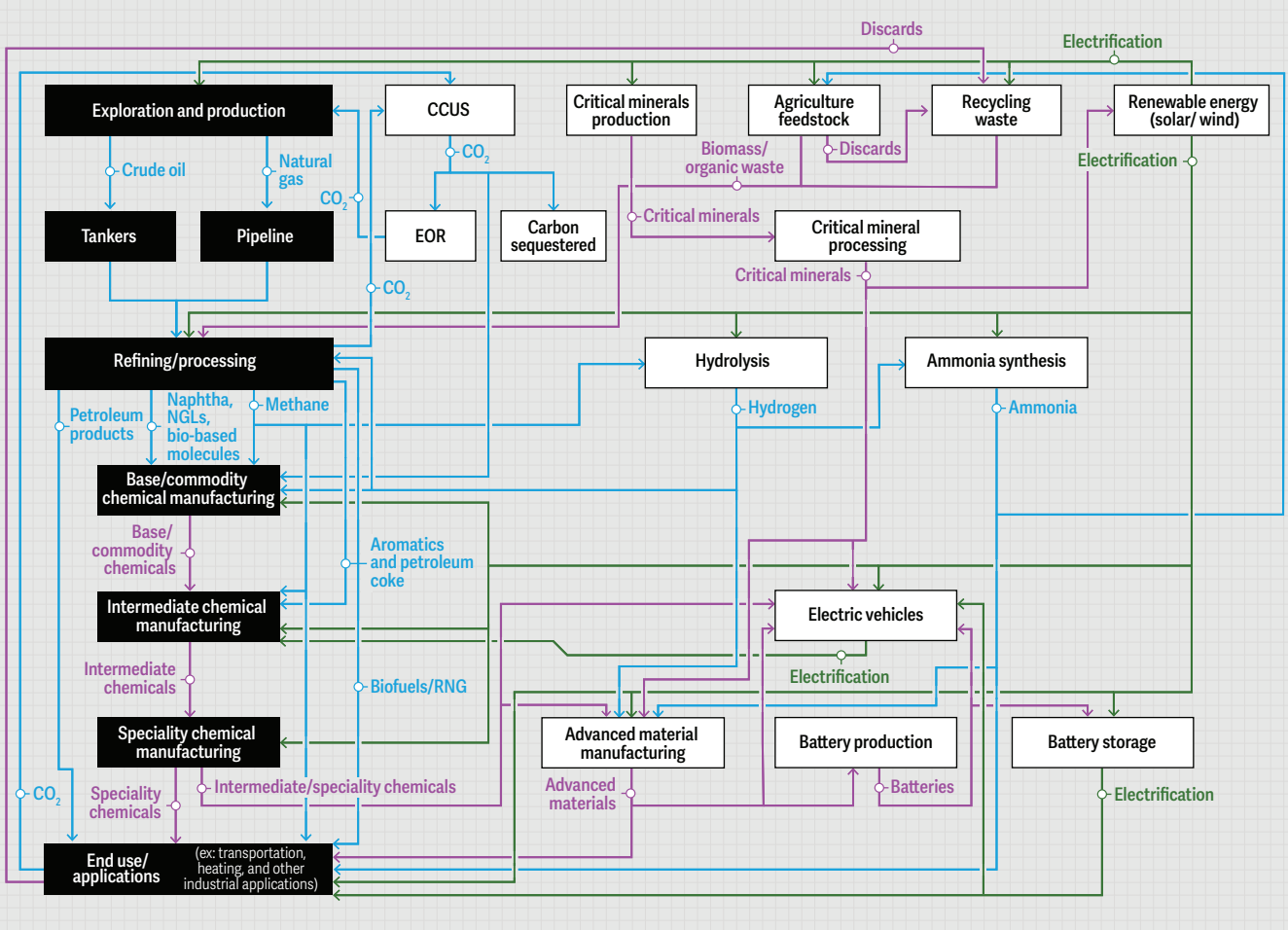


Figure 2

# The complexity of the low-carbon value chain presents both opportunities and challenges

● Traditional value chain segments   ○ Low-carbon segments   — Molecules   — Electrons   — Materials



Notes: This diagram provides a broad schematic representation of the value chain interconnections and is not comprehensive. Electrons are usually utilized as fuel to power the processes, while molecules often play a dual role between fuel and feedstock which varies depending on the processes. There are many complexities that can exist across these value chains, especially in refining and chemical manufacturing, which are not captured in this graphic. But these additional complexities can make optimization even more challenging across traditional as well as new value chains.

Sources: Deloitte insights gleaned from AlphaSense; International Renewable Energy Agency.