



IDFA

**International
Dairy Foods Association**

Notes on Dairy's Decarbonization Journey

(High-level Overview, August 2023)



IDFA advocates on behalf of America's dairy industry to ensure our members have the tools and resources they need to innovate and thrive.

We represent the nation's **dairy manufacturing and marketing industry**, which supports more than **3.2 million jobs** that generate \$49 billion in direct wages and **\$794 billion in overall economic impact**.

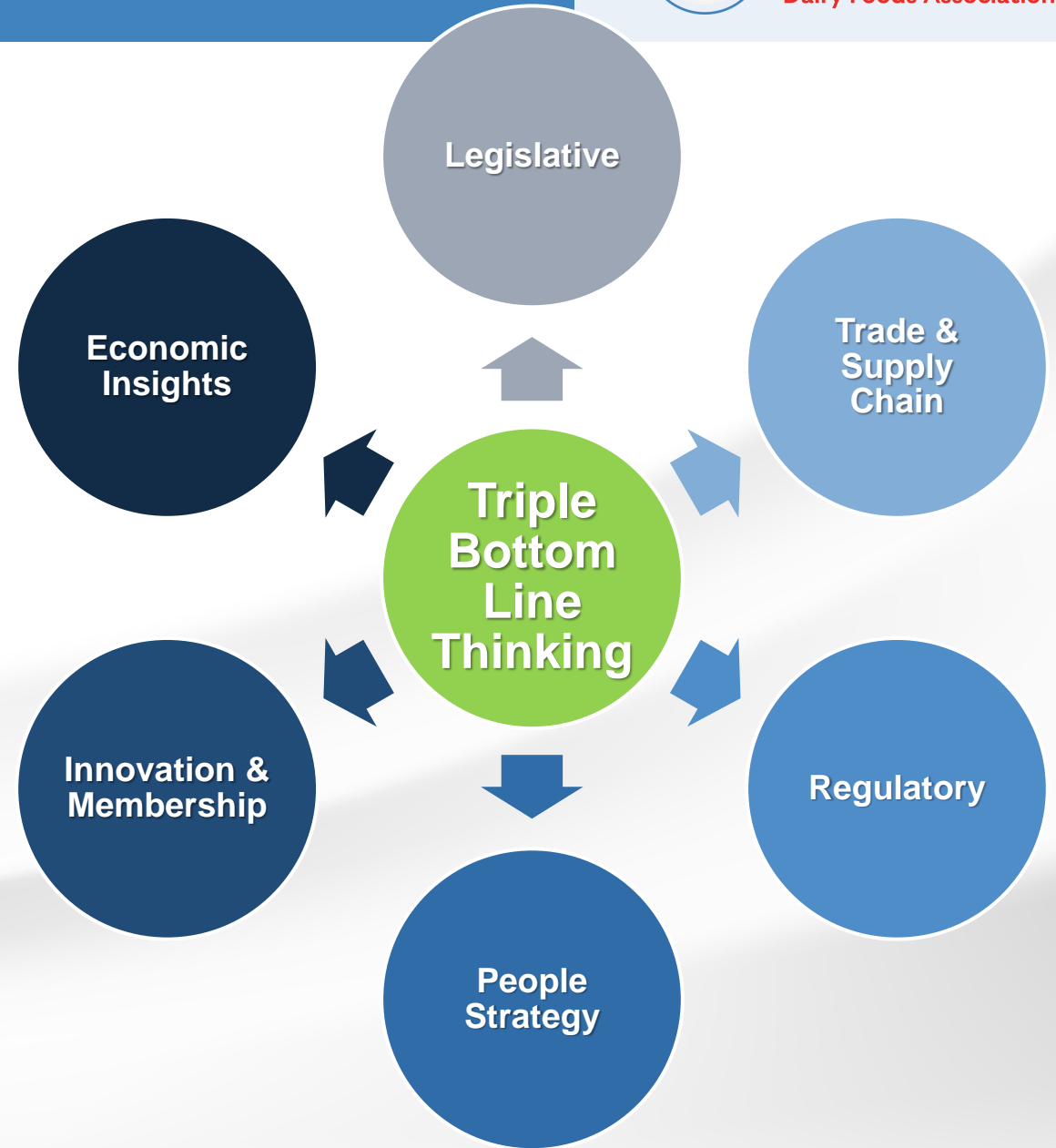
- Dairy processors (and suppliers)
- Farmer-owned cooperatives
- **20+ Science Based Target Initiative (SBTi) participants**
- **~45 member companies in IDFA's Sustainability Committee**

