



biogasmax

A D R I V I N G F O R C E

“LESSONS LEARNED”

a first review of WP7 research results

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handout at the Symposium of Experts

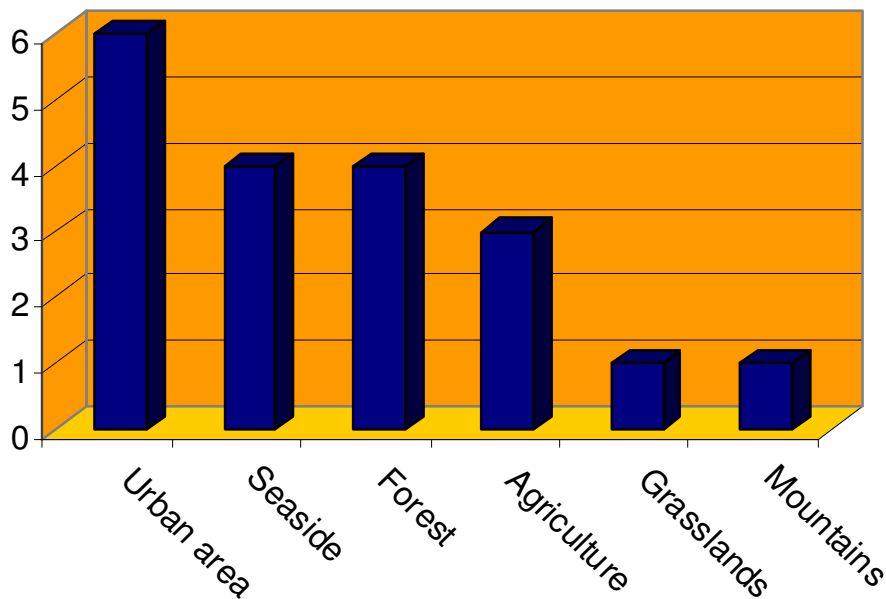
3 April 2007

Lille, France

In the first year of the BIOGASMAX project WP7 used a questionnaire to look into different aspects of biomethane production. A short summary of its results is presented in this document. The questionnaire was sent out to a total of 40 potential respondents. 14 questionnaires were returned to ENGVA, a response rate of 35%. This is the first time that the results get presented outside the project consortium. Eventually they will be part of the BIOGASMAX Decision Guide for Urban and Municipal Policy Makers.

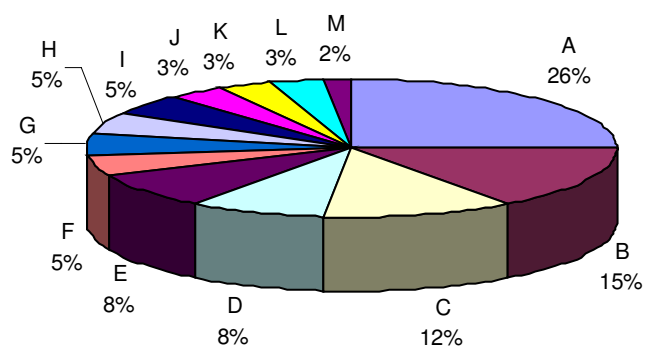
General Information:

- Biomethane production since about 13 years ago; biogas produced since much longer
- 72% of respondents produce biogas and biomethane in the same location
- Production plants most common environments:



The Start-up Phase:

- Main motivations for biomethane use:



A = Need for clean city air

B = Reduce CO2 emissions

C = Reduce dependence on imported fuel(s)

