

| Green molecules needed? | Industry  | Transport  | Power sector  | Buildings  |
|-------------------------|---|---|--|---|
| No-regret | <ul style="list-style-type: none"> · Reaction agents (DRI steel) · Feedstock (ammonia, chemicals) | <ul style="list-style-type: none"> · Long-haul aviation · Maritime shipping | <ul style="list-style-type: none"> · Renewable energy back-up depending on wind and solar share and seasonal demand structure | <ul style="list-style-type: none"> · Heating grids (residual heat load *) |
| Controversial | <ul style="list-style-type: none"> · High-temperature heat | <ul style="list-style-type: none"> · Trucks and buses ** · Short-haul aviation and shipping · Trains *** | <ul style="list-style-type: none"> · Absolute size of need given other flexibility and storage options | |
| Bad idea | <ul style="list-style-type: none"> · Low-temperature heat | <ul style="list-style-type: none"> · Cars · Light-duty vehicles | | <ul style="list-style-type: none"> · Building-level heating |

* After using renewable energy, ambient and waste heat as much as possible. Especially relevant for large existing district heating systems with high flow temperatures. Note that according to the UNFCCC Common Reporting Format, district heating is classified as being part of the power sector.

** Series production currently more advanced on electric than on hydrogen for heavy duty vehicles and buses. Hydrogen heavy duty to be deployed at this point in time only in locations with synergies (ports, industry clusters).

*** Depending on distance, frequency and energy supply options