IDFA Strategic Priorities



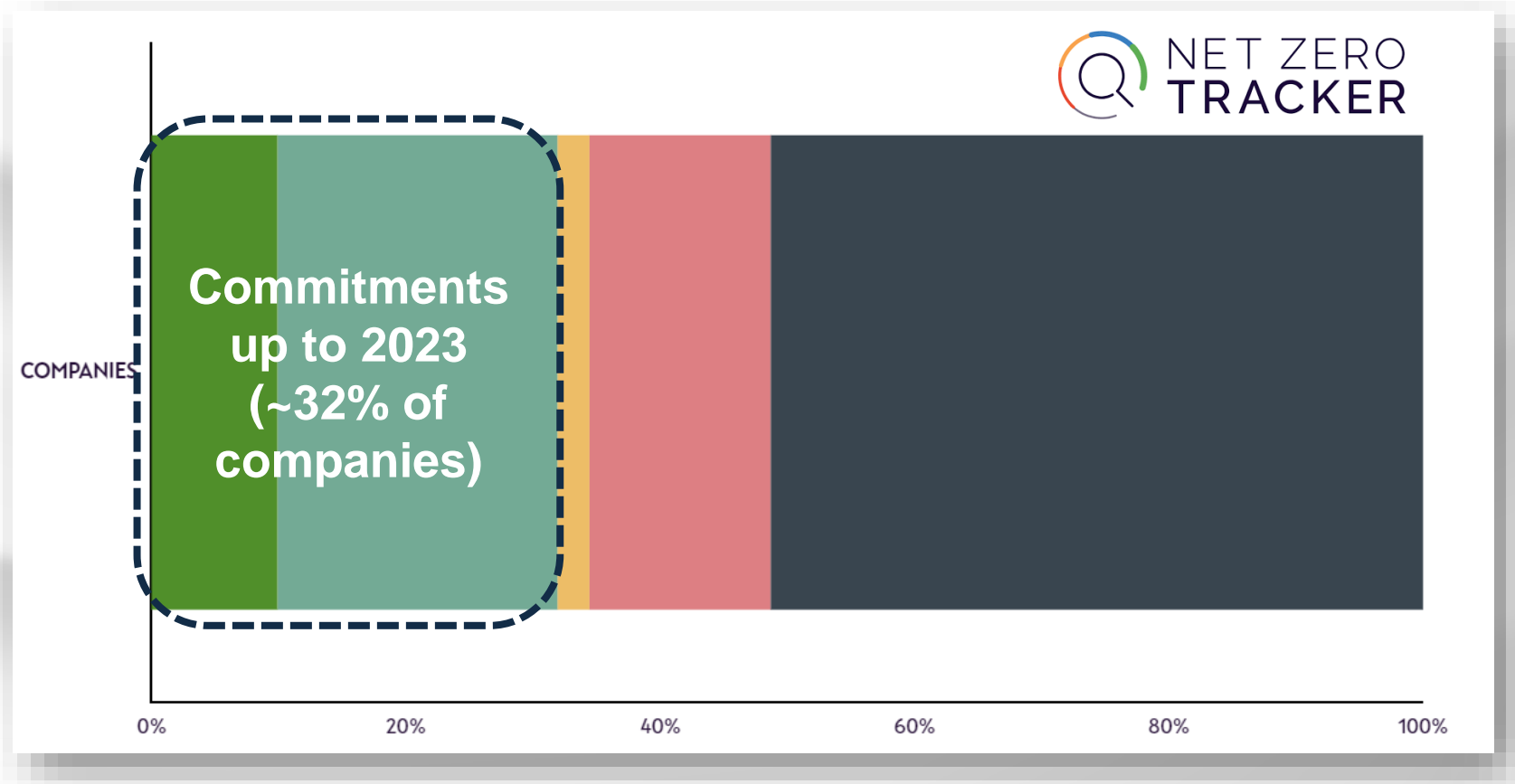
Developing an ESG Practice for Members

IDFA will continue to expand tools, resources, and advocacy efforts aimed at helping members succeed in advancing sustainable business practices and navigating emerging environmental, social, and governance (ESG) policy developments that may affect the long-term competitiveness of the dairy sector.



