Crisil Intelligence

SectorVector

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Reading the topical trends

CNG on a song

Domestic sales of compressed natural gas (CNG) vehicles are forecast to reach 1.1 million units by the end of this fiscal, driven by the government's ongoing push for cleaner fuels.

This will take the CNG vehicle count in India to 7.5 million, a 3x increase from 2.6 million in fiscal 2016, and translating into a compound annual growth rate (CAGR) of ~12%.

The rapid uptake has been undergirded by the expansion of the CNG infrastructure, with the number of filling stations set to rise to over 7,400 from 1,081 in fiscal 2016, etching a CAGR of ~24%.

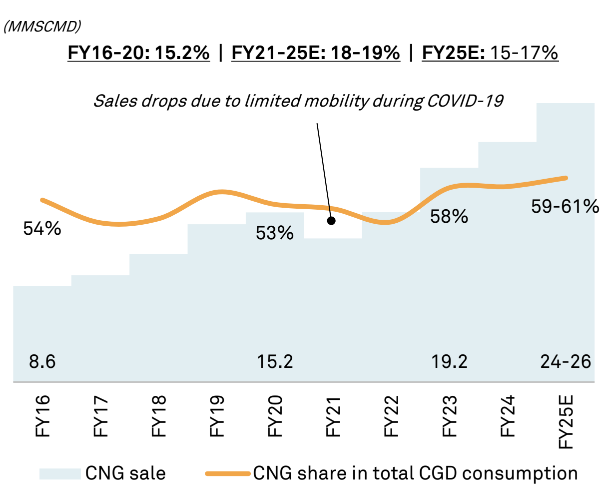
Rising sales of CNG passenger vehicles has driven up their penetration in the overall passenger vehicle population to 15-16% this fiscal-end vs 5.6% in fiscal 2016. The availability of over 30 CNG car variants, compared with single digit not long ago, thus catering to diverse consumer preferences, has accelerated adoption.

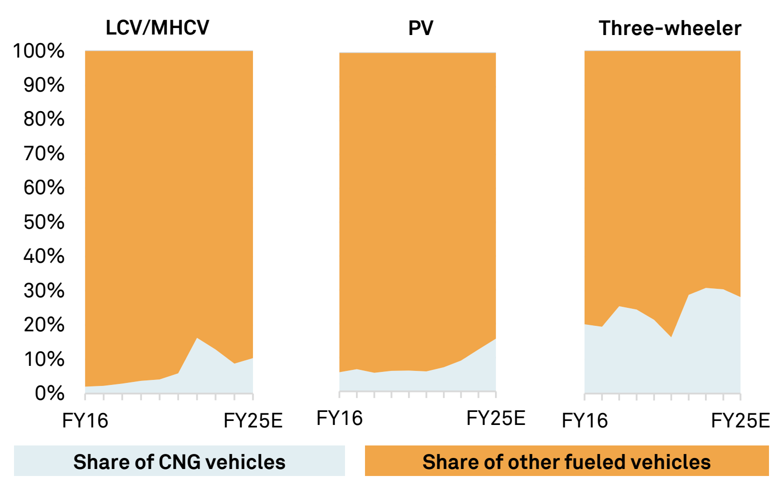
The commercial vehicle segment has also been gaining traction amid growing options that offer tangible cost savings, with penetration levels currently at 10-11%.

Penetration in the two-wheeler segment is growing as well, following the introduction of CNG options.

However, the three-wheeler segment, which currently has a penetration level of 28-29%, will need to navigate competition from electric vehicles.

CNG vehicle adoption boosts CNG sales





E – estimated; MMSCMD – million metric standard cubic metre per day; LCV – light commercial vehicles; MHCV – medium and heavy commercial vehicles; PV – passenger vehicles
Note: LCV/MHCVs include buses, light to heavy goods and commercial vehicles; PVs include cars, taxis, other light and medium passenger vehicles
Source: Petroleum Planning & Analysis Cell (PPAC), Vahan, Crisil Intelligence

by S&P Global

Rapid growth in CNG infrastructure is meeting rising demand

CNG consumption has increased in tandem with the rise in sales of CNG vehicles, at a CAGR of ~13% between fiscals 2016 and 2025.

The expansion and distribution of the CNG infrastructure can be gauged from the fact that the share of the top five states has reduced to 55% in fiscal 2025 from over 90% in fiscal 2016, with newly awarded geographical areas gaining traction.

Congestion levels at filling stations are also expected to decrease, with the number of vehicles per station reducing by around half since fiscal 2016, thereby enhancing overall customer experience and operational efficiency of the CNG stations.

