



Leading the Way to a Sustainable Energy Future

Smart Energy Consumer Collaborative

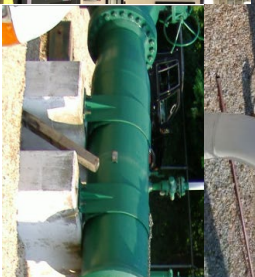
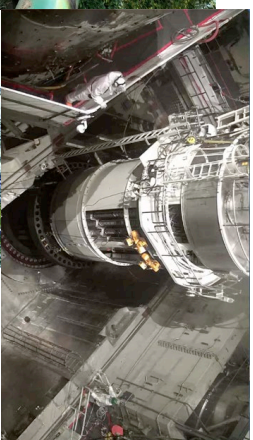
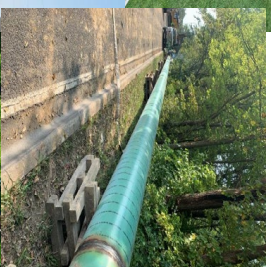
October 25, 2022



The Big Picture



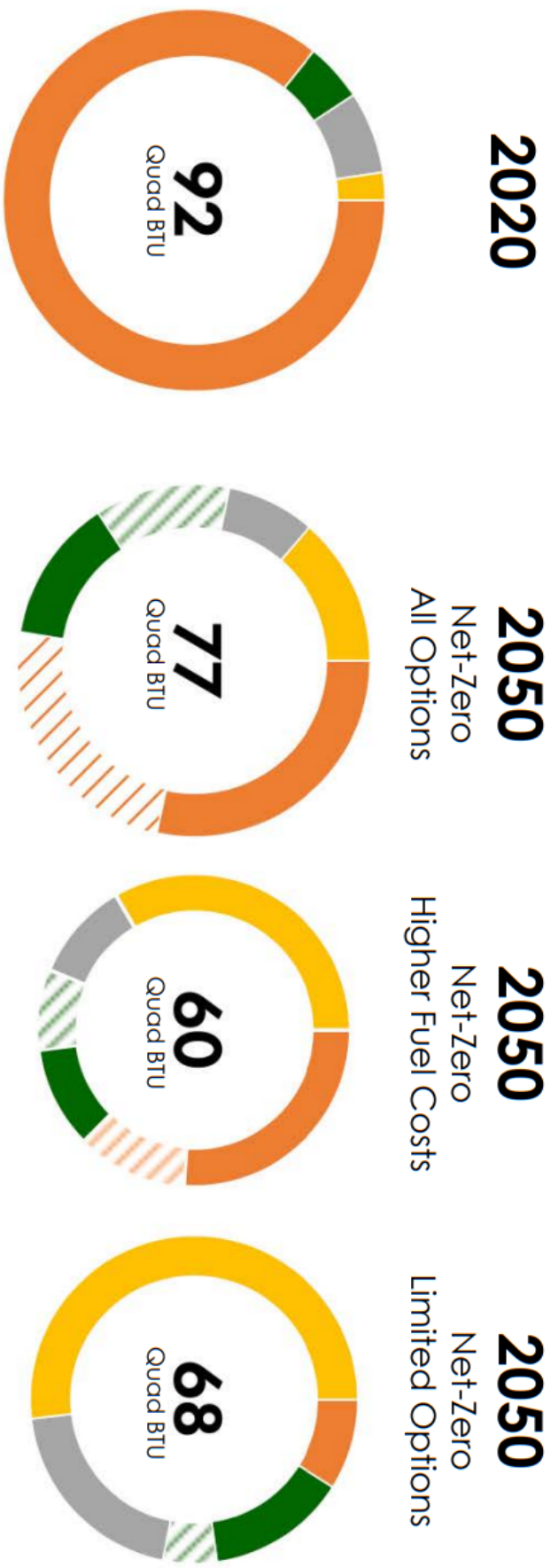
- How much energy do we use
- What form does it take
- What is the Energy Transition



