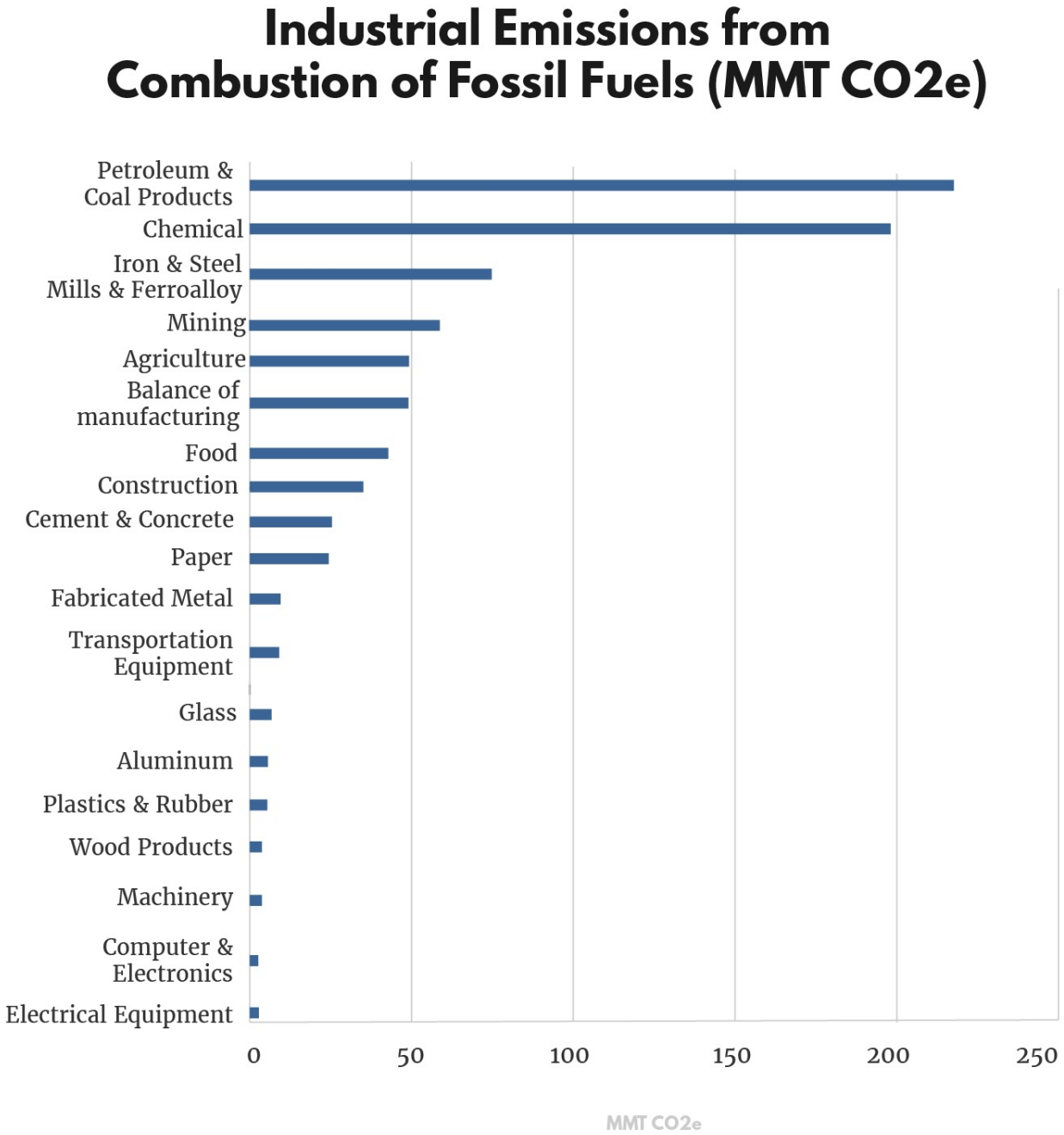
THIRD WAY

Understanding Industrial Emissions



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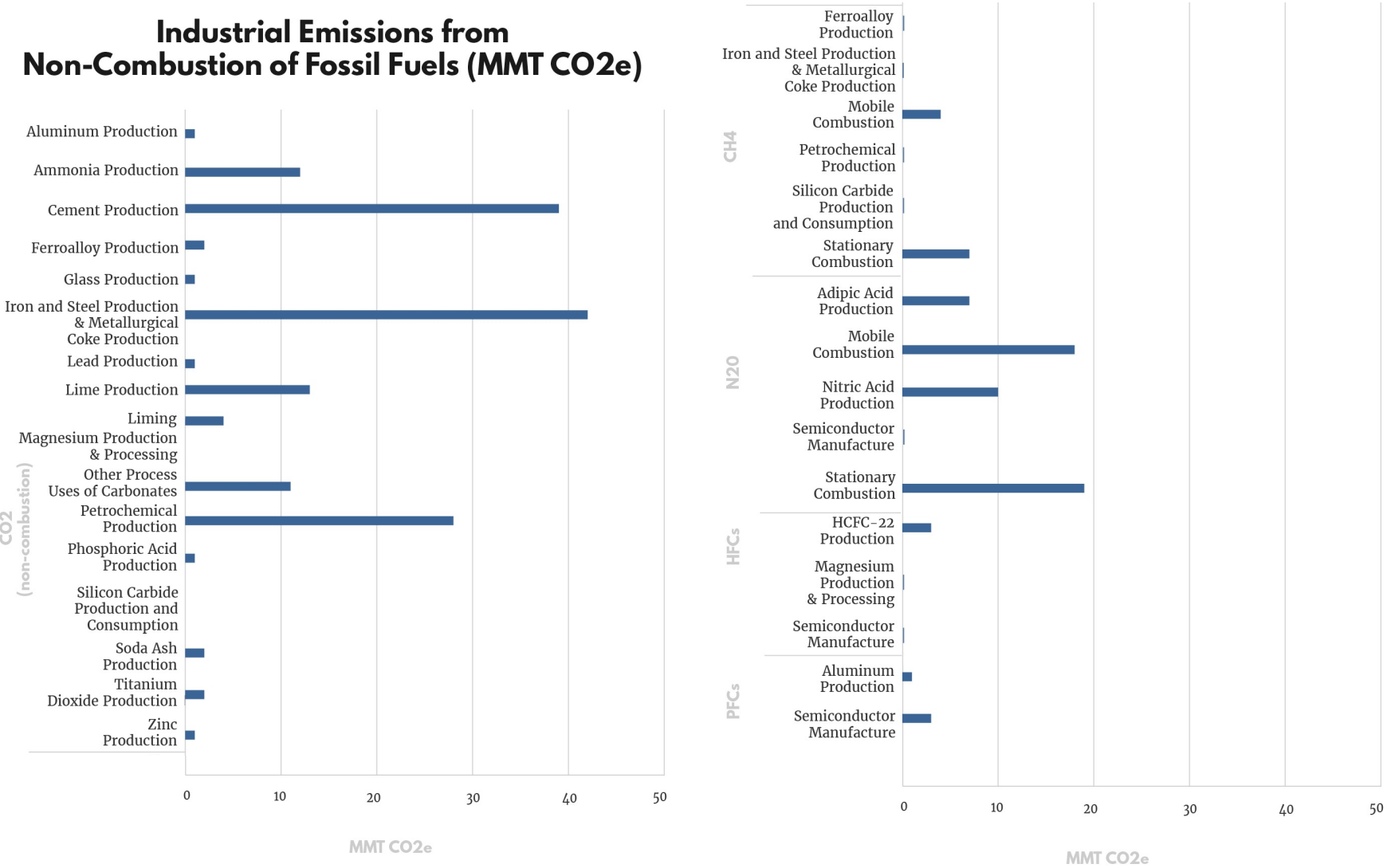
THIRD WAY

Understanding Industrial Emissions



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Nuclear's Role in Industrial Decarbonization Strategies

