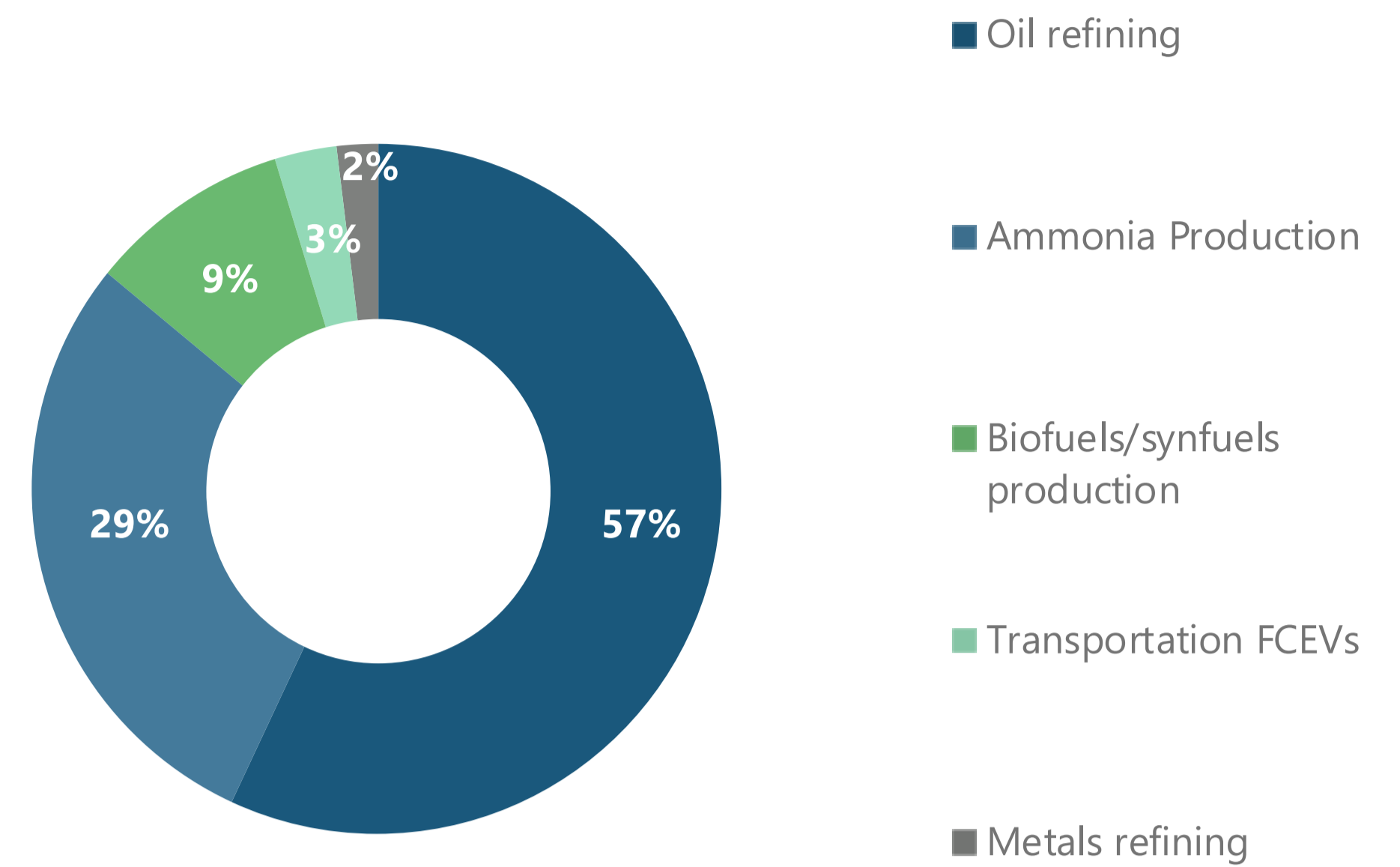


## Snapshot of the U.S. Hydrogen Market

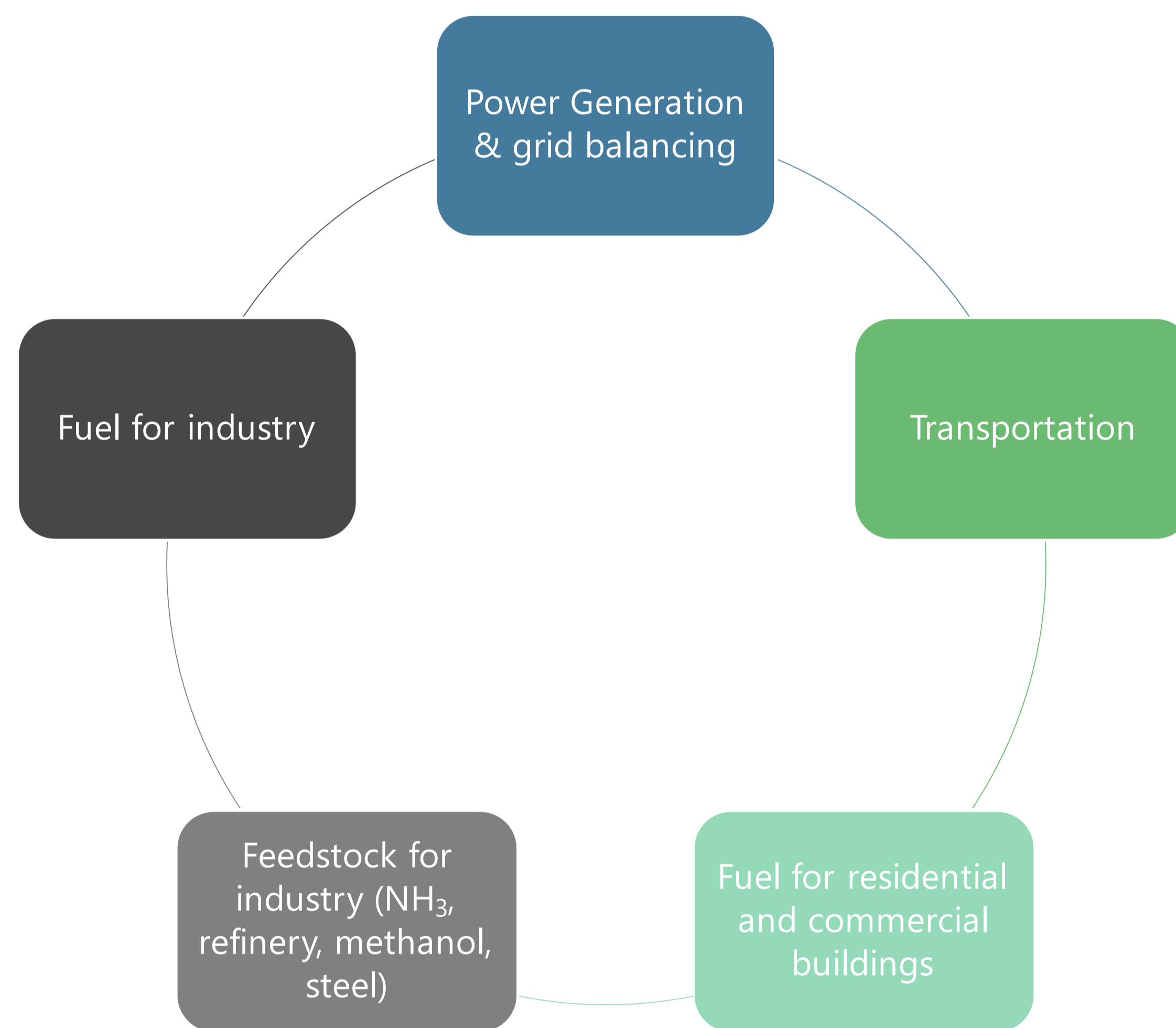
### Current Demand Outlook:

- Today, hydrogen demand in US amounts to approximately 10 million metric tonnes (MMT)/year,
- around 70% of this is produced from steam methane reforming.
- The rest is produced as a by-product of cracking natural gas liquids and chemical processing facilities such as chlor-alkali production and ethylene cracking.
- A relatively small amount of hydrogen is also produced via water electrolysis.

**CURRENT H2 CONSUMPTION IN THE U.S. MARKET (%)**



## Future Target uses of Hydrogen in the U.S: H2 Roadmap 2020



## Hydrogen Highlights in the U.S. Bipartisan Infrastructure Bill 2021



### Defining 'Clean Hydrogen'

For the very first-time 'clean hydrogen' is defined under U.S. law as hydrogen produced with a carbon intensity equal to or less than 2 kilograms of CO<sub>2</sub>-equivalent produced at the site of production per kilogram of hydrogen produced (kg-CO<sub>2</sub> /kg-H<sub>2</sub>).

### \$8 Billion for Regional Clean Hydrogen Hubs

As part of the R&D program, \$8b are allocated from the fiscal years 2022-2026 to establish at least 4 regional clean hydrogen hubs. The bill defines these as 'network[s] of clean hydrogen producers, potential clean hydrogen consumers, and connective infrastructure located in close proximity....that can be developed into a national clean hydrogen network to facilitate a clean hydrogen economy.'

### \$1 Billion for H2 Electrolysis Program

\$1b will be spent on grants and contracts as part of a "research, development, demonstration, commercialization and deployment program" that aims to reduce the cost of hydrogen produced from electrolysis to less than \$2/kg by 2026 — as well as "any other goals the Secretary determines".

### \$500 Million for Clean H2 Manufacturing & Recycling

The program provides grants to support a clean hydrogen domestic supply chain. R&D projects will advance clean hydrogen research, development and demonstration projects, including for production, processing, delivery, storage or usage of the H<sub>2</sub>.