D = Avoid increasing waste volumes caused by gradual phasing out of landfills

E = Improve image of city / region

F = Reach national fuel replacement targets

G = Strengthen position of municipal / regional leadership

H = Minimize GHG emissions from landfill

I = Optimize plant operation costs by energy recovery & fuel(s) saving

J = Optimize municipal savings

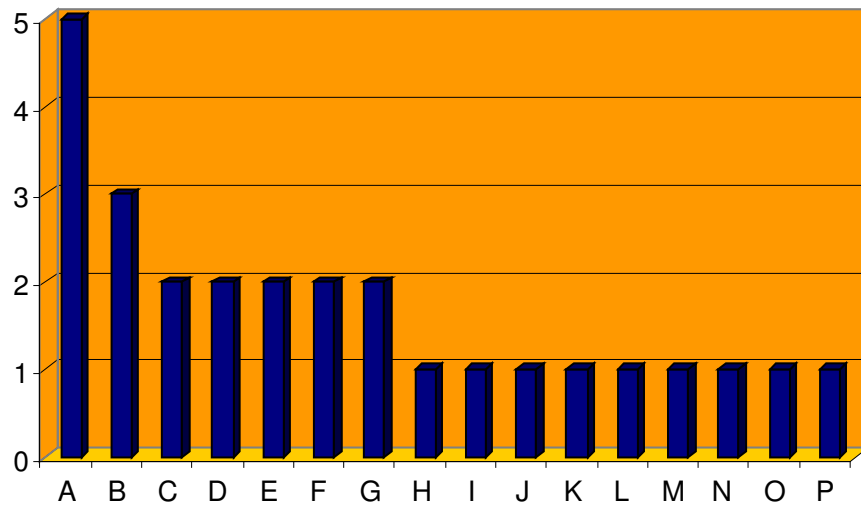
K = Secure future fuel supplies

L = Increase energetic performance of waste management service

M = Develop 100% clean public transport offer

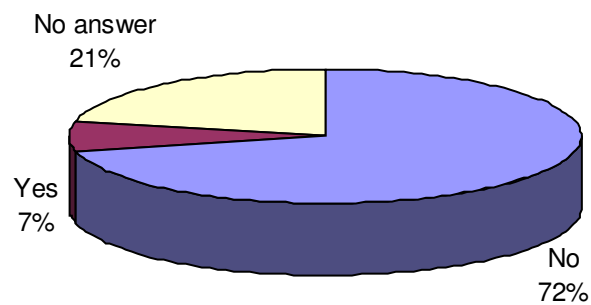
The Start-up Phase (continued):

- Stakeholders initiating biomethane projects:



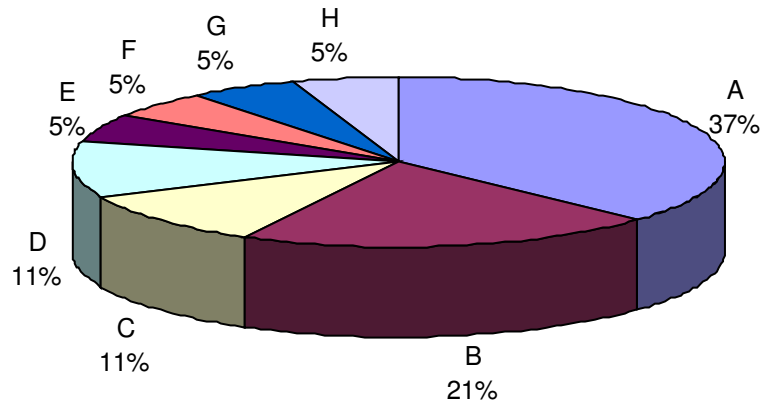
A = Municipal waste handling company
B = Municipal water works
C = Company specialized in methane distribution
D = Agriculture or forestry company
E = Municipal leadership
F = National government
G = Municipal energy company
H = National energy company
I = Private energy company
J = Regional leadership
K = Private bus fleet company
L = Local public bus fleet company
M = Plant supplier
N = Private company
O = Local farmers
P = Private waste handling company

- Have there been changes in stakeholders since the start of the project?