Strategy	Nuclear Opportunities
Energy Efficiency	Use of waste heat from nuclear power plants in cogeneration applications
Electrification	Switching to electricity necessitates additional zero-carbon generation
Fuel Switching	Nuclear heat can be used for high-temperature industrial processes and to produce hydrogen
Fuels Decarbonization	Nuclear-produced hydrogen can be used directly or as a feedstock for other zero-carbon fuels (synthetic hydrocarbons, ammonia, etc.)
Carbon Capture	N/A

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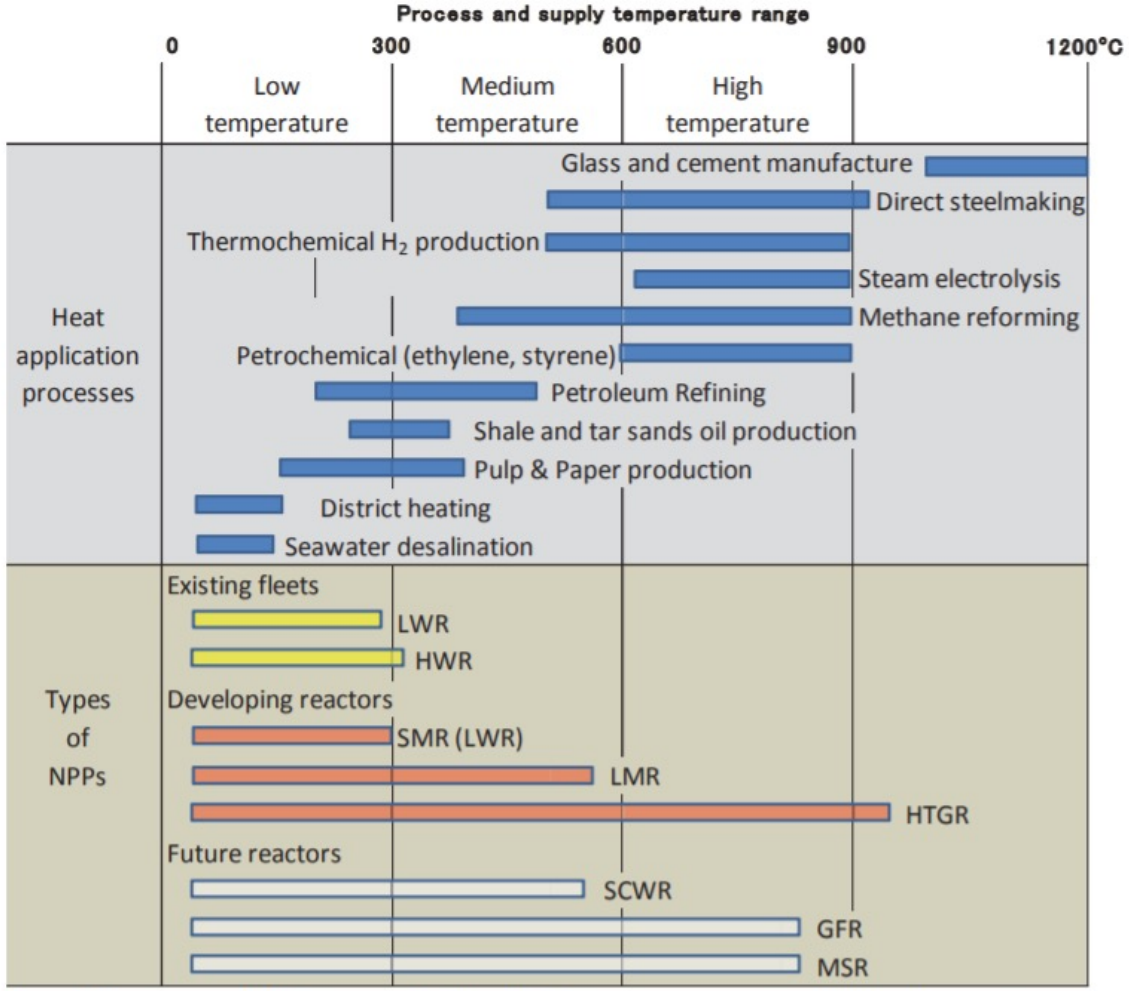
Required Temperatures for Applications are Key



Note: GFR — gas cooled fast reactor; HTGR — high temperature gas reactor; HWR — heavy water reactor; LMR — liquid metal reactor; LWR — light water reactor; MSR — molten salt reactor; NPP — nuclear power plant; SCWR — supercritical water reactor; SMR — small modular reactor.