Increased proximity to CNG stations drives CNG demand

	FY16	FY20	FY24	FY25E
CNG stations	1,081	2,208	6,861	7,400-7,500
Share of top five states	94%	83%	55%	53-55%
Share of top ten states	97%	94%	77%	75-77%
CNG vehicles on road (million units)*	2.6	4.0	6.5	7.5-7.7
CNG vehicles per station	~2000		900-1000	
CNG consumption (TMT)	2,155	3,247	5,652	6,300-6,500

** Vehicles on road numbers above are estimated.*
E – estimated; TMT – trillion metric tonne
Source: PPAC, PNGRB, Crisil Intelligence

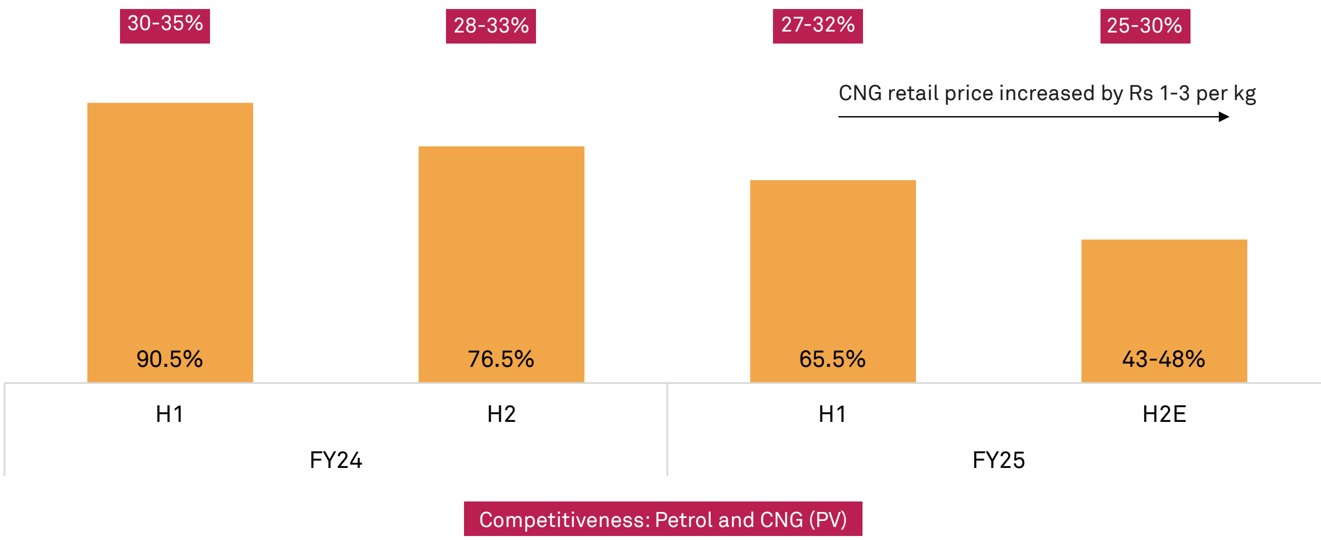
Going forward as well, the expansion of CNG infrastructure in cities such as Chennai and in tier-II cities is expected to support sustained sales of CNG and, in turn, CNG vehicles.

But reduced APM gas allocation may impact CNG adoption and infrastructure expansion

On a cautionary note, though. The development of the CNG market could be impacted by factors such as low availability of cheap domestic natural gas and increasing competitiveness from alternative fuels.

Also, the recent cut in Administered Pricing Mechanism (APM) gas allocation for CNG, including a drop from ~68% to ~51% in October 2024, and a further reduction to ~37% in November 2024 (later revised to 50% in January 2025), have created uncertainty and increased the gas sourcing cost of city gas distributors.

Reduced APM gas allocation could erode CNG competitiveness



E – estimated; PV – passenger vehicle
Notes: (i) For computation of CNG competitiveness over petrol and diesel, prices in Delhi and the entry-level car for Delhi location have been considered.
(ii) APM allocation is average for the period mentioned.
Source: PPAC, Industry, Crisil Intelligence

This has raised their sourcing cost to Rs 2-4 per kg, depending on the exposure of CNG in the overall volume-mix.

While it could have led to a rise in CNG prices of up to Rs 4-6 per kg, most city gas distribution (CGD) entities have implemented limited price hikes (Rs 1-3 per kg) since October 2024, with a view to preserving competitiveness, thereby impacting their margins.

This underscores the need for a long-term solution to balance supply and demand, whilst ensuring the competitiveness of CGD.

Higher CNG prices could also hinder long-term infrastructure development

While CNG prices are stable for now despite the APM gas allocation cuts, any further reduction could lead to price hikes. This could affect CNG sales, as CGD entities pass on the increased costs to consumers.

To mitigate the pain points…

Potential measures could include inclusion of natural gas under the Goods and Services Tax, lowering excise duty on CNG, and incentivising CNG vehicles through lower taxes, which could help maintain CNG's competitiveness and support its adoption over alternative fuels.

Still, growing urbanisation is expected to drive the adoption of CNG vehicles and the development of the requisite infrastructure.

Analytical contacts

Sehul Bhatt
Director - Industry Research
Crisil Intelligence
Sehul.Bhatt@crisil.com

Jaydeep Dattani
Manager - Industry Research
Crisil Intelligence
Jaydeep.Dattani@crisil.com

Jay Prajapati
Senior Analyst - Industry Research
Crisil Intelligence
Jay.Prajapati@crisil.com

Media contacts

Ramkumar Uppara
Media Relations
CRISIL Limited
M: +91 98201 77907
ramkumar.uppara@crisil.com

Roma Gurnani
Media Relations
CRISIL Limited
M: +91 70662 92142
roma.gurnani1@ext-crisil.com

Sanjay Lawrence
Media Relations
CRISIL Limited
M: +91 89833 21061
sanjay.lawrence@crisil.com