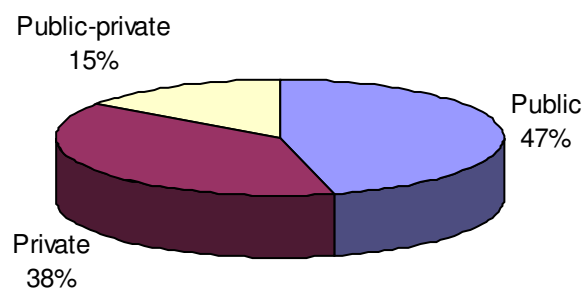
The Start-up Phase (continued):

- **Driving forces of the decision process:**



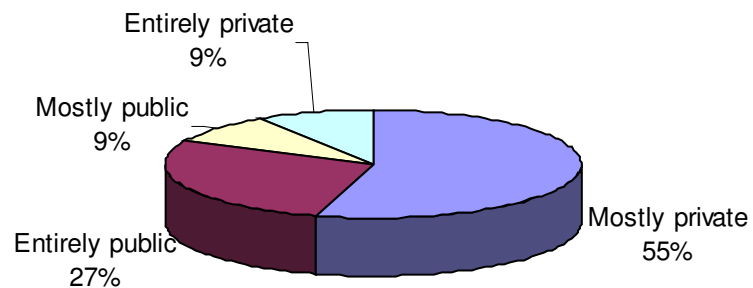
- A = A market study & business plan indicating a good business opportunity
- B = Government subsidies
- C = The support of a big energy company
- D = The use of biogas that would otherwise be flared
- E = Fiscal incentives
- F = Political commitment
- G = A survey concluding equal income for fuel vs. electricity generation
- H = The availability of biogas in combination with the willingness of the company to use AFVs

- **Is the project a private or public initiative?**

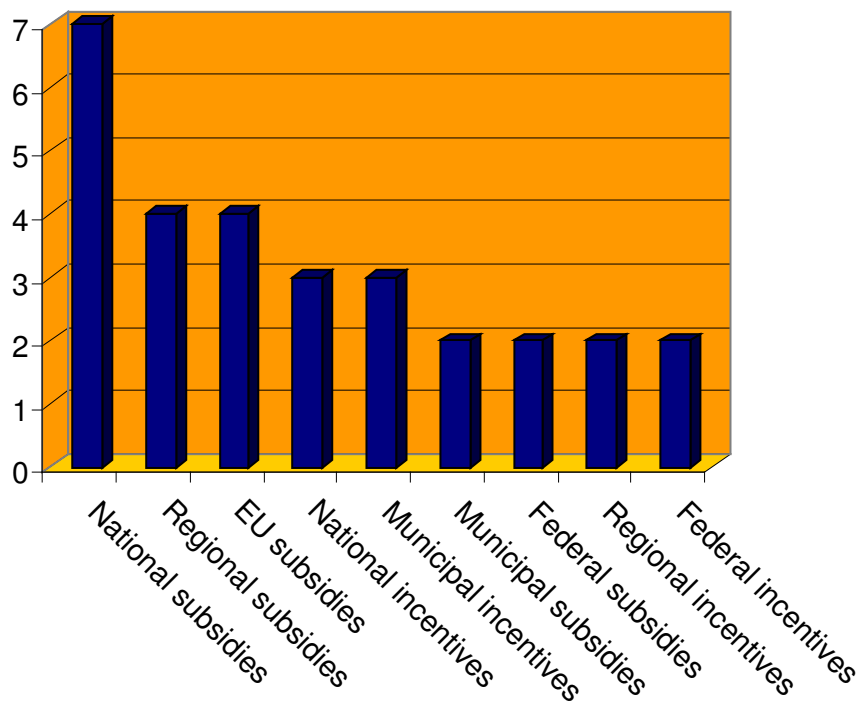


Commercial Implementation:

- Is the production plant publicly or privately funded?

