

## NAVIGATING TOWARDS A LOW CARBON FUTURE

### MID-CONTINENT LDC FORUM SEPTEMBER 14, 2021





### **David Slater**

President and CEO – DT Midstream

### Agenda

 Lowering our carbon footprint – Where are we today?

Future state pathways

initiatives

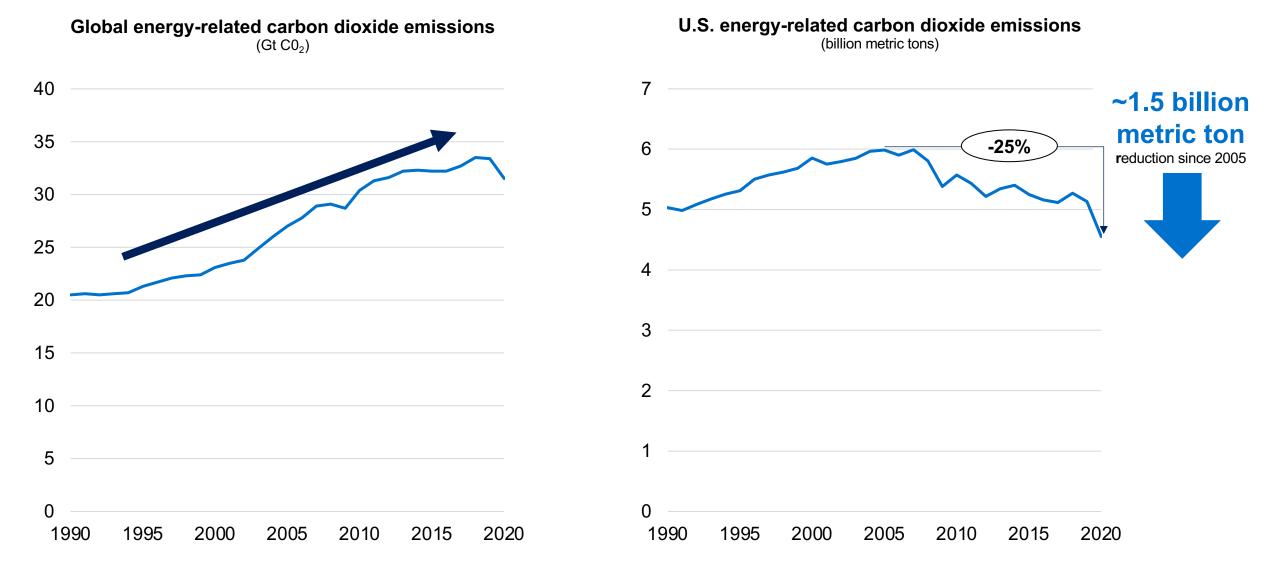
DT Midstream decarbonization



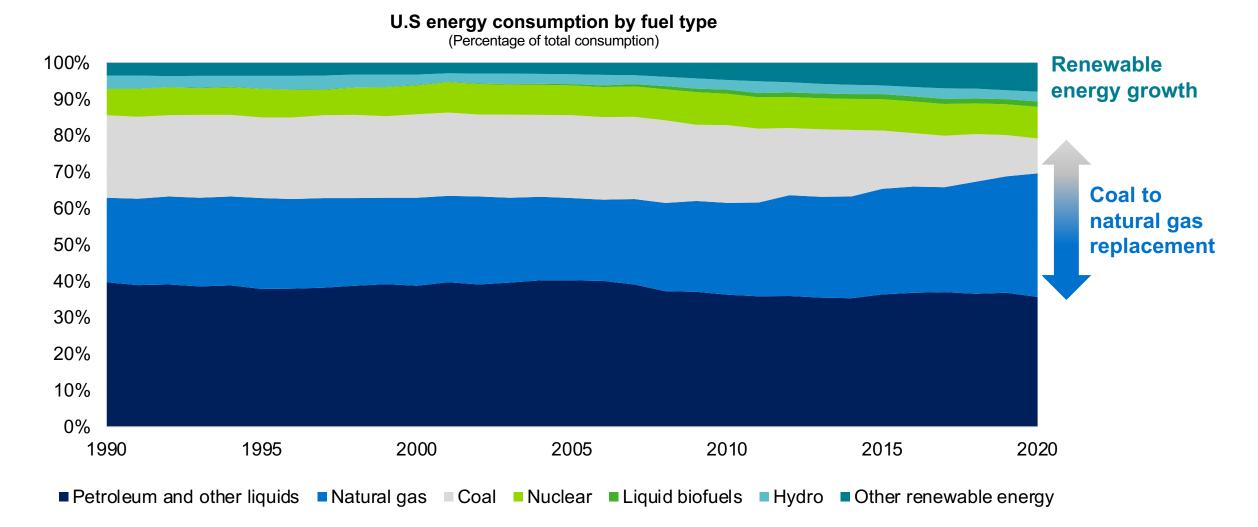




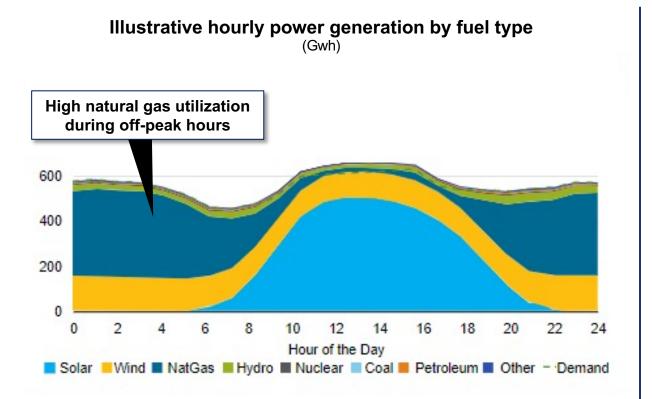
# As global $CO_2$ emissions have trended higher, the United States has made significant progress in reducing its $CO_2$ emissions



Natural gas has enabled significant carbon reductions, replacing coal and oil as a cheaper and cleaner alternative fuel while supporting intermittent renewables growth



Natural gas enables intermittent renewables and efficiently provides grid reliability when non-dispatchable resources are not available



