Federico De' Stefani

THE ALTERNATIVE FUEL VEHICLES MARKET: the case of O.M.V.L.

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04-2003

SIT Mission

SIT develops and manufactures systems designed for safety, comfort and performance (mainly high efficiency) of gas equipment, for the domestic, commercial and automotive markets

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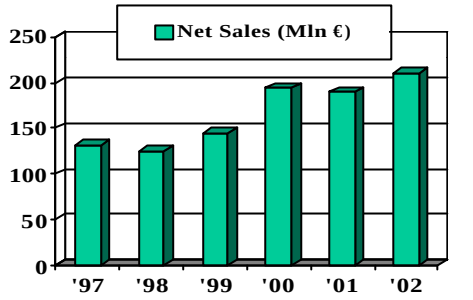
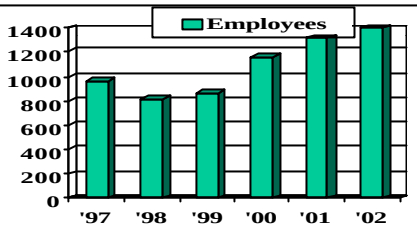
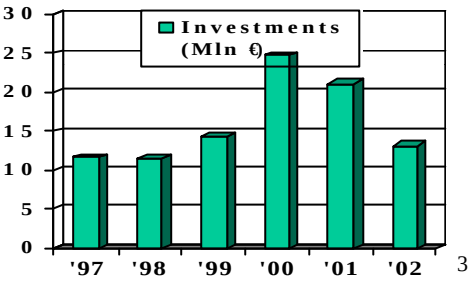
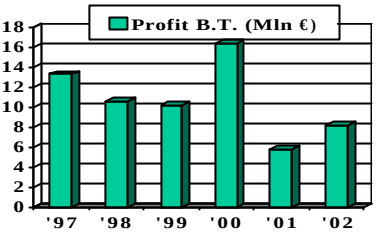
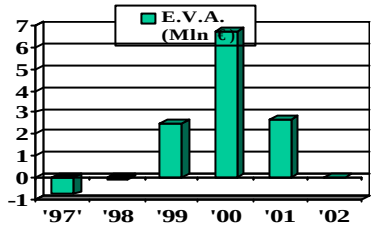
SIT Numbers











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SIT Geography

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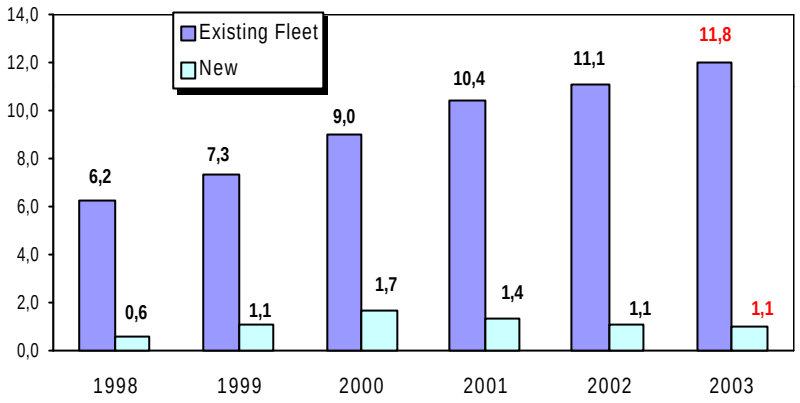
The Automotive Business Unit: OMVL

Market Size (millions of autovehicles)



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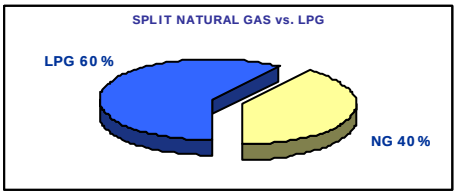
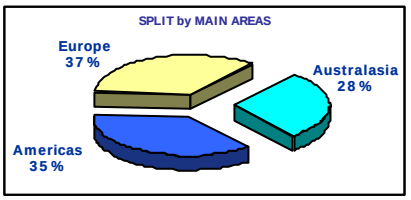
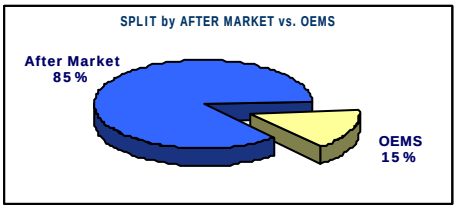
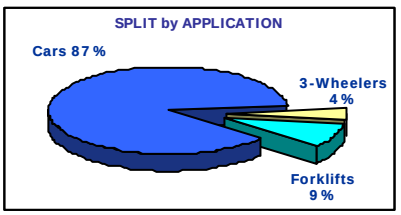
The Automotive Business Unit: OMVL

Market Split









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Why using Alternative Fuel Vehicles?

1) *COST:*

Average cost of CNG and LPG in
Western Europe is ≅ 50% of Gasoline

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Why using Alternative Fuel Vehicles?

