

# Country Report

## *Finland*

IEA Bioenergy Task 37

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# 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

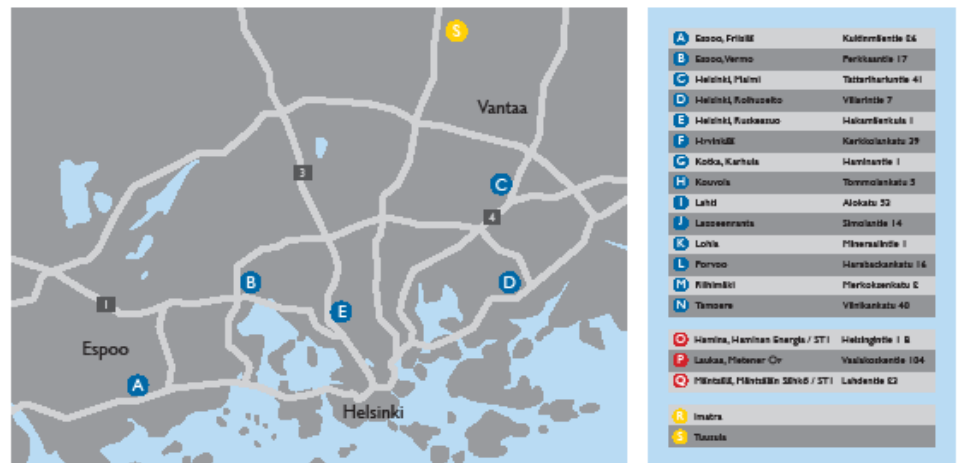
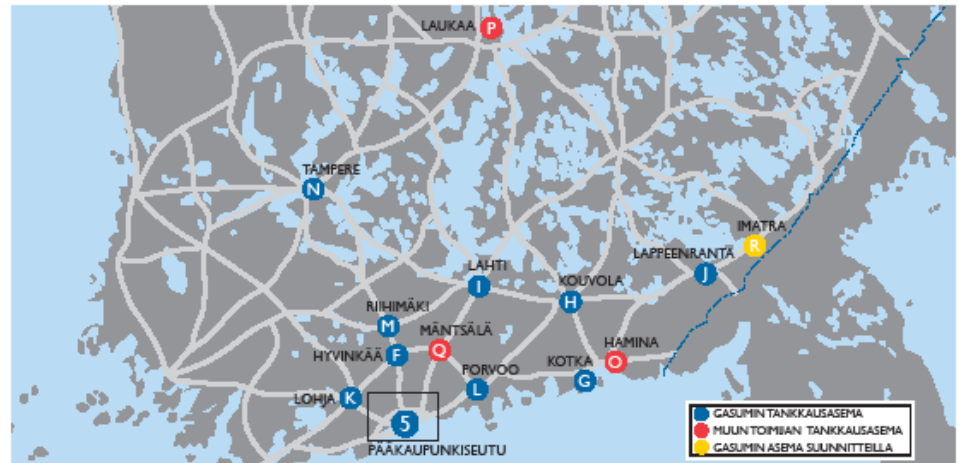
- 16 public gas fuelling stations using natural gas
- Ca. 900 gas vehicles



Picture: Metener Ltd.

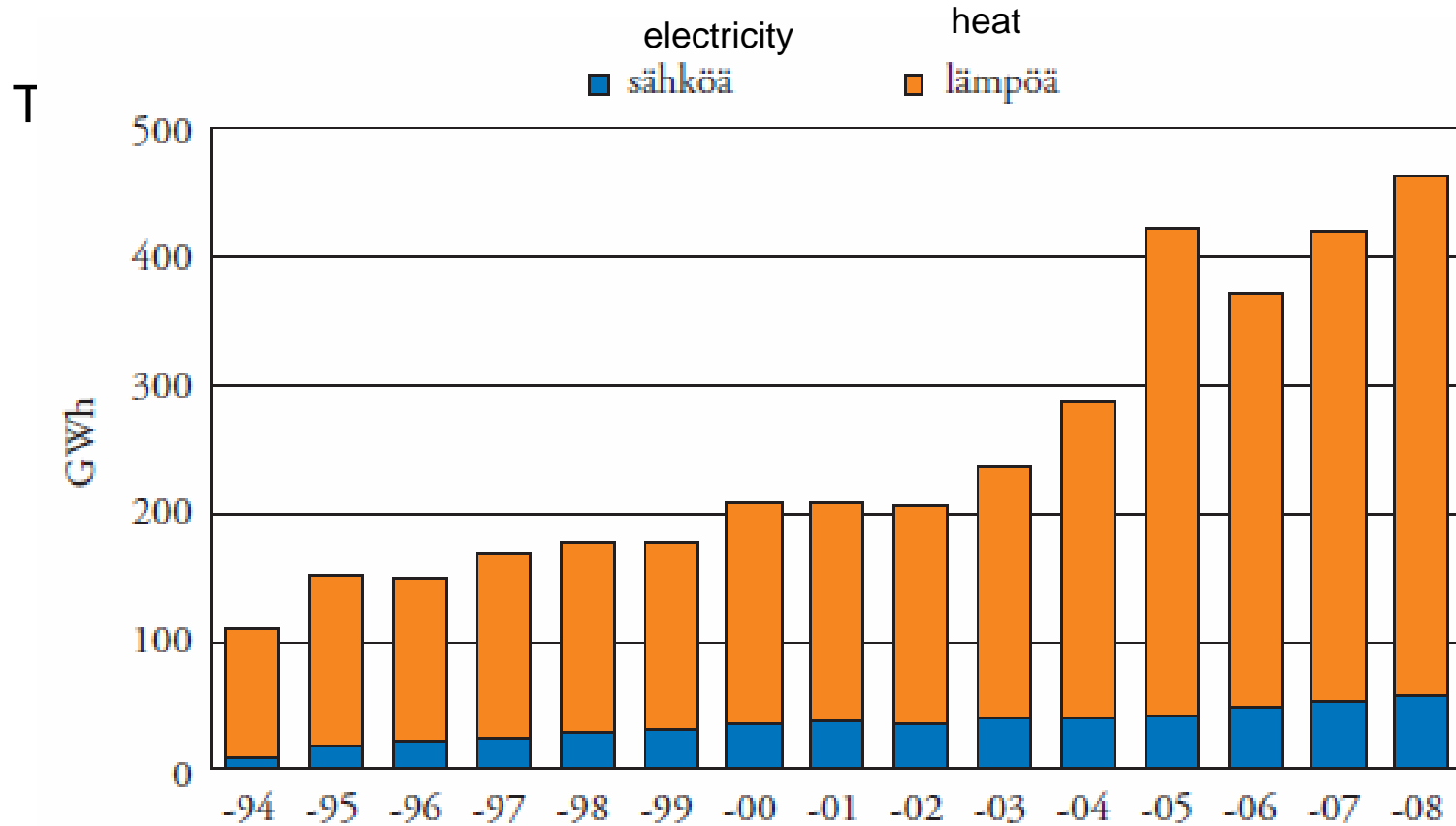
# Gas fuelling stations in Finland

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



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**