Solar and battery capacity to displace CCGT (70% capacity factor) in MISO

**1,610 MW** Solar Photovoltaic

560 MW

**Battery Storage** 



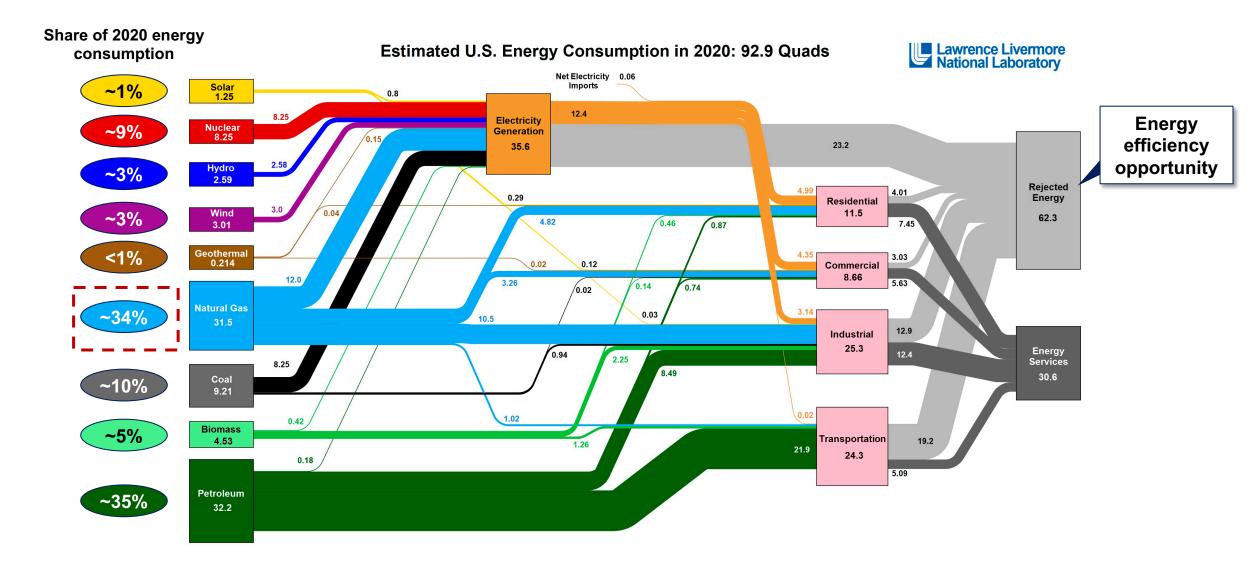
100 MW

**Combined Cycle** 

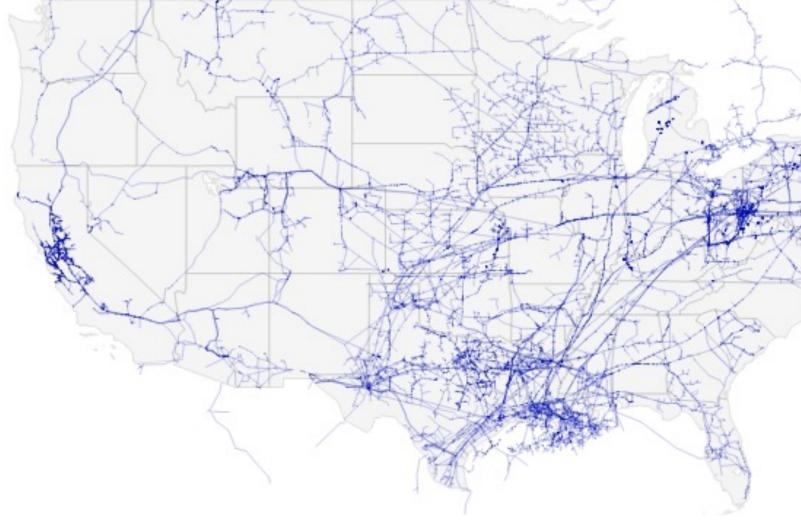
Gas Turbine

Requires ~6,500 acres of land, equivalent to ~950 Solider Fields Currently <10% of this amount installed in MISO

### Natural gas infrastructure is fundamental to our economy



# Pipeline and storage infrastructure is critical to reliably and cost effectively serve U.S energy demand



Pipeline infrastructure delivers ~1/3 of U.S. energy every day