Source: International Atomic Energy Agency (IAEA)

Light Water Reactors

- Westinghouse AP1000: 324.7°C
- NuScale Power Module: 300°C
- GE-Hitachi BWRX-300: 287°C

Advanced reactor technologies

- X-energy Xe-100 (HTGR): 750°C
- TerraPower Natrium (SFR): 500°C
- Kairos Power (MSR): 650°C
- Ultra Safe Nuclear Corporation (HTGR): 630°C

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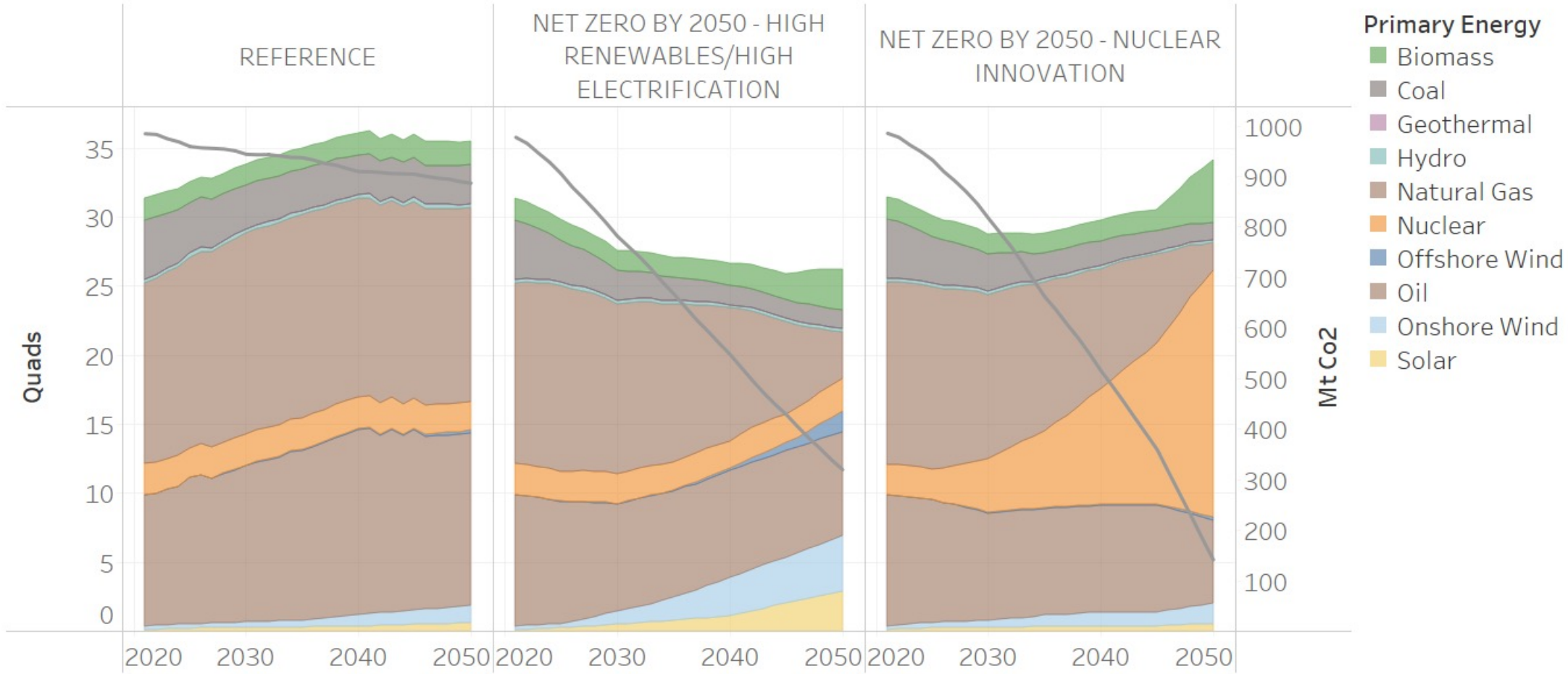
Industrial Primary Energy and Emissions