Primary Energy declines as we approach 2050

PRIMARY ENERGY

Economy-wide View need for many solutions



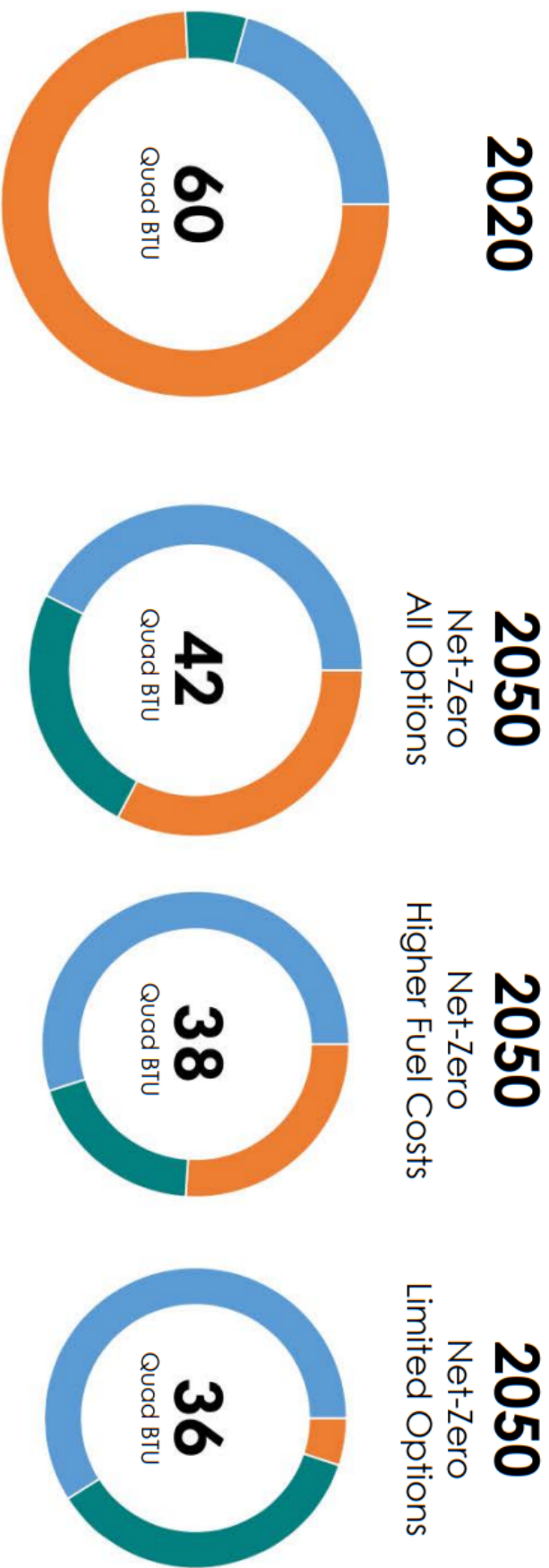
- Fossil
- Fossil + CC*
- Nuclear
- Bioenergy
- Bioenergy + CC*
- Renewable

