



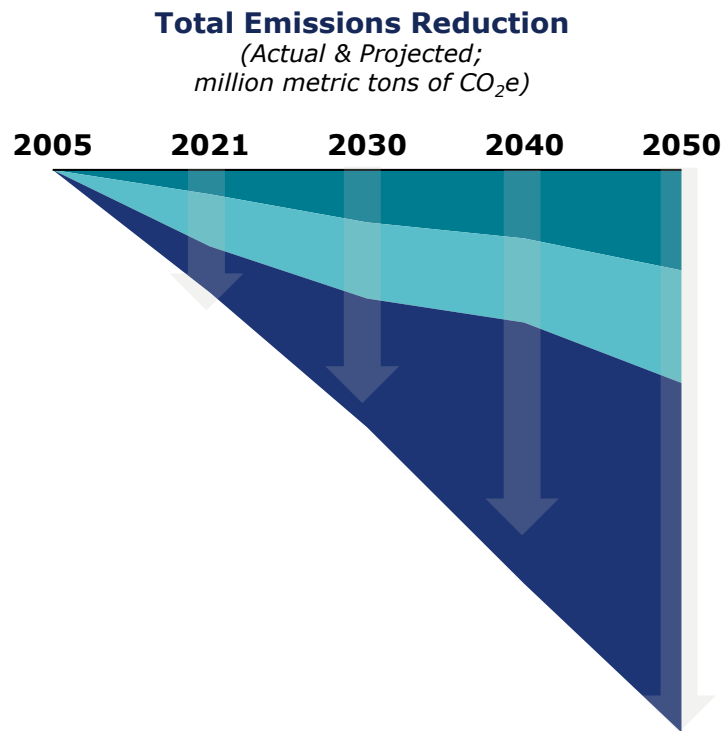
**DTE**

**Natural Gas Balance**

Ann Arbor Energy Commission

11/08/2022

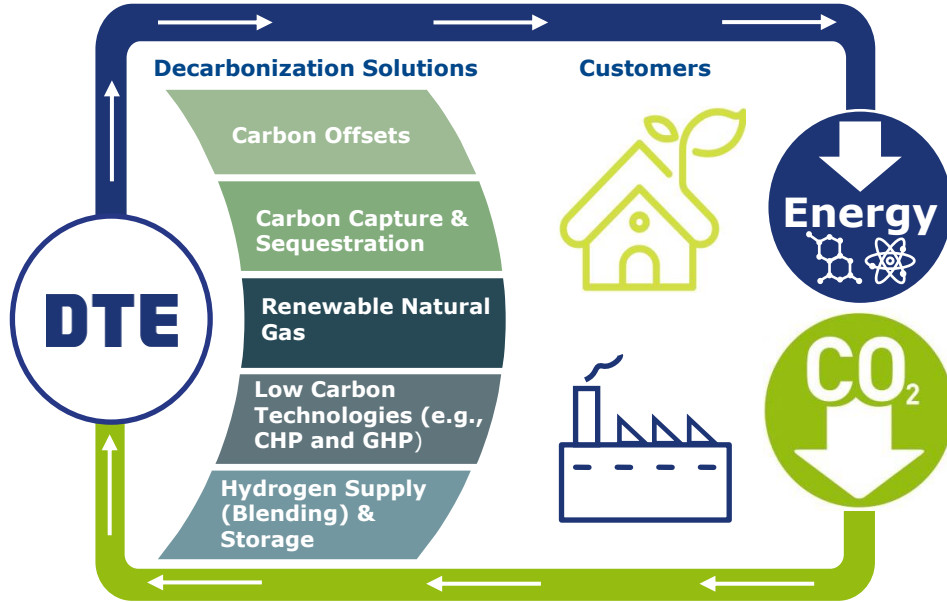
In 2020, DTE Gas committed to reduce emissions across our value chain, and have achieved ~25% of our 2050 reduction target



