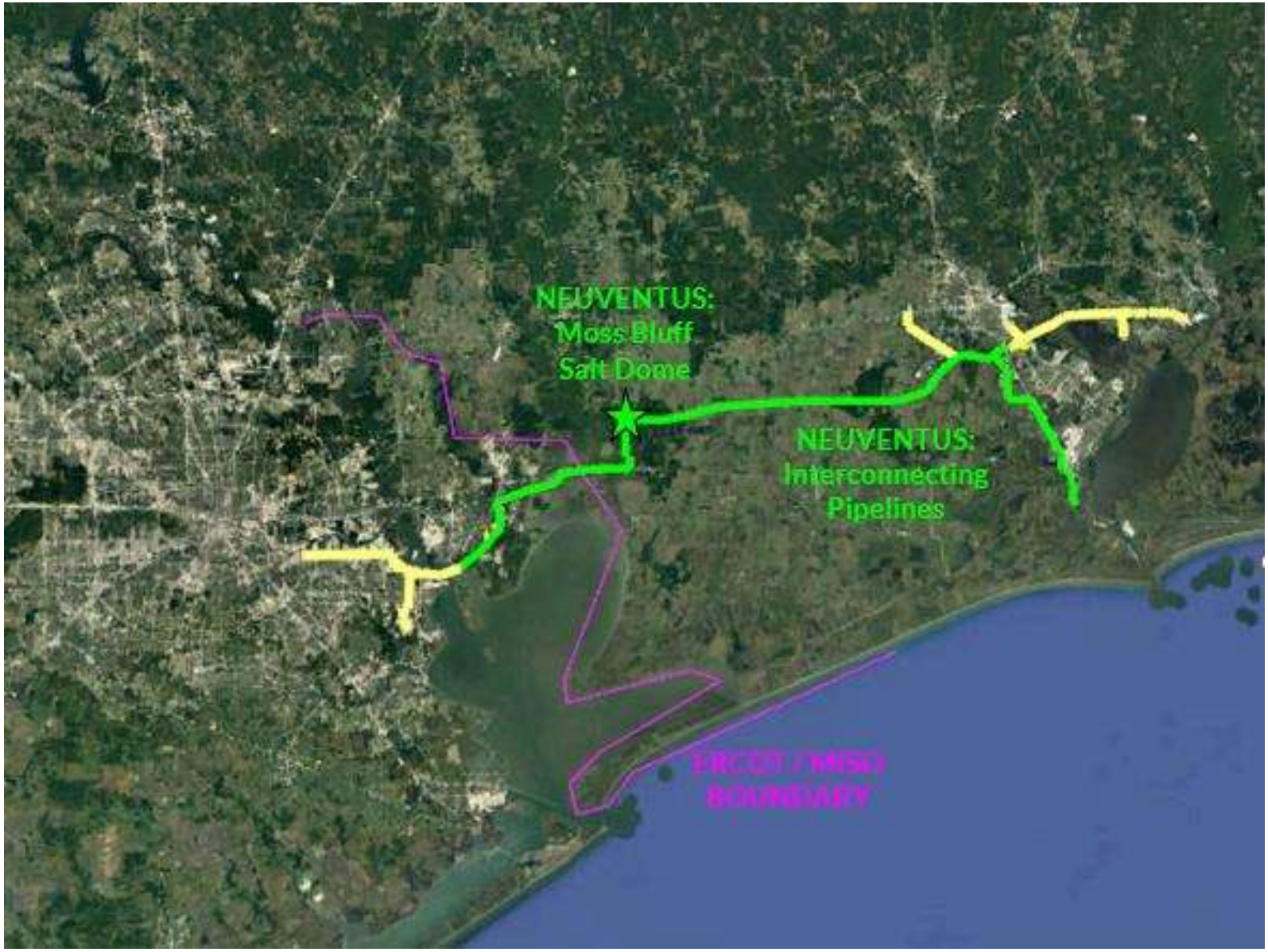
HOUSTON – BAYTOWN – BEAUMONT – PORT ARTHUR

Hub & Spoke: Initial System Concept Overview



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Investment Tax Credit for Hydrogen Storage (up to 50% of capex)

The November 2023 proposed Section 48 regulations would define "hydrogen energy storage property" as follows (***emphasis*** added):

> (iv) *Hydrogen energy storage property*. Hydrogen energy storage property is property (other than property primarily used in the transportation of goods or individuals and not for the production of electricity) that stores hydrogen and has a nameplate capacity of not less than 5 kWh, equivalent to 0.127 kg of hydrogen or 52.7 standard cubic feet (scf) of hydrogen. ***Hydrogen energy storage property must store hydrogen that is solely used as energy and not for other purposes such as for the production of end products such as fertilizer.*** For example, hydrogen energy storage property includes, but is not limited to, a hydrogen compressor and associated storage tank and an underground storage facility and associated compressors.

Here is the text of IRC section 48(c)(6)(A)(i) that this portion of the regulations interprets:

> the term "energy storage technology" means, (i) property (other than property primarily used in the transportation of goods or individuals and not for the production of electricity) which receives, stores, and delivers energy for conversion to electricity (or, in the case of hydrogen, which stores energy), and has a nameplate capacity of not less than 5 kilowatt hours

TAX CREDITS = PROJECT FINANCE = TECHNOLOGY AVERSE

- **Project Financeable**:
  - Salt cavern storage and pipelines are established technology

- **Carbon Intensity**:
  - Need an internationally standardized and certifiably accurate scheme for tracking the environmental attributes
  - Will require:
    - Physical monitoring and verification of emissions through the final molecule's lifecycle
    - Standardized accounting and legal methodology
    - Clarity on how to apportion midstream CI across midstream system users

- **Leak Detection**:
  - Need commercially available hydrogen leak detection equipment