*Carbon capture with storage or utilization

Final Energy shifts to cleaner energy

FINAL ENERGY

Shift of End-Use Resources
reliability and affordability critical



 Fossil

 Low-Carbon Fuels*

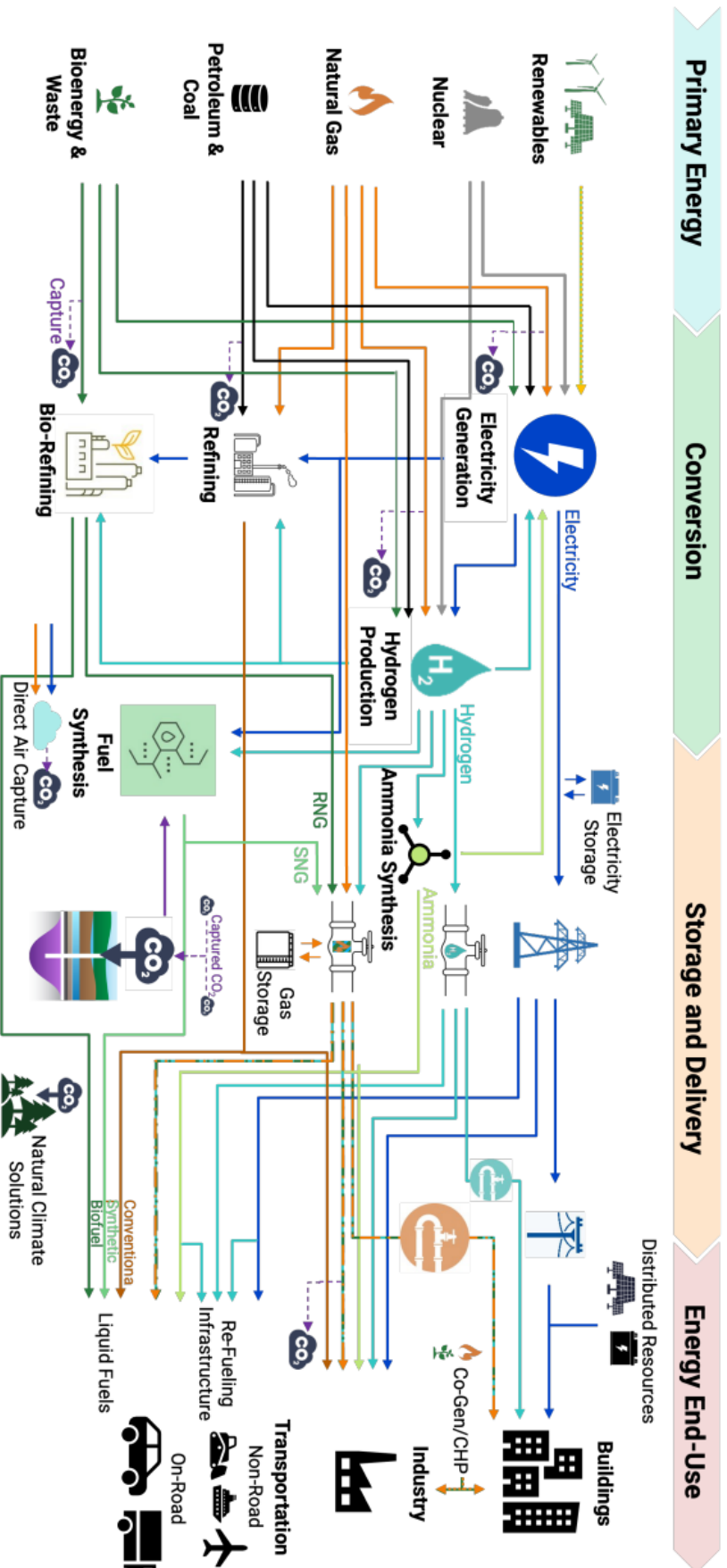
 Electricity

*Low Carbon Fuels include hydrogen, hydrogen-derived fuels (synthetic fuels and ammonia) and bioenergy

Energy Transition means picking the right pathways

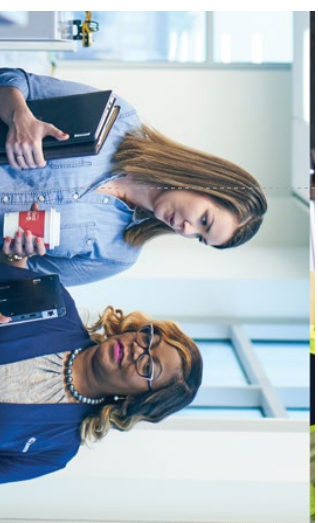


Economy-Wide Low-Carbon Energy Pathways



Next Steps

- Where do we decarbonize
- How do we leverage innovation
- How do we manage the transition for the customer

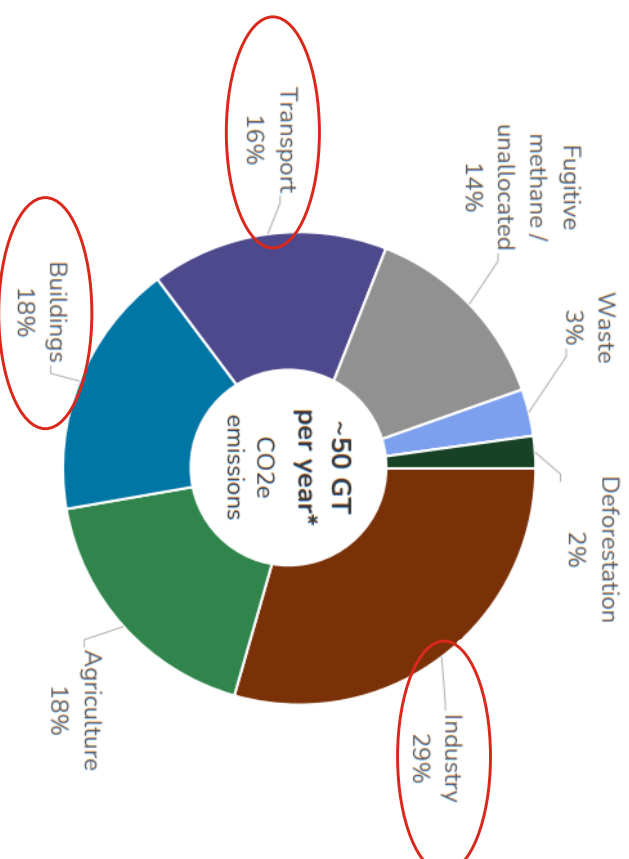


Customer



Where do we need to decarbonize?