**Our Commitments throughout the Value Chain**  
(CO<sub>2</sub>e)

Area of Value Chain	DTEG's Commitment	% of Value Chain
<b>Upstream Emissions</b>	<b>Net-zero emissions</b> from gas purchased for our customers by <b>2050</b>	~12%
<b>Utility Distribution Emissions</b>	<b>Net-zero emissions</b> for our utility operations (combustion + methane) by <b>2050</b>	~8%
<b>Downstream Emissions</b>	<b>~35% reduction</b> in emissions from customer end use by <b>2040</b> <sup>1</sup>	~80%
<b>Total</b>		100%

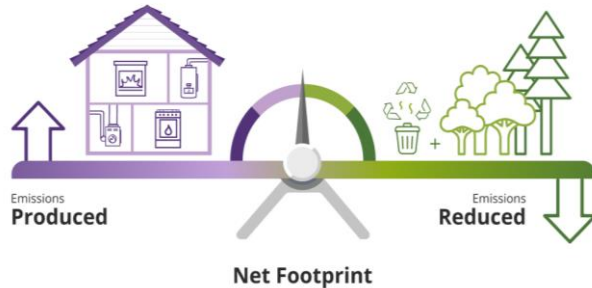
While upstream and internal emissions are largely under the control of DTE Gas, downstream (customer) emissions will require the use of advanced technologies to fully mitigate carbon generation



We will continue to advance other solutions for future development to provide customers with energy while minimizing their GHG emissions

- With gas consumption in Michigan expected to remain strong, these solutions will be critical for **decarbonizing** emissions
- Our efforts around **RNG** are focused on voluntary program offerings to our gas customers
- **Carbon Capture & Sequestration** has potential to be a key player in emissions reducing based on MI's unique geological position
- **Nature based offsets** are increasingly gaining popularity amongst corporates and hedge funds as they see it as way to address ESG goals affordably
- **Hydrogen** is an immature decarbonization solution but has potential for reducing emissions via blending with natural gas and fuel supply production
- **Gas Heat Pumps (GHPs)** are gaining industry momentum

# Our CleanVision Natural Gas Balance voluntary program provides our customers a solution to affordably offset their natural gas emissions with locally sourced projects



A **first of its kind program** within the country aimed at reducing our customer end use emissions through local projects

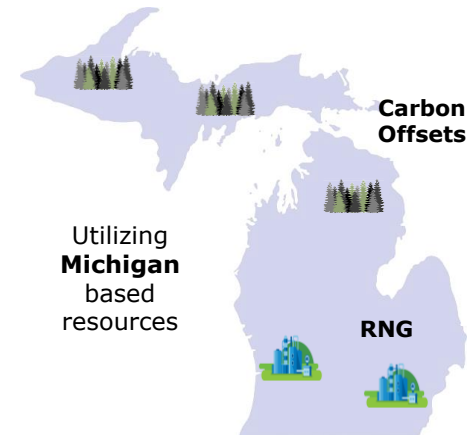
**Open to all our customer classes**, including residential, commercial and industrials