Near-term Targets in Sight

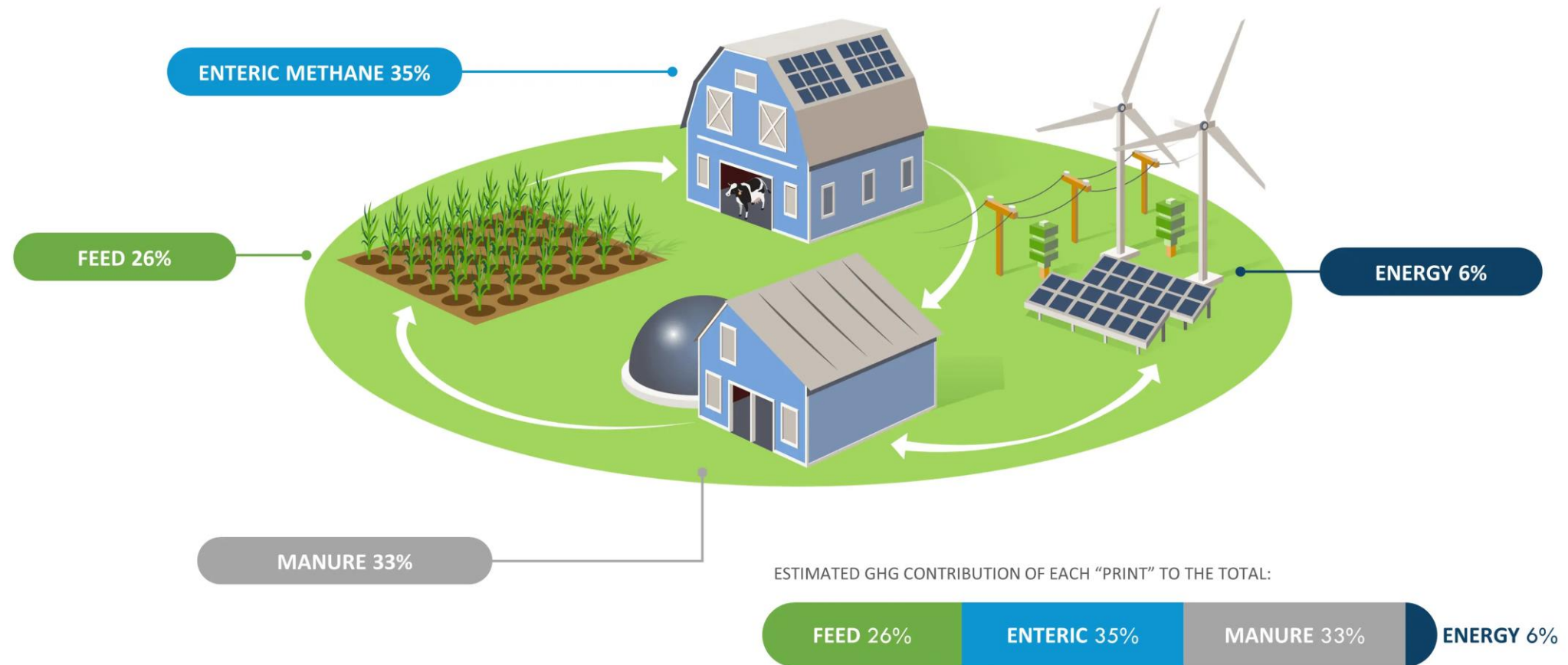
Key Statistic: ~1/3 of large companies have interim climate mitigation progress goals leading up to 2030...***are some your customers?***



