

# Country Report

## *Finland*

IEA Bioenergy Task 37

***Jukka Rintala, University Of Jyväskylä***

***Eeli Mykkänen, Jyväskylä Innovation Ltd.***

# Summary of AD plants

Number of AD Plants and biogas production, year 2008:

- Agriculture	8 plants, 2 GWh
- Industrial	5 plants, 8 GWh
- Sewage sludge	15 plants, 129 GWh
- Municipal (biowaste)	3 plants, 23 GWh
- Landfill	33 plants, 475 GWh

# Biogas Plant Inventory

## Summary of Up-grading Plants:

- One farm scale biogas upgrading unit in operation in Laukaa (outside natural gas grid), 20-30 vehicles are using this station, capacity 400 m<sup>3</sup> methane /day
- Construction of the first upgrading plant to inject methane into grid announced, expected to start operation in 2011

## Other info

- 16 public gas fuelling stations using natural gas
- Ca. 900 gas vehicles

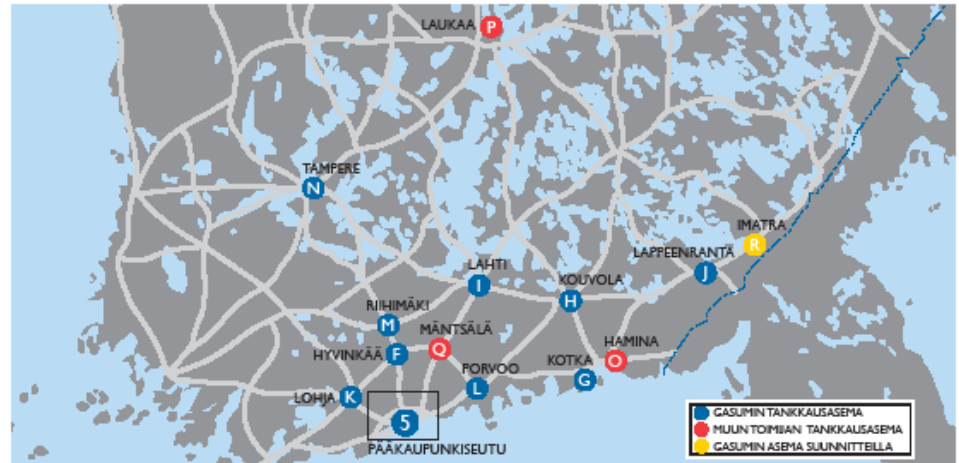


Picture: Metener Ltd.



# Gas fuelling stations in Finland

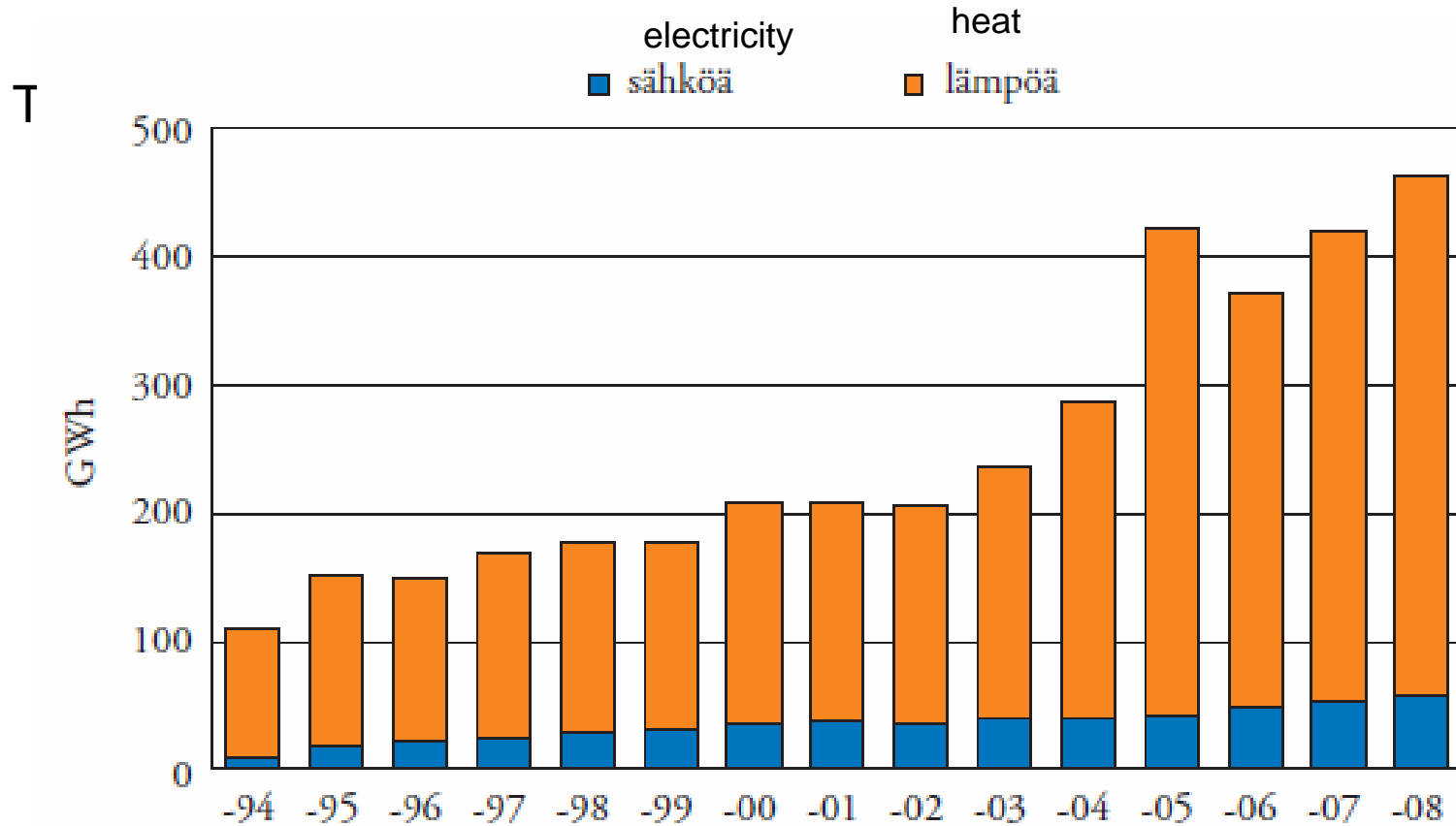
- 1 biomethane fuelling station in Central Finland (Laukaa)
- 16 natural gas fuelling stations in Southern Finland



