

# NGV: "The Best Fuel"

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## ACCOMPLISHED GOAL BY ARGENTINE STAKEHOLDERS

- ✦ Development NGV system without subsidies.
- ✦ The GNV became a social tool because it allowed the middle class to continue using its car during the economic crisis of 2001.
- ✦ With a CNG retrofitting workshops chain (more than 1800) complying with stringent rules from the starting point in 1984.
- ✦ It developed a net of GNV's stations that cover almost the whole Country.
- ✦ Progress was done in spite of changing governmental policies on liquid subsidized fuel prices.
- ✦ Leading Case: Argentina shared with many countries its massive experience on CNG, encouraging studies of feasibility.
- ✦ OEM's Automotive industry drew interesting conclusions based on Argentine CNG Experience
- ✦ Argentine CNG equipment products are successfully exported to more than 40 countries



# A SUCCESSFUL NGV HISTORY

- TO REPLACE A FUEL IS A GOVERNMENT POLICY
- STAKEHOLDERS ARE THE SUCCESS KEY TO ACHIEVE THE GOAL
  - NGV ASSOCIATION
  - **GAS COMPANIES**
  - CAR MANUFACTURER?
  - ENVIRONMENTAL ASSOCIATIONS



## HIGH PRESSURE NATURAL GAS TRANSPORTED ON-ROAD

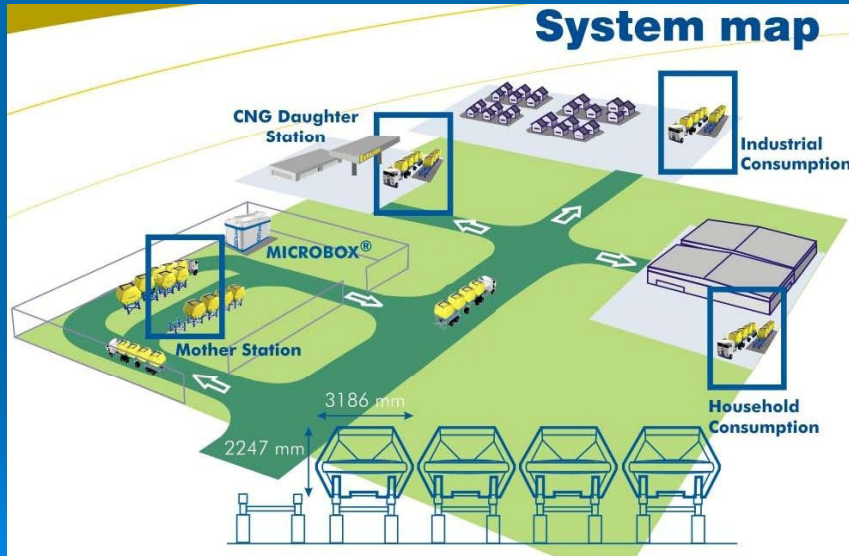
- ✦ Considering that only 10 % of the population of the world accedes to Natural Gas, this one is an ideal tool to expand the areas of provision.
- ✦ Also it is a complement ideal for the revenue of the NGV on new markets, because its help to resolves the dilemma the chicken or the egg...first stations without clients or first clients without sufficient stations?.
- ✦ In addition gives viability to the blue corridors, because it allows to install a station in the lacking place still when there is no gas pipeline there.
- ✦ Designed in order to supply natural gas for customers located out of the pipelines areas (Virtual Pipeline). reaching areas 100 to 300 Km faraway from the trunk pipeline.
  
- ✦ Daughter NVG Stations.
- ✦ Gas distribution networks.
- ✦ Industries
- ✦ Irrigation systems
- ✦ Heating system, etc.

### It is a solution for:

- ✦ Low distance consumption ratio.
- ✦ Market development.
- ✦ Seasonal consumption



# CALILEO's VIRTUAL PIPELINE TECHNOLOGY



## PIPELINE NET PLANNING IMPROVEMENT WITHOUT LIMITS FOR AREAS FARAWAY FROM TRUNK PIPELINES



## MINING INDUSTRY IN ARGENTINA SUPPLIED BY VIRTUAL PIPELINE

•MINING: 62.000 m<sup>3</sup>/ day



•MOTHER STATION – MINERA DEL ALTIPLANO – SALTA, ARG.

## MINING INDUSTRY IN ARGENTINA SUPPLIED BY VIRTUAL PIPELINE

•GNC STATION: 8.000 m<sup>3</sup>/ day



DAUGHTER STATION – POSTO VIP, CUIABÁ, MT - BRAZIL

## CNG WORLDWIDE FACTS

- In fact gas fields distribution is wider than oil fields worldwide.
- In countries with plentiful sources of natural gas will surely be an steady driving force.
- The price of the barrel of petroleum continue rising as the world recovers its level of economic activity.
- The capacity of distillation of many countries is exceeded and the uncertainty brings over of the oil and its price impedes to face so costly investments.
- The fulfillment of Kyoto's protocol needs a massively replace of vehicles for less pollutant fuels.



## CNG WORLDWIDE FACTS

- Prestige could easily become a driving force for the gas industry connecting CNG to Environmental issues.
- In addition the concept of being a bridge to future gaseous applications like biogas or hydrogen and H-CNG fuels.
- Advanced CNG fuel system technology developed in the last 10 years, turned ngv's to a better performance than liquid fuel cars.
- Retrofitting CNG industry would have an outstanding place and horizon in the one thousand million present automotive market population, improving technology

## The Appeal of NGV for Gas Companies

- ✦ With the support of Big Players of the Natural Gas Industries, the present ten million NGVs would be the springboard for 65 million NGVs in the twenties.
- ✦ With that figure, the NGVs will reach 6% of the total vehicles population. It will stop being an alternative fuel to be another green fuel.
- ✦ The trend NGVs in light, medium and heavy duty transport, could reach 100 /120 Bcm NG sales in 2020.



## The Appeal of NGV for Gas Companies

- ✦ It is the highest growth ratio segment in the next decade.
- ✦ Concentration bis a bis domestic: Only One filling station can buy up to 1 million m3 per month.
- ✦ Lower investment: There is no need for distribution lines nor reduction pressure device, because it is taken directly from the pipeline for a new compression.
- ✦ It is not a seasonal product, balancing the seasonal domestic consumption



***THANK YOU***