McKinsey & Company

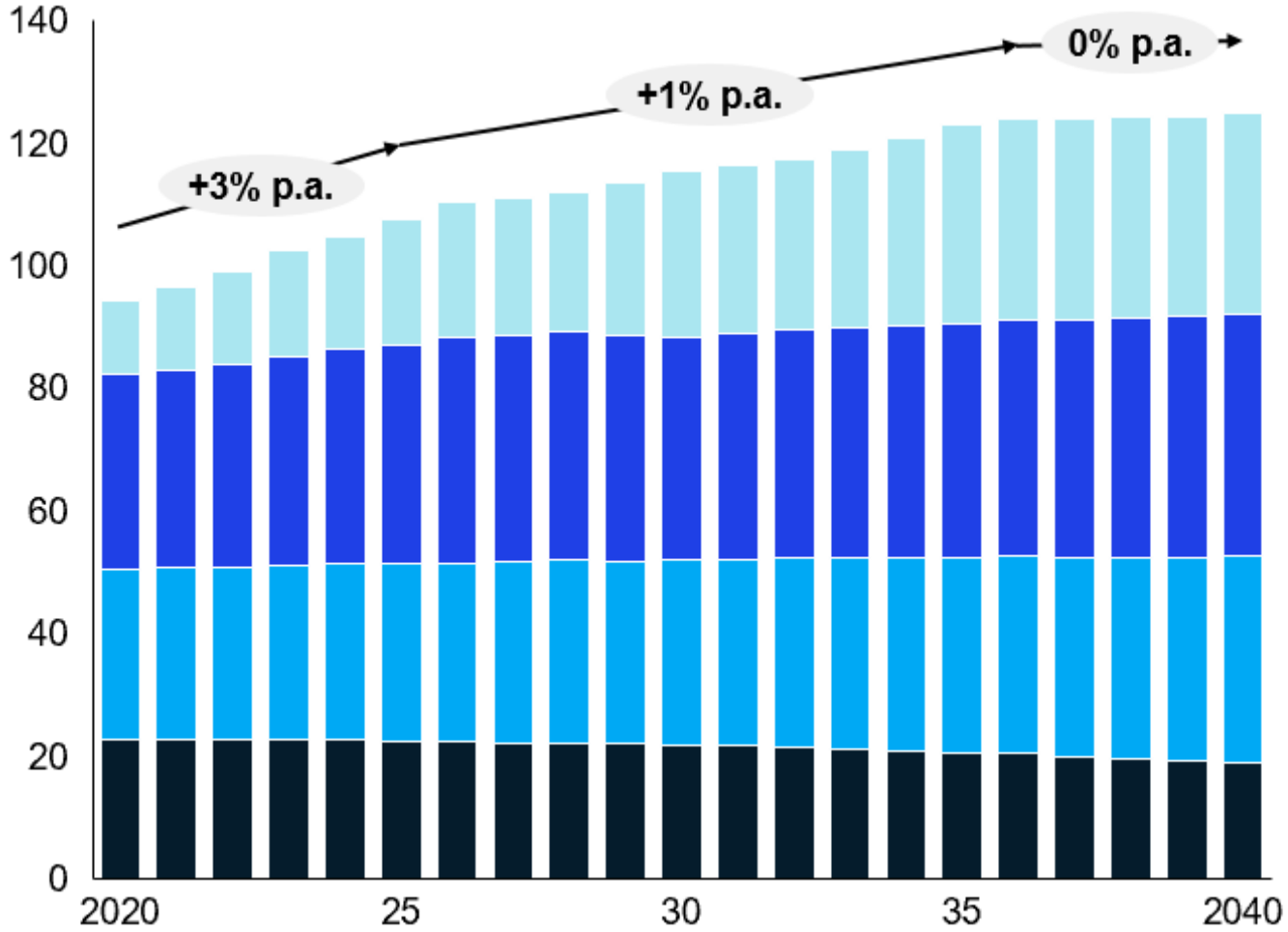
Peak gas demand

Gas Electric Partnership

ROUNDTABLE | FEBRUARY 5, 2020

Total demand for US & Canadian gas plateaus from ~2035

US and Canadian gas demand, bcfd



CAGR, 2020-40, %

LNG & Mexico exports — 5%
- Strong growth until ~2035
- Post-2035 demand plateaus due to competition and weaker international market

Electricity — 1%
- Strong growth until ~2025 driven by coal replacements
- Nuclear retirements and flexibility needs from a renewable heavy power mix bolster gas demand longer term

Industrial — 1%
- Steady growth as gas substitution is difficult

Residential & Commercial[1] — -1%
- Long-term decrease driven by adoption of electric air source heat pumps

1. Includes NGVs

Source: McKinsey Energy Insights: North American gas supply -demand model, 2019

Decreasing residential and commercial demand has the most potential to disrupt the N. American gas market in the long-term

Sector	Peak demand signposts	Variables impacting gas demand
Residential & commercial 	ccHASP[1] cost competitiveness vs gas furnaces	Local climate Policy (i.e. ccHASP subsidies)
Power 	Coal and nuclear retirements Renewable price advantage vs gas Intraday and seasonal power price volatility	Coal power plant age and carbon tax Nuclear extensions Renewable build Battery costs and DER[2] implementation
LNG 	Global gas demand decreases Non-N. American LNG cost competitiveness	ccASHP deployment Renewable generation
Industrial 	Increased electrification of process heat Low cost synthetic gas/ hydrogen for feedstocks	Subsidies for synthetic/green gas Lower electricity costs due to increased renewable generation

Key Takeaway

The residential and commercial sector has significant uncertainty with most risks to the downside

Once ccASHP are cost competitive with traditional gas furnace, gas demand will likely decline

The power sector will continue to need gas due to coal and nuclear retirements coupled with the need for flexibility in a renewable heavy power system

1. Cold climate air source heat pump; 2. Distributed energy resource, (e.g. demand response, household solar panels)