- > Pipelines are a strategic energy asset
- Replacing network is cost prohibitive and environmentally disruptive
- Significant social implications enables reliable and affordable energy



### **Future state pathways**



INGAA's climate commitment is a comprehensive vision for a cleaner energy future



Reducing individual member emissions

Working as an industry to net zero by 2050



Transparent data collection and reporting

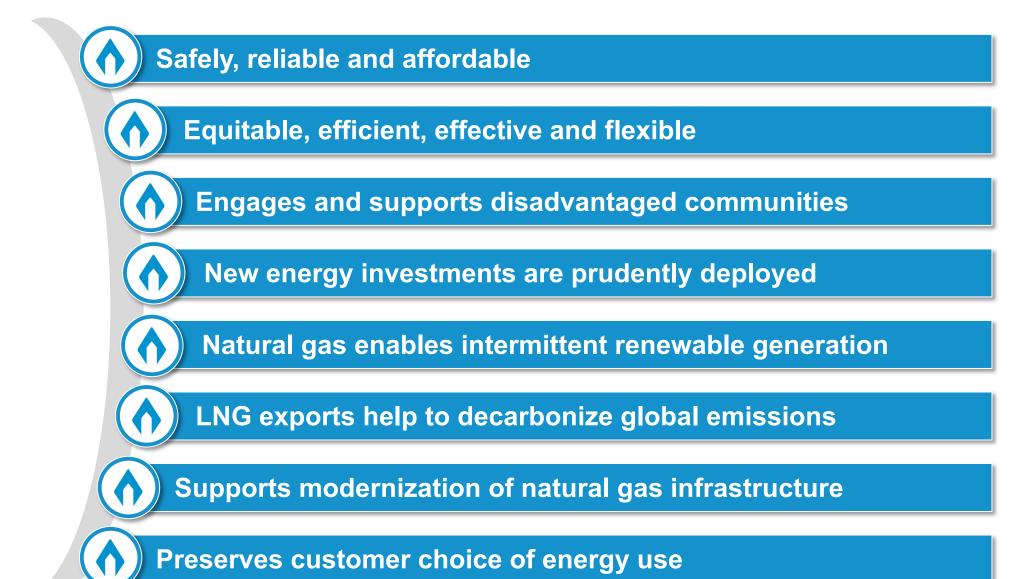


Reducing carbon intensity and investing in new technology (e.g., CCS, RNG, other low carbon fuels)