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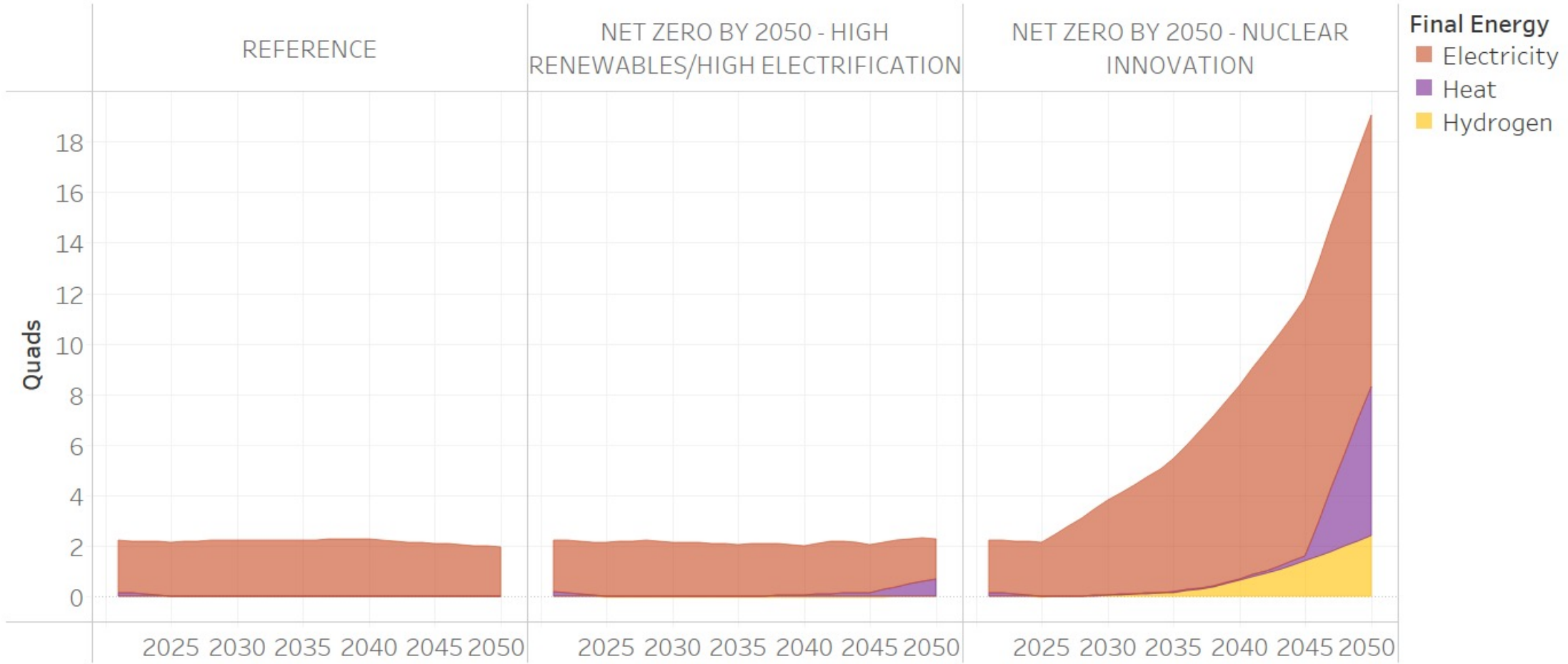
Nuclear Primary Energy – Final Use