2) *REDUCED EMISSIONS:*

	Gasoline	LPG	CNG	Diesel
CO (g/km)	**1.12**	0.91	**0.45**	0.67
HC (g/km)	0.15	**0.12**	**0.36**	0.14
NOx (g/km)	0.15	0.21	**0.13**	**0.74**
Particulates (g/km)	0.015	**0.005**	0.025	**0.094**

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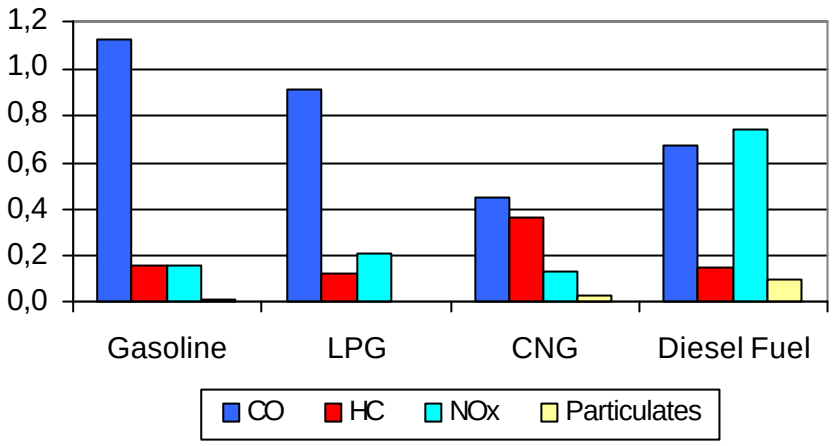
Emissions (g/km)



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Why <u>not</u> using Alternative Fuel Vehicles?

1) *<u>COST:</u>*

Average break-even point of a CNG equipment for a mid-size car converted after the purchase in Western Europe ≅ <u>60,000 Km</u>

By completely eliminating duties on CNG, the break-even point would be reduced to ≅ <u>40,000 Km</u>

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Why not using Alternative Fuel Vehicles?

2) *DISTRIBUTION:*

Only 9,088 refilling stations in Europe
(CNG: 958; LPG: 8.130),
concentrated only in certain Regions.

Plans for ~ 2,000 CNG new refilling stations
in Western Europe by 2005,
but still not enough.

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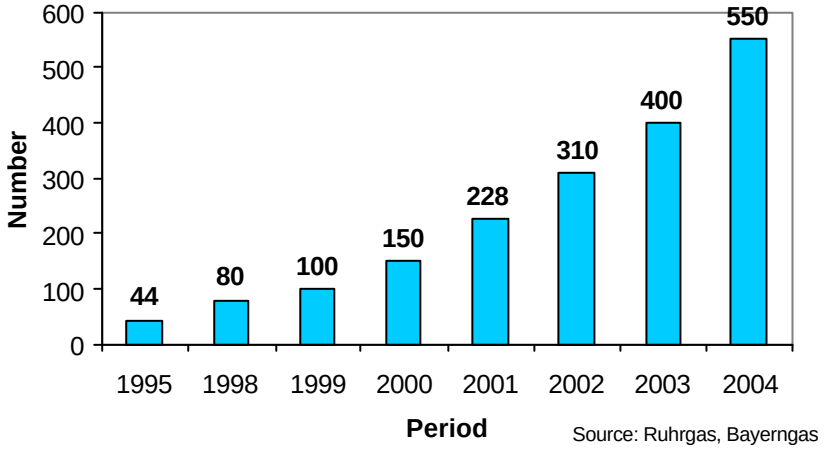
CNG filling stations in Germany



Source: Ruhrgas, Bayerngas

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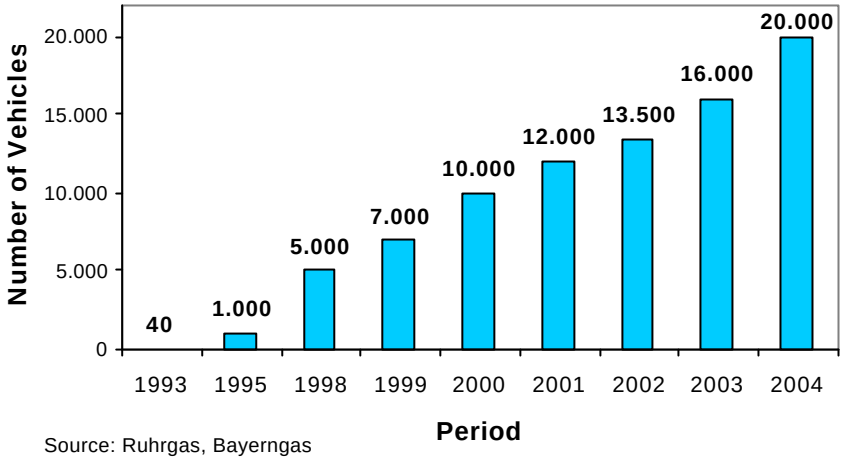
NGVs in Germany



Source: Ruhrgas, Bayerngas

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Next Steps:

Where are we going?

1 Kw PEM FUEL CELL

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