Source: <https://zerotracker.net/>

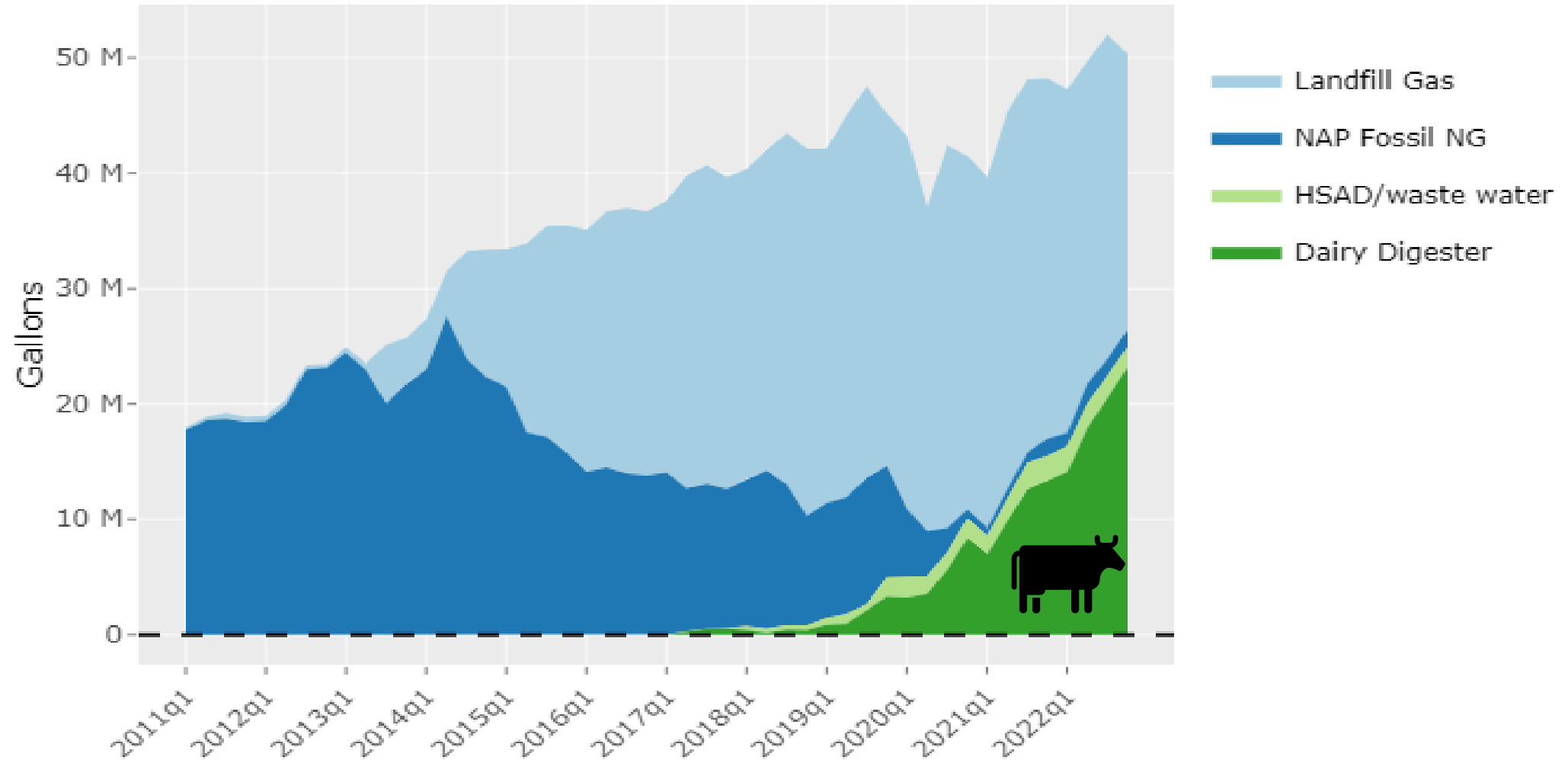
Dairy Farm GHG Source Breakdown (High Level)