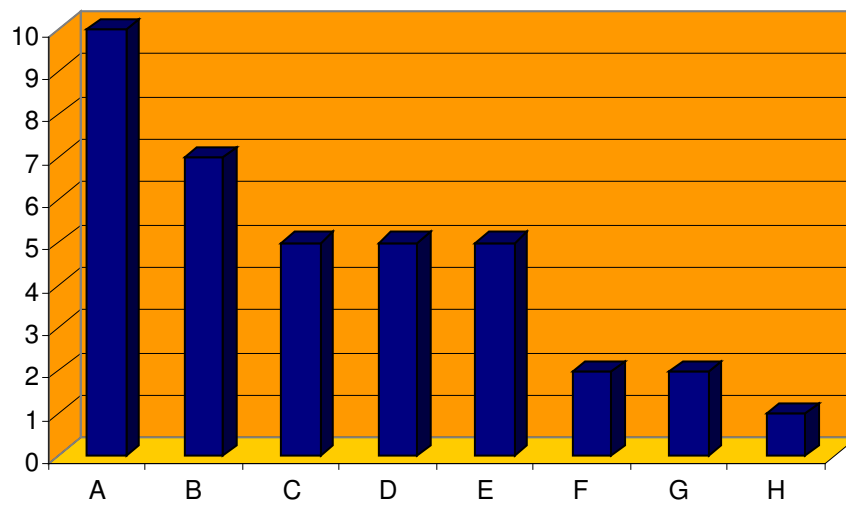


- Does the biomethane production plant receive subsidies or incentives?
 - 56% yes
 - 44% no
- How is the (indirect) financial support received?



Market Development:

- **Helpful factors in market development:**



A = Fleets run by major public or private operators

B = Municipal fleet (partly) switched to methane

C = Local incentives

D = Political support on all levels

E = Strong support for alternative fuels in the community or region

F = Fiscal incentives

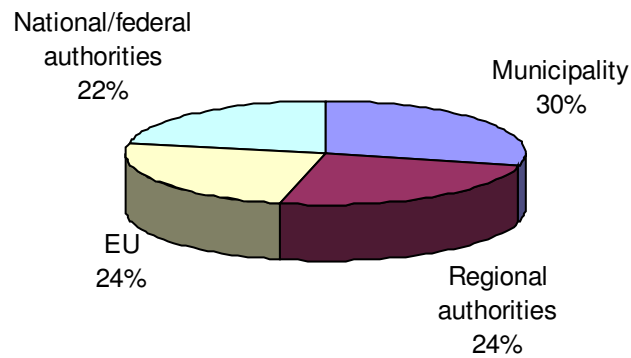
G = National government sets definitions, standards and targets for biomethane business

H = Biogas available on site

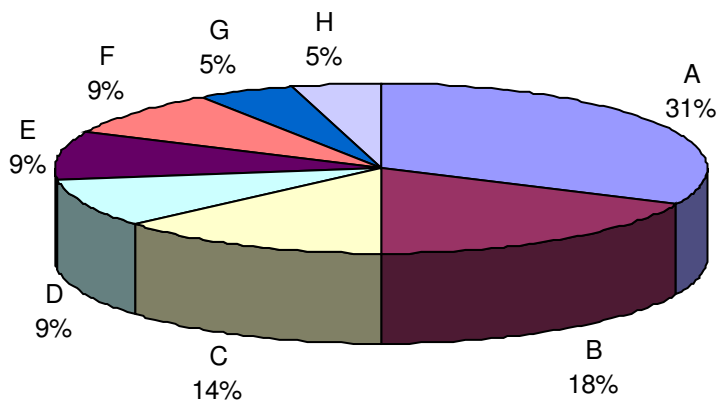
- **Experiencing competition from other alternative fuels?**
 - 75 % of the respondents experience competition with alternative fuels
 - 67% of the competition comes from ethanol
 - 33 % of the competition comes from natural gas

Government Policy:

- Political levels encouraging use of biomethane:



- Biomethane enterprise most enthusiastically supported by:



A = Municipality where the plant is located
B = National / federal authorities
C = Regional politicians
D = Regional authorities
E = Politicians from nation-wide partners
F = Politicians from European political partners
G = EU authorities
H = Not feeling supported at all