


LEGAL DISCLAIMER

The views expressed in this paper are the views of the author(s) and do not necessarily reflect the views or policies of the Asian Development Bank (ADB), or its Board of Directors or the governments they represent.


ADB does not guarantee the source, originality, accuracy, completeness or reliability of any statement, information, data, finding, interpretation, advice, opinion, or view presented, nor does it make any representation concerning the same.




dutCH4
Turn key CNG projects

City of Haarlem and surroundings towards sustainable transportation

Drs. Sander A.M. Peeters
Director, Espe Holding BV
Managing Director, ZF Nederland BV



 **RDA**
RIJDEN OP AARDGAS

Content

- Reasons
- Why natural gas
- Project goals
- Implementation

Reasons

- Problems with local air pollution (soot, benzene, NO_x, etc.) caused by motorised vehicles.



Reasons

Due to bad air quality

- Increase of health risks
- Buildings and monuments badly affected (estimated costs: EUR 0.7 Million/year)



Modern technology



Modern technology



Czech passenger car Wikov running on compressed town gas – around 1936

Modern technology



Bus running on non-compressed town gas in Prague 1944-5



Emission reduction

Reductions with limited number of vehicles
($\ll 1\%$ of total):

CO ₂	740	tons/a
NO _x	11	tons/a
CO	12	tons/a
PM	1	ton/a

Ultimate aim: 10% NGV's in year 2020

Implementation

- Decision by the local government to implement NGV in the city itself
- To overcome the chicken and egg problem
- To convince fleet owners, local companies and private owners

How was it implemented

- One project team responsible for the selection of new vehicles
- Set up a specification list for vehicles
- Preference for OEM

How was it implemented

- Refuelling station installed at the sites of partners
- Accessibility to public not first priority
- Training of drivers
- Training for engineers in workshops

Additional project started

- Subsidy for private users
- Public refuelling station needed
- 350 private cars in 3 years time
- In co-operation with local car dealers



Financial figures

Total amount invested: EUR 4 Million
(incl. manpower, training, PR, etc.)

Pay-back times:

refuelling stations	10 years
trucks	9 years
light duty + private cars	3-4 years

Project goals

- If you do want a change just start with yourself, at your own company or in your city
- City of Haarlem and surroundings as an example for other regions in the Netherlands



Driving on Natural Gas

“Today’s fuel for a cleaner tomorrow”

dutCH4

Turn key CNG projects