NZI Key Areas of Focus And Contributions to the Total Farm Footprint



California Low Carbon Fuel Standard Dairy Participation

CA LCFS : Volume for Natural_Gas , Quarterly basis



Still Must Prioritize: Post-farmgate Emissions

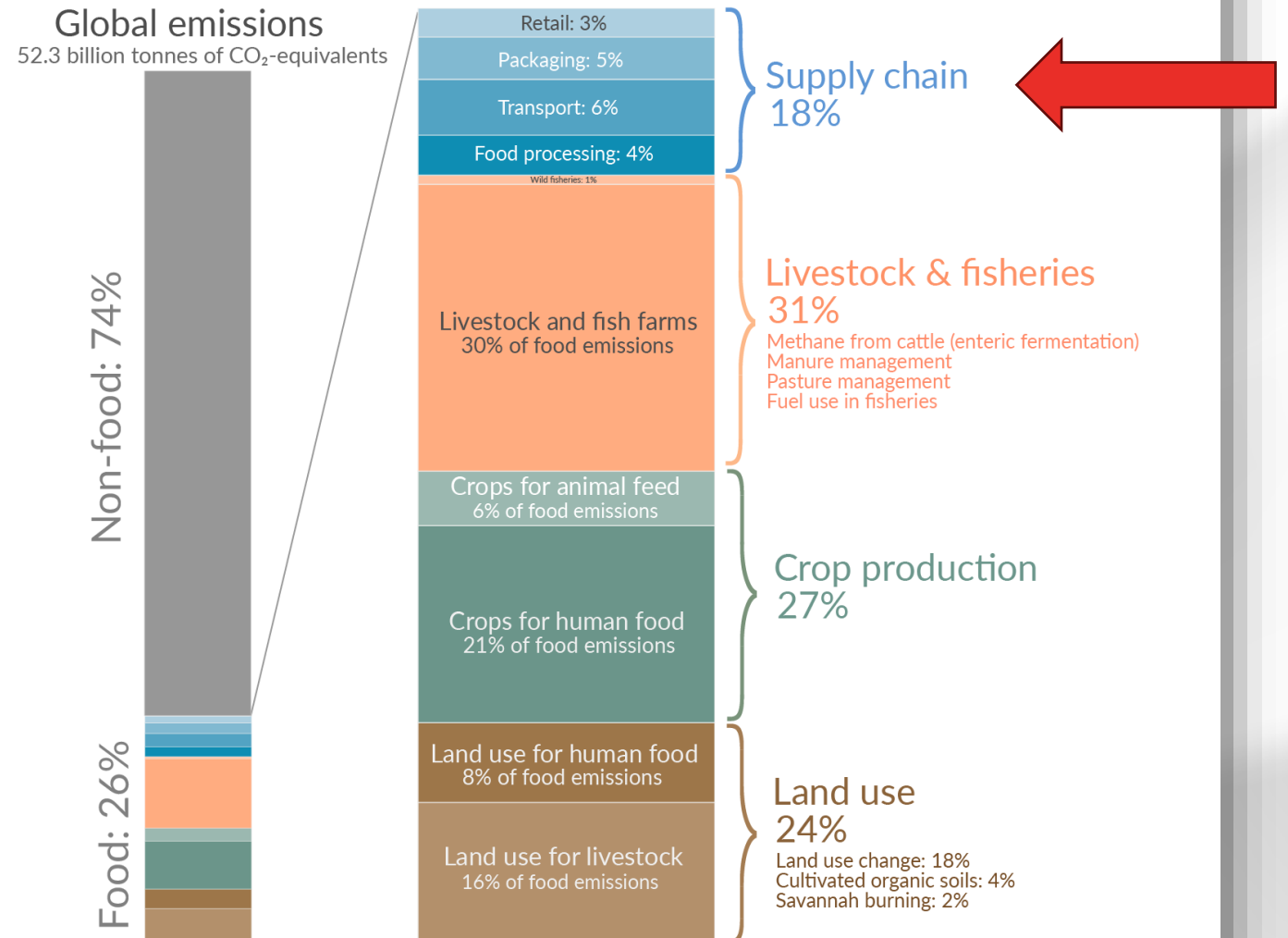
- We realize that ~20% of GHGs from food production are generated after the farm.
- IDFA processors are also focused on reducing that operational footprint.

Sources:

<https://ourworldindata.org/food-ghg-emissions>
<https://www.science.org/doi/10.1126/science.aag0216>

Global greenhouse gas emissions from food production

Our World
in Data



Data source: Joseph Poore & Thomas Nemecek (2018). Reducing food's environmental impacts through producers and consumers. Published in *Science*.
Licensed under CC-BY by the author Hannah Ritchie (Nov 2022).