We currently have over **9,400 customers enrolled** in the program

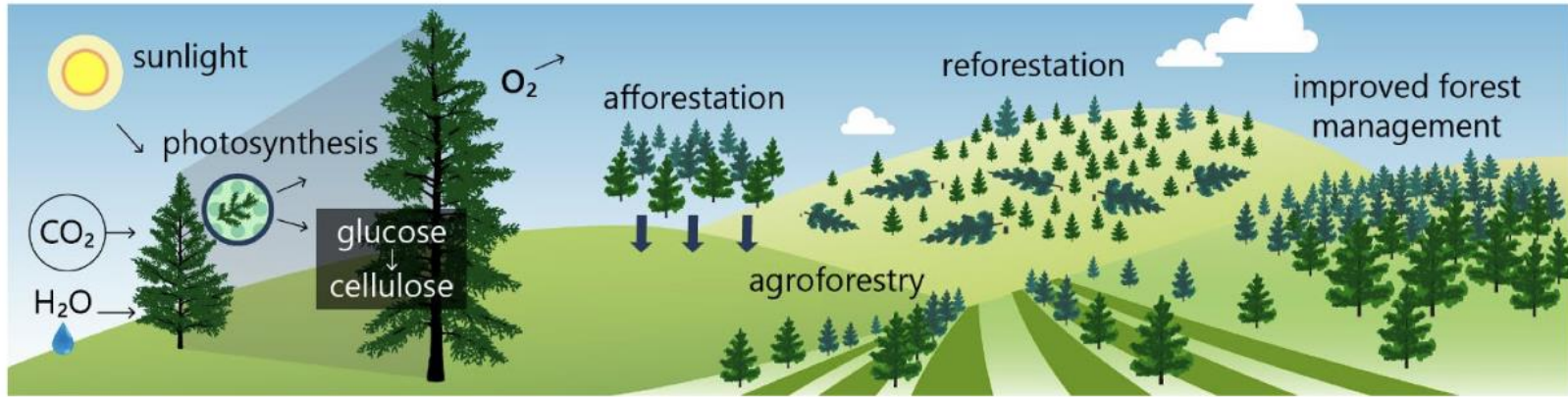
Our residential program offering is designed to negate emissions from an average home; our business program offering is more tailored and flexible allowing participation at any level starting at 5% all the way up to 100%

Voluntary program offering consisting of a hybrid blend of **carbon offsets (95%)** and **renewable natural gas (RNG-5%)<sup>1</sup>** to negate customer emissions

We source forestry carbon offsets from projects in the **Upper Peninsula and Pigeon River forest near Gaylord**; RNG we supply from a **Canton landfill and Grand Rapids waste-water facility**

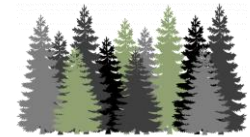


# What are Carbon Offsets through Forestry Projects?



- **Reforestation** restocks existing forests that have been depleted, often through deforestation or logging.
- **Afforestation** introduces trees to create a new forest in an area that has not been forested previously (or in recent history) and where tree growth is beneficial.
- **Agroforestry** intentionally integrates trees into agricultural areas.
- **Improved Forest Management (IFM)** aims to increase the carbon stored in forests, including increasing the average age of trees in timber harvesting areas by avoiding or delaying conversion to timber

# Co-Benefits associated with local Michigan improved forestry management carbon offset projects



Michigan  
Carbon Offset  
Projects

Co-benefits



Conserve  
water  
resources

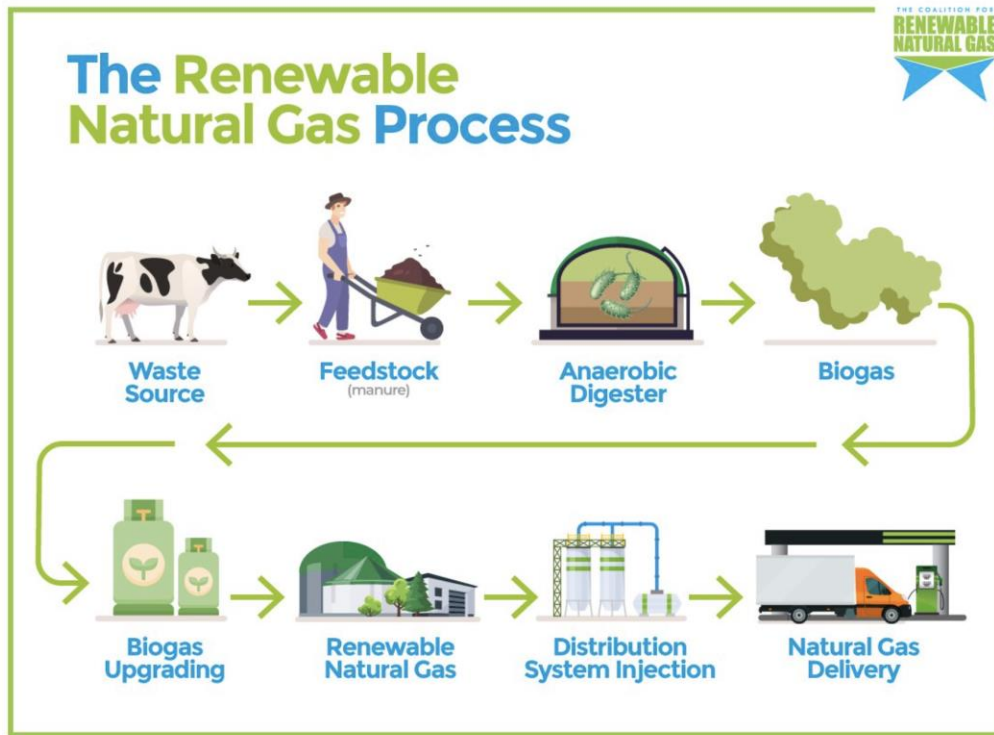
Create Habitat  
Improvements  
for Wildlife