A	Espoo, Eriäte	Kalliokatu 16
B	Espoo, Verno	Perikatu 17
C	Helsinki, Pääntie	Tattariharjunta 41
D	Helsinki, Rauhate	Vilhoitie 7
E	Helsinki, Rauhate	Hakaniementie 1
F	Helsinki, Rauhate	Karoliininkatu 29
G	Kotka, Keskusta	Haminaentie 1
H	Kouvola, Keskusta	Torvalankatu 3
I	Lahhti, Keskusta	Alokatu 52
J	Lappeenranta, Keskusta	Sivonkatu 14
K	Lohja, Keskusta	Mäntyseläentie 1
L	Porvoo, Keskusta	Hartikkankatu 16
M	Riihimäki, Keskusta	Pirkkosenkatu 6
N	Tampere, Keskusta	Vilhoinkatu 40
O	Hamina, Hamina Energy / STI	Helsingintie 1 B
P	Laukaa, Mestari Oy	Valkokiventie 104
Q	Mäntsälä, Mäntsälän Sähkö / STI	Lundentie 62
R	Imatra	
S	Tuusula	

Pictures: Eeli Mykkänen  
Map: Gasum Ltd.

# Biogas – Power and heat production 1994-2008



*Biokaasulla tuotetun energiamäärän kehitys Suomessa vuosina 1994–2008.*

# Biogas Plant Inventory

## Summary of Gas Production Data:

- Raw biogas production 635 GWh
- Electricity production 57 GWh
- Amount of heat recovered 406 GWh
- Up-graded to biomethane 410 MWh
  - amount used as vehicle fuel
- Other mechanical 1,9 GWh
- Flaired 173 GWh

# Economic Support Data

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- Feed in tariff expected, not yet confirmed: expected 85 €/MWh<sub>e</sub> + 50 €/MWh<sub>e</sub> heat bonus, if 50 % total efficiency is obtained.
- Biogas as vehicle fuel has been free of fuel taxes. However, new tax reform may add taxes also for biomethane

# Biogas - Research Activities

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- Processing digestate to value added products
- Developing sustainable crop cultivation for biogas production
- Developing use of biogas as vehicle fuel



Pictures: Eeli Mykkänen



# GasHighWay - Promoting the Uptake of Gaseous Vehicle Fuels, Biogas and Natural Gas, in Europe

The project is coordinated by Jyväskylä Innovation Ltd. (Finland)

## Aim of the Project:

- To increase the use of environmentally-benign gaseous vehicle fuels in the transportation sector
- To promote the production and upgrading of biogas for vehicle fuel
- To facilitate the increase of the use of upgraded biogas in the natural gas grid

## The long-term objective of the project

to promote the realisation of a network of filling stations for biogas and natural gas from Sweden and Finland in the North to Italy in the South

- Countries include: Finland, Sweden, Estonia, Latvia, Lithuania, Poland, Germany, Czech Republic, Austria and Italy
- Funded from the IEE – Intelligent Energy for Europe-programme 2009-2012, 1.8 M€



**Thank you**