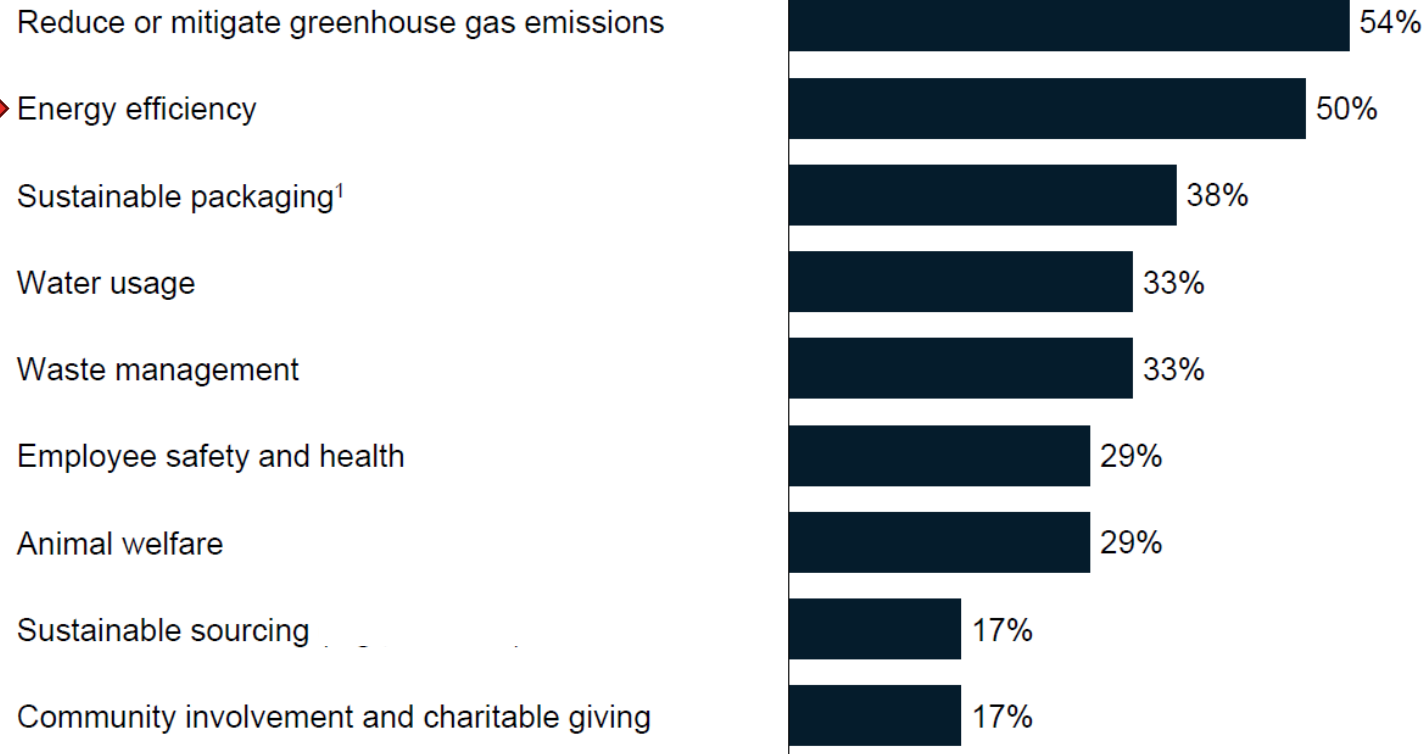
As greenhouse gas (GHG) reporting becomes increasingly expected (or mandatory), the entire value chain is affected.

The Dairy Industry Working Together



What are the top three priorities of your company's sustainability strategy?

N = 24



1. Sustainable materials, source reduction, recyclability, post-consumer recycled content
2. Of the respondents who have a sustainability strategy but not an ESG strategy

Company priorities differ with no single driver being a top 3 priority for more than 54% of companies

Reducing or mitigating greenhouse gas emissions and/or improving energy efficiency are the top two perceived priorities²

Benchmark: IDFA Members Managing GHGs

Focus is shifting from energy efficiency to packaging/circular economy:

- 90% of processors have made energy efficiency investments
- In the future, 72% plan to invest in packaging/circular economy while 62% plan to invest in energy efficiency



Drawing Conclusions for Discussion:

- First movers likely the largest by revenue
- “Low-hanging fruit” captured
 - Next actions may have CAPEX / IRR hurdles
- Small & medium enterprises ramping up action planning
- **Need: increased knowledge, guidance, and access to incentives (e.g., IRA funding)**

“HP Hood Plant is First Fluid Dairy Processor Awarded ENERGY STAR® Certification”

- Agawam Massachusetts Plant (c. 1960s).
- Utilized EPA Energy Performance Indicator (EPI) tool co-developed with the dairy industry.
- Benchmark: Hood plant verified to be in top quartile amongst other U.S. plants.
- “...the Agawam plant spends less on energy and has lower energy-related environmental impacts than similar plants.”