- Energy Efficiency, Electrification, Demand Response programs help us to address needs with Residential and Commercial customers primarily in the areas of transport and buildings
- Decarbonization programs are of interest to customers (carbon footprint, carbon intensity)
- Decarbonizing the industrial sector involves finding the right pathway



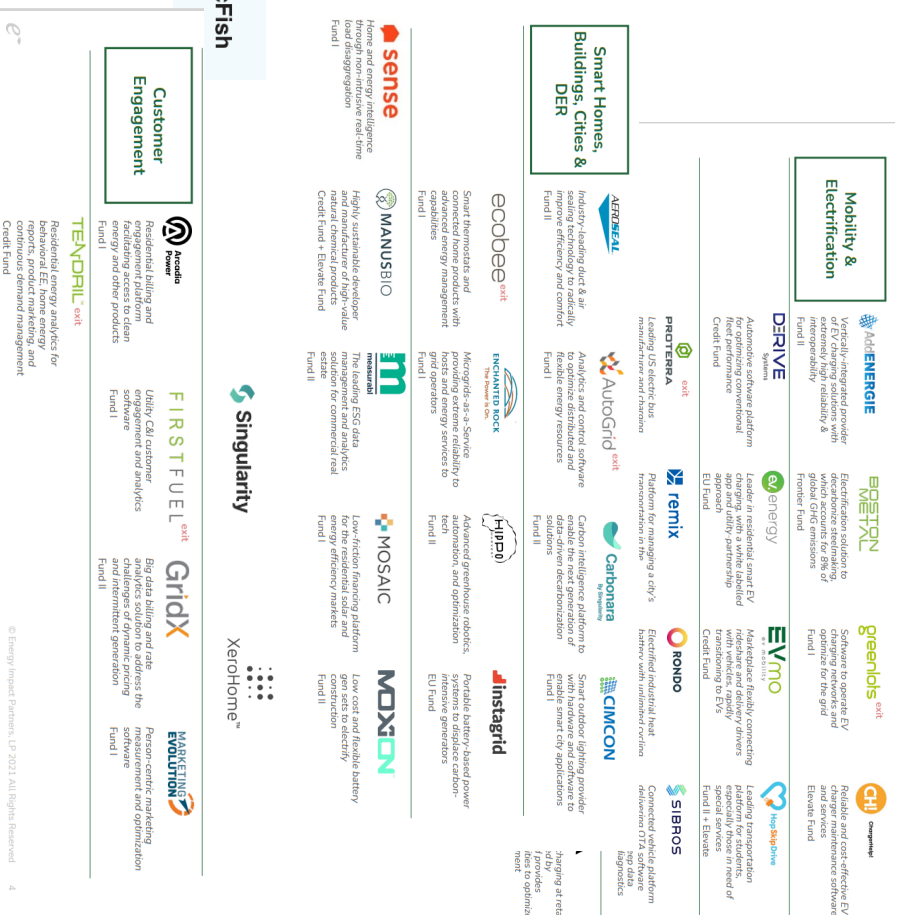
Sources: ClimateWatch & World Resources Institute (2020) via Our World in Data. "Emissions by Sector", 2020 Note: *There is significant uncertainty and variance in global GHG emissions estimates



Where do we focus our Innovation?

- Industrial Customers
 - Support energy transition and decarbonization
- Commercial Customers
 - Fleet electrification
 - Building electrification
 - Energy programs/Energy efficiency
 - Technology to facilitate engagement
- Residential Customers
 - Energy assistance
 - Electrification
 - Demand response/energy efficiency
 - Energy programs
 - Technology to facilitate engagement

ElectricFish



Focus on SECC Key Themes

To Manage the Energy Transition

- Affordability and Reliability are still paramount
- But consumers . . .

THEME 1: Consumers are ready to take action to help meet decarbonization goals.

THEME 2: Consumers are most likely to invest in smart energy technologies that are easy to use and demonstrate clear value.

THEME 3: Consumers increasingly expect a high degree of personalization in their interactions with energy providers.

THEME 4: Consumers are inclined to trust their energy providers to help them manage their energy and protect their data.

THEME 5: Consumers need support to gain equitable access to clean energy opportunities.

THEME 6: Consumers respond favorably to innovative utility partnerships.



Discussion

