

# First results of GGG questionnaire

GGG Workshop Biomethane Trade

Brussels, 2012 February 21, Renewable Energy House



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# Status quo regarding questionnaire studies

- n GGG – questionnaire studies are completed for all partner countries:
  - n Austria, Croatia, France, Germany, Hungary, Italy, The Netherlands, Poland, Slovakia, Sweden, Switzerland, United Kingdom and additionally for Spain
- n An overview of Biomethane market has derived from the questionnaires content.
  - n Resulting Study will be published soon on GGG-website

## Biogas production in GGG partner countries

Country	Biomethane plants	Biomethane plants feeding the grid	Biogas plants total (approx.)	Agricultural	Biowaste (incl. organic MSW)	Sewage	LFG
Austria	10	7	503	approx. 300	55	134	14
Croatia	-	-	4	2	-	1	1
France	3	1	283	40	98	74	71
Germany	84	82	8.792	approx. 7.000	92	1.700	
Hungary	1	-	58	36	-	14	8
Italy	-	-	667	approx. 300	32	135	200
Netherlands	13	13	130				
Poland	-	-	219	17	2	approx. 200	
Slovakia	-	-	24	12	-	12	-
UK	2	2	360	60		100	> 200
Sweden	47	8	229	14	23	135	57
Switzerland	17	15	600	140		460	
<b>TOTAL</b>	<b>177</b>	<b>128</b>	<b>11.869</b>				

# Countries with on going Biomethane support schemes

	Austria	Germany	France	Netherlands	Sweden	UK	Slovakia
Support Scheme for biomethane	FIT for Electricity (includes bonus for biomethane), Fossil Tax Exemption; Investment grants	FIT for Electricity (includes bonus for biomethane) Tariff for avoided network usage, Biofuel Quota, Cost split for grid	FIT for Biomethane FIT for Electricity	FIT for Gas and Electricity (SDE+ scheme)	Support schemes for Clean Fuel (Tax Levies, Investment Grants)	FIT for Renewable Heat (RHI scheme), Green Certificates, RES Transport Obligation	FIT for Electricity, Investment subsidies, Tax Exemption
FIT Structure	basic tariffs plant capacity dependent, bonus scheme	FIT largely plant capacity dependent + energy crops usage + biomethane generation	FIT biomethane: plant capacity dependent, differs between waste categories (non-toxic waste / others) FIT electricity: plant capacity dependent	Budget of the scheme is provided in a phased application procedure, 4 regular categories plus 1 open category ranked according to project costs			Substrate source dependent  ! Plant capacity cannot exceed 10 MW
FIT   Feed-in tariff +   Bonus !   Requirement	+ biomethane generation 2€/ct/kwh + CHP efficiency bonus 2€/ct/kwh  ! CHP efficiency mandatory 60% ! Livestock manure usage min 30%	+ electricity generation during peak hours  ! 100% heat recovery in CHP (EEG) ! Maximum 60 % maize and corn					
Eligibility Period	15 Years	20 years	15 years	12 years		20 years	15 years
Apportionment		EEG apportionment to electricity price, costs related to grid connection to gas price		SDE+ is tax financed but planned to shift on levy to electricity and gas price	Grant Scheme: tax-financed	RHI is tax financed	

# Countries with biomethane support schemes under development

	Switzerland	Croatia	Hungary	Italy	Poland
Support Scheme for biomethane	FIT for Electricity (KEV Scheme),  remark: In Switzerland biomethane is majorly used as	FIT for Electricity	FIT for Electricity (under development)	FIT for Electricity (expires end of 2012, no follow-up agreement up to now); Quota obligation and Certificate	Support schemes include financial grants, Quota obligation and Certification, Tax Exemption
FIT Structure	No bonus for biomethane production ! Heat recovery / efficiency	plant capacity dependent (<or>1MWel), no differentiation based on substrate or plant efficiency	Tariff differentiated on plant capacity and demand conditions - peak, off or mid load condition	high remuneration for biogas to electricity, plant capacity restricted to max 1 MWel	Net metering allowed for systems, plant capacity dependant
Eligibility Period	20 years	12 years	15 years	15 years	
Apportionment	KEV: tax-financed	RES levy on electricity price			

FIT | Feed-in tariff  
+ | Bonus  
! | Requirement



# Brief overview of biomethane support schemes

- n Broad range of different support schemes
  - n FIT for injected biomethane
  - n FIT for CHP (electricity) covers also biomethane
    - n + bonuses for upgrading
    - n ! connected with obligations: heat use, substrates, efficiency, methane losses
  - n RES obligations
  - n Tax exemptions
  - n Investment subsidies
  - n Non discriminatory or priority grid access

# What will be important for success of biomethane injection?

- n Different support schemes will work but...
  - n they have to cover the production costs of 5-6 ct/kWh HHV for waste fermentation and of 7-8 ct/kWh HHV for energy crop fermentation
  - n Regulations for grid connections, and operating of the gas injection unit has to be clearly defined
    - n Who pays the investment? Who covers operation costs? Who owns the grid connection
  - n Priority access will make grid connection easier
  - n Cost split/capping of investment costs for upgrading unit solve a lot of problems in Germany



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