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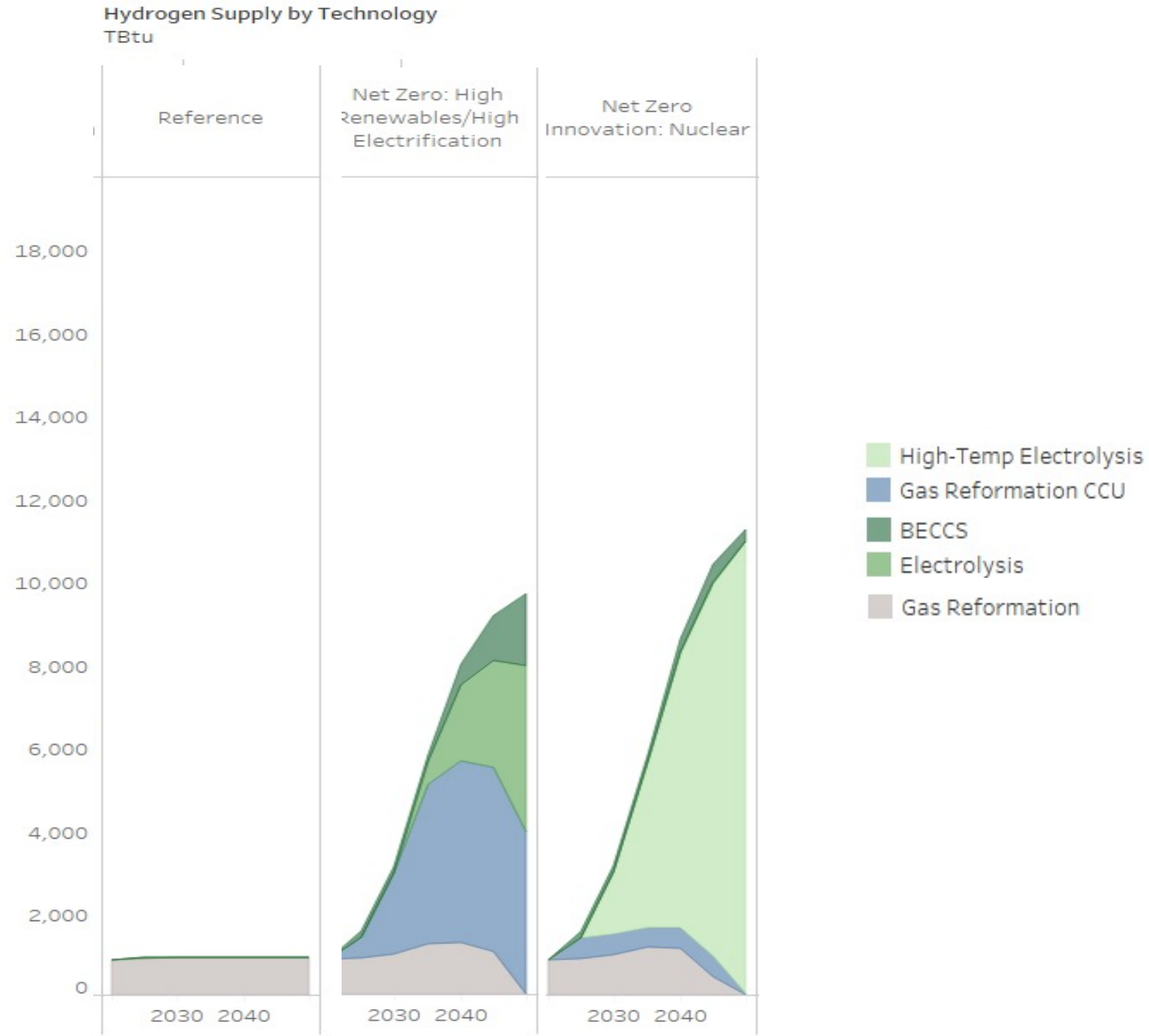
Hydrogen Supply by Technology for Net-Zero Scenarios



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