Member Collaboration Example

While IDFA does not endorse any specific companies or technologies, we help connect the dots. Skyven recently joined the association.

- Together, we are hosting a webinar to educate processors about steam-generating heat pumps
- IDFA was able to provide a letter of support for a DOE grant opportunity; currently ~10 dairy project sites identified!





ARCTURUS

STEAM-GENERATING HEAT PUMPS

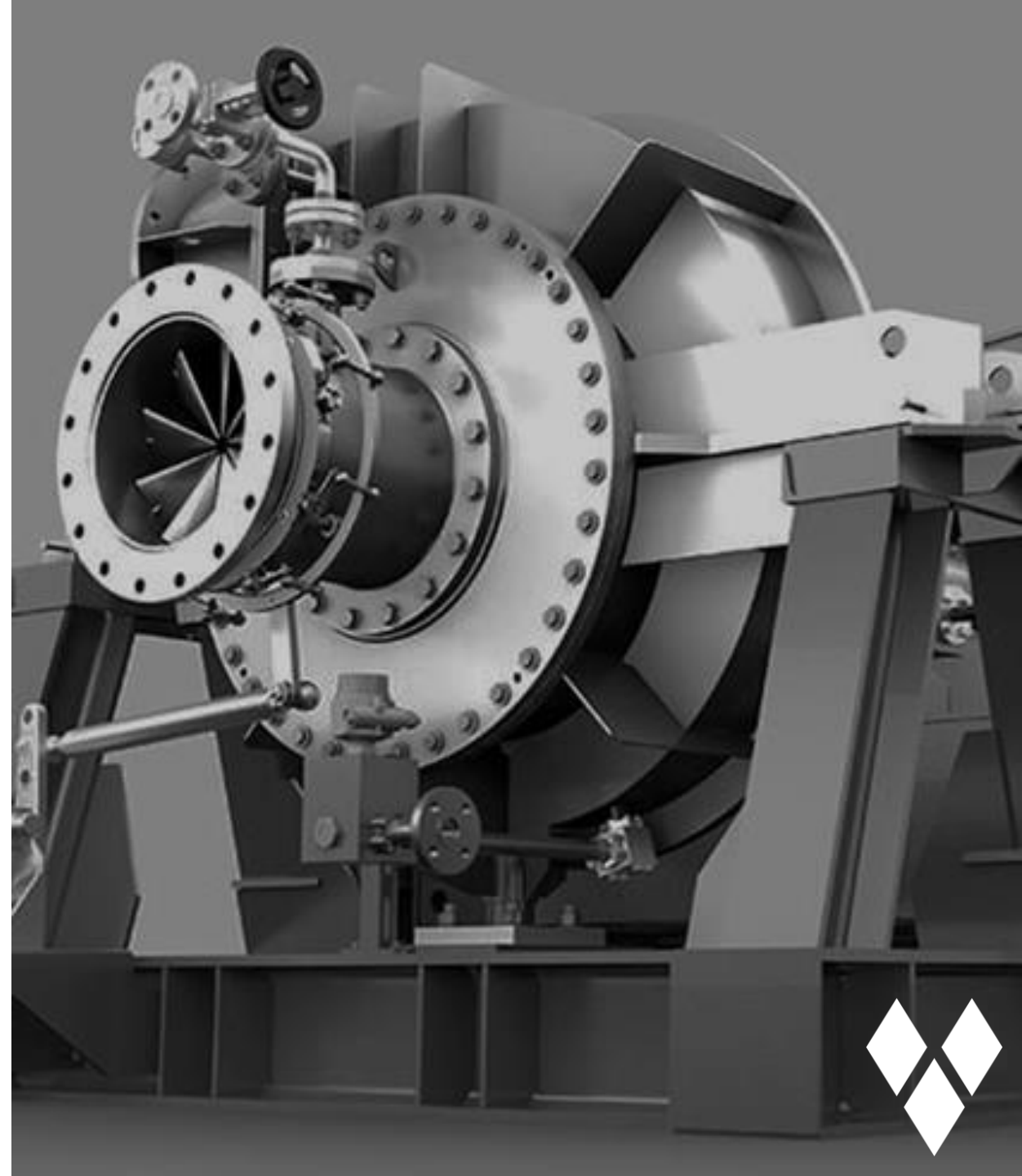
Generates high-quality steam at up to 400° F
(290 psig)