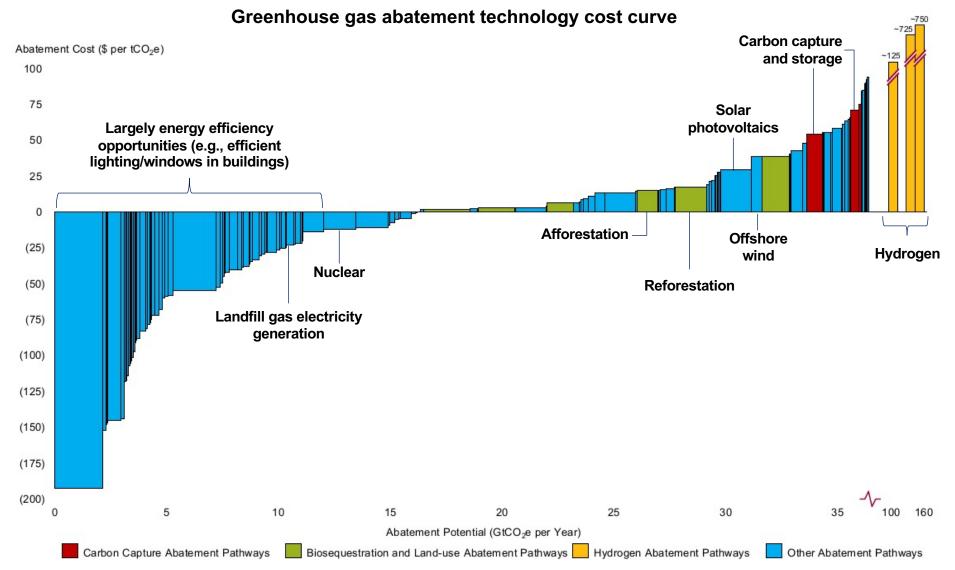


Collaborating with customers, governments, and other stakeholders across the natural gas value chain 6

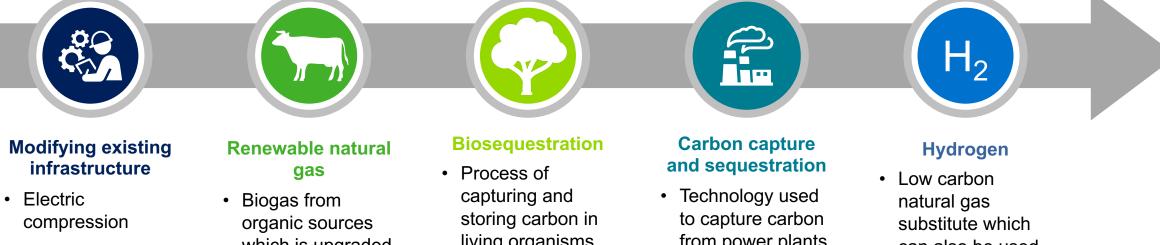
Responsible environmental stewardship in our communities **INGAA's guiding principles to shape constructive energy policy** 



# Pathways for carbon reduction have a wide range of costs and technologies are evolving quickly



Source: McKinsey's Global GHG Abatement Cost Curve v3.0; BAU building on International Energy Agency (World Energy Outlook 2010); Thunder Said Energy, "Decarbonizing Global Energy: The Route to Net Zero?", December 14, 2020. Note: The curve presents an estimate of the maximum potential of technical GHG abatement measures below \$100 per tCO2e if each lever was pursued aggressively. It is not a forecast of what role different abatement measures and technologies will play. There are various opportunities to decarbonize pipeline and storage infrastructure



- Methane reducing technologies
- Energy efficiency improvements
- which is upgraded to natural gas quality
- living organisms such as plants or algae
- from power plants or industrial processes and permanently store in deep geological formations
- can also be used as fuel for transportation and long-term energy storage



## DT Midstream decarbonization initiatives



#### DT Midstream is committed to its net zero by 2050 target

(million metric tons / year) ~30% Net zero 2030 2030 2050 unabated target target

Annual GHG emissions

- Among first in sector to implement a net zero by 2050 target
- Net zero plan expects to use a combination of existing market-ready solutions along with future technologies under development
- Commitment to sustainable operations