Benefit  
the  
Michigan  
Economy

Provide  
additional  
recreation  
areas for  
Michiganders

*Offset projects benefit many aspects of life*

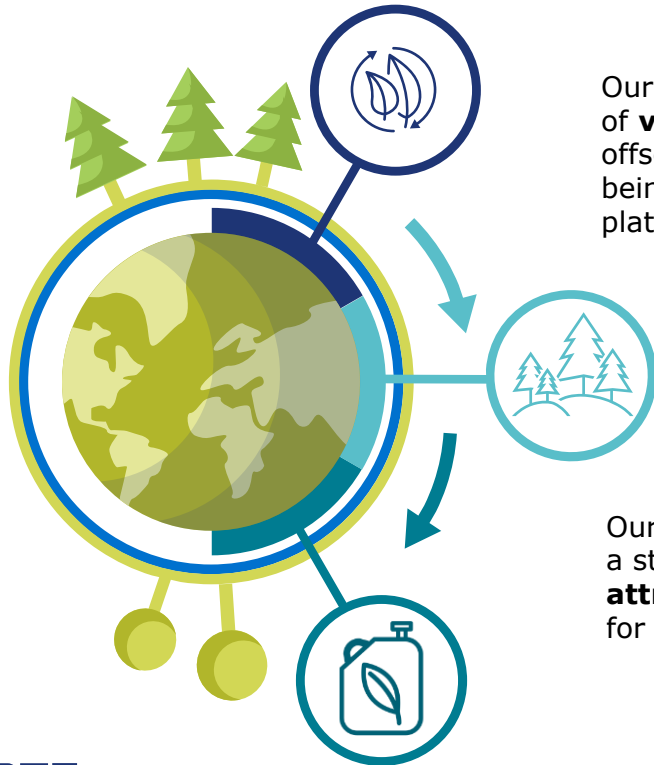
Renewable Natural Gas is a clean, affordable and reliable waste-derived fuel that can be used to help accelerate decarbonization goals



### Overview of RNG:

- RNG projects capture methane from existing food waste, animal manure, wastewater sludge and garbage, and redirects it away from the environment, **repurposing it as a clean, green energy source**
- We see RNG as a key component when it comes to decarbonization as it is a technology which is already **commercialized and widely deployed today**
- Even though RNG presents a large premium to typical fossil gas (3x to 5x on average), it is **significantly cheaper than other renewable energy alternatives** requiring costly upgrades to businesses and homes
- RNG acts like conventional natural gas in all heating applications and **without the financial commitment of upgrading or adjusting existing appliances**

# A thorough evaluation of projects was conducted to ensure our CleanVision Natural Gas Balance supply is high-quality



Our carbon offsets go through a rigorous process of **validation** and **third-party verification** to ensure offsets are of the highest standards and quality, ultimately being approved by the **American Carbon Registry** platform



Our RNG environmental attributes are certified under M-RETS, a state-of-the-art platform **validating the environmental attributes of RNG** and issuing a traceable digital certificate for every dekatherm of RNG produced

