

## VAPO Group's wood pellet markets and supply

[www.vapo.com](http://www.vapo.com)



World leader in biomass fuels



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## From a supplier of firewood to a diversified group

**From firewood forests... to sawmills and peatlands... to energy production, environmental technology, Sweden and the Baltics...**

In the peak years forest work employed 30 000 workers, 12 000 horses, 184 vehicles, 172 boats, production of 8 million m<sup>3</sup> of stacked wood.

Production of sawn goods has increased from 5000 cubic metres to 740 000 cubic metres



1940

1950

1960

1970

1980

1990

2000

1940 Birth of Vapo: Railway Administration Timber Office founded  
1945 State Fuel Office  
1962 Vapo enters the sawmill business: Hankasalmi sawmill  
1968 State Fuel Centre  
1970 Peat production started  
1972 Finland's first peat power plant in Kuopio

1973 head office moved from Helsinki to Jyväskylä  
1984 Vapo becomes Vapo Oy  
1994 1st power plant owned by Vapo in Lieksa  
1997 Vapo enters community waste processing business: Mustankorkea Oy founded in Jyväskylä  
1998 district heat company in Lieksa

1999 power producing company in Forssa  
2000 Räsjö Torv, Sweden  
2002 Metsäliitto becomes a shareholder  
2002 Tootsi Turvas, Estonia  
2003 SÄBI AB, Sweden  
2005 Statoil A/S, Denmark  
2005 Seda, Latvia



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## Vapo's strategy

- Vapo's strongest growing and most competitive business areas, on which Vapo is focusing, are:
  - local biofuels (wood, peat, ref)
  - bio electricity and heat
  - waste processing and technology

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## Vapo's mission

- Vapo processes local natural resources responsibly, such as wood, peat and community waste
- Vapo is the leading supplier of local and renewable fuels, bio electricity and heat and bio and dry waste processing solutions in the Baltic Sea area

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## Divisions



**Vapo Local Fuels**



**Vapo Pellets**



**Vapo Heat and Power**



**Vapo Environment**



**Vapo Timber Oy**



**Kekkilä Oyj**

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## Products

- Vapo Local Fuels
  - biofuels: energy peat, wood, and energy crops
- Vapo Pellets
  - pellets and briquettes
- Vapo Heat and Power
  - district, municipal and industrial heat produced by using biofuels
  - bio and wind power
- Vapo Environment
  - horticultural and environmental peat, growing soil, animal litter
  - municipal waste management solutions (plants, equipment, technology, management service)
- Vapo Timber Oy
  - sawn goods
- Kekkilä Oyj
  - growing mediums and plant nutrients
  - hobby and professional gardening products, landscaping products

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## Five years in figures

EUR million	2002	2003	2004	2005	2006
Turnover	434.4	472.2	526.8	523.9	600.9
Growth %	5.4	8.7	11.6	-0.6	14.7
Operating profit	38.1	38.4	27.6	23.5	53.8
% of turnover	8.8	8.1	5.2	4.5	9.0
Net financial items	-3.9	-4.0	-4.0	-4.0	-5.2
Profit before extraordinary items	34.1	34.4	23.6	19.7	49.2
% of turnover	7.9	7.3	4.5	3.8	8.2
Taxes	10.4	11.5	6.0	5.6	13.2
Profit for financial period	23.1	22.5	17.2	14.1	34.6
Dividends distributed	11.5	11.5	11.5	11.5	17.0 proposal
Balance sheet total	524.8	549.7	553.3	624.9	699.7
Interest-bearing liabilities	163.8	155.6	155.0	212.6	235.9
Return on capital invested (ROI)%	9.5	8.8	6.5	5.2	10.8
Return on equity (ROE)%	8.8	8.1	6.0	4.7	11.5
Current ratio	1.9	2.0	2.0	1.4	1.2
Solvency ratio %	53.0	52.6	54.4	48.6	47.3
Total investments	61.8	54.4	44.9	78.0	69.1
% of turnover	14.2	11.5	8.5	14.9	11.5
Average number of employees	1 311	1 744	1 814	1 734	1 891