Sources heat from cooling return at 80°-90° F

Uses 60% less electricity than electric boilers

Backed-up by existing boilers & cooling towers

Built on highly reliable MVR technology



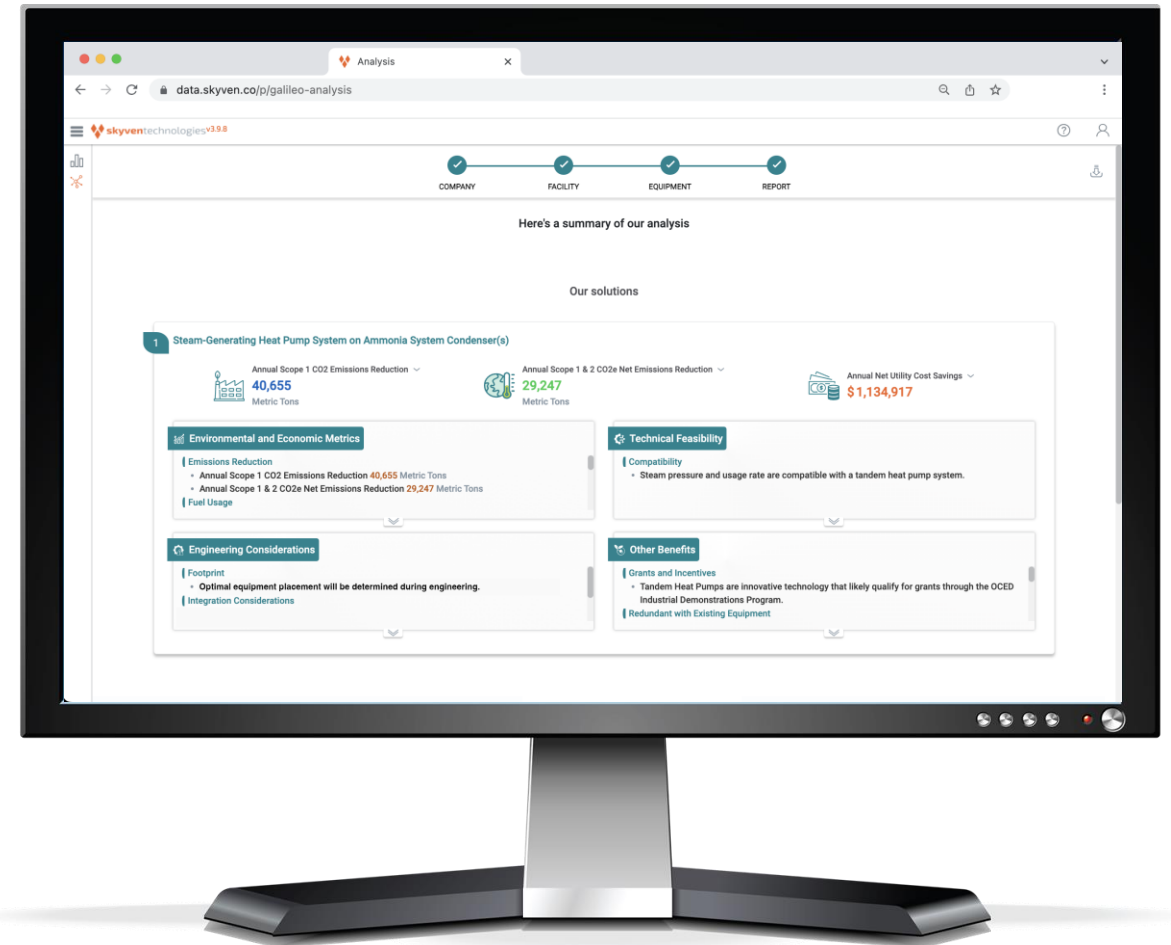


INTRODUCING GALILEO

A revolutionary decarbonization software tool

Instant project proposal with 2-5 attractive decarbonization projects, including how much carbon, energy, and money each project saves

Results within 1-2 hours of answering plant-level questions



Thank you!

Please try to connect with our members in the room to learn more about their specific energy efficiency and decarbonization challenges, successes, and key learnings from their actions in this space.