# Taking action today to reduce infrastructure emissions



#### **Currently executing**

- Carbon capture and sequestration
- Electric compression
- Renewable natural gas connections



#### **Opportunities being evaluated**

- Methane reducing technologies (e.g., vent control devices, electrical glycol pumps, instrument air system)
- Biosequestration offsets
- Hydrogen





# Haynesville system expansion offers first of its kind "Wellhead to Water" carbon neutral service

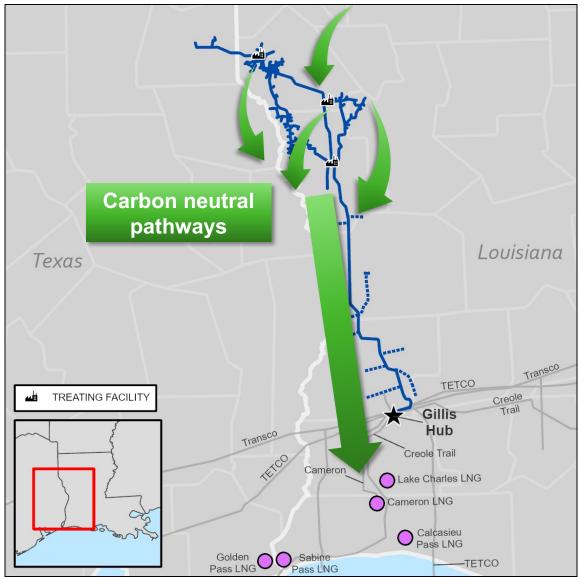
## Project will provide carbon neutral pathway for Haynesville supply to reach growing LNG markets

 Delivers up to 2.0 Bcf/d to the Gillis Hub, directly serving LNG export terminals and domestic demand

#### "Wellhead to Water" carbon neutral services enabled by:

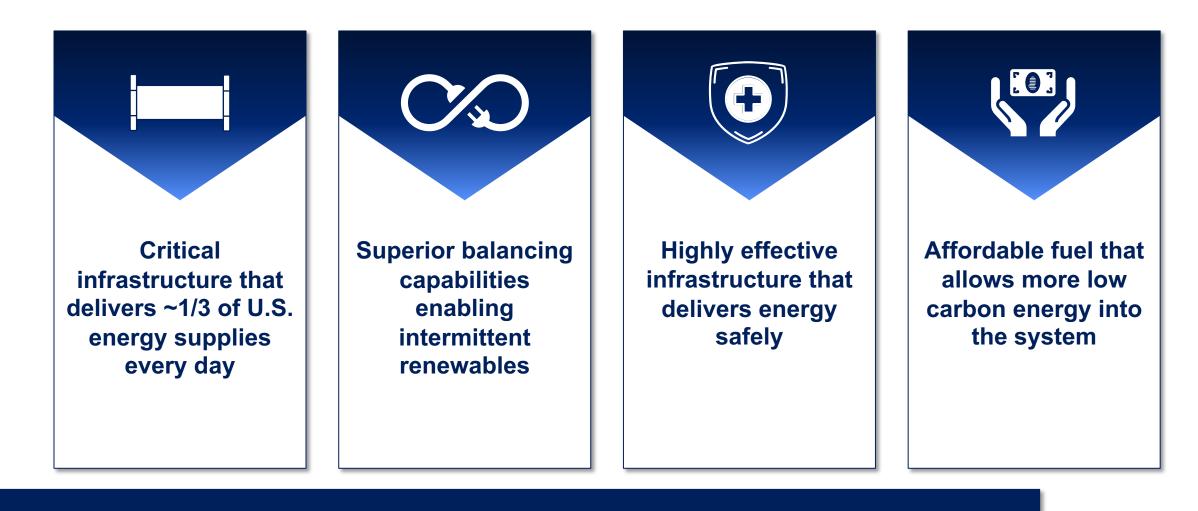
- Electric compression supplied by renewable generation
- Facilities paired with carbon capture and sequestration
- Carbon offsets for any residual emissions

## Supports international market desire for low carbon LNG exports





Pipeline and storage infrastructure is a durable strategic energy asset for North America



Natural gas is a foundational fuel for decades to come