2005 and 2006, IFRS Principles; previous years in accordance with FAS



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## Vapo Pellets



- Vapo is the largest producer of pellets in the Baltic Sea Region. Vapo has production plants in Finland, Sweden, Estonia, Denmark and Poland. Vapo produces both wood and peat pellets.
- Turnover EUR 75 million / 2006
- Number of employees 196

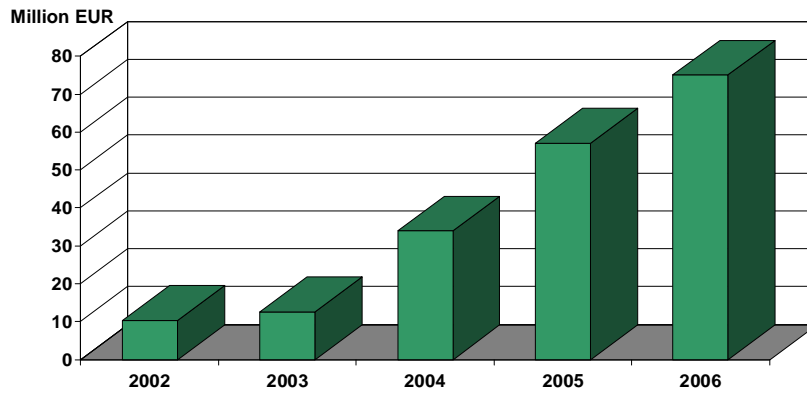


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## Turnover

Vapo Pellets (75 million EUR / 2006)



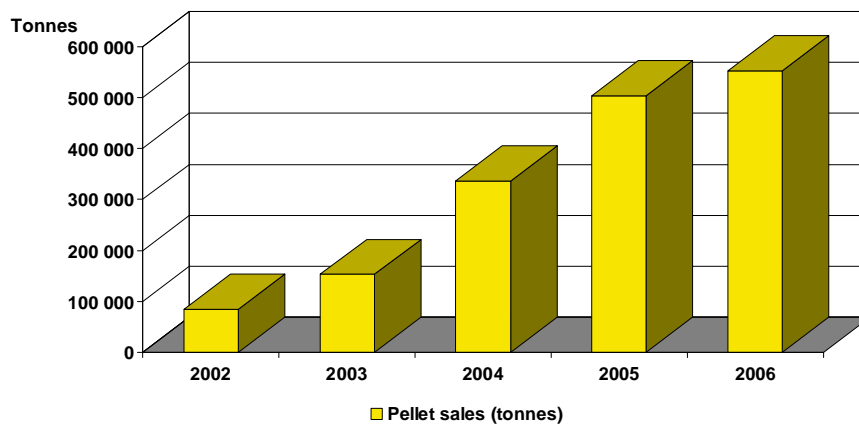
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## Pellet sales

Vapo Pellets (553 000 tonnes / 2006)

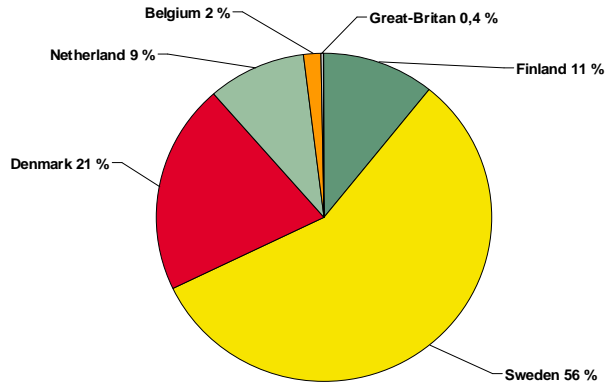


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## Pellet market shares 2006 Vapo Pellets



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## The Largest Pellet Manufacturer in Europe

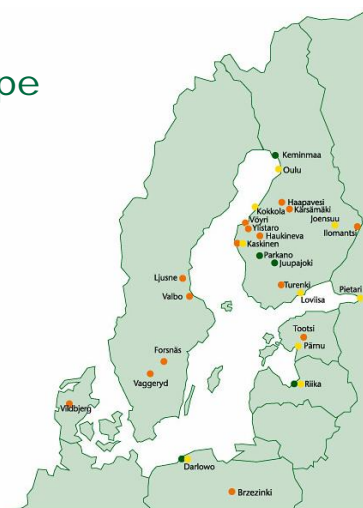
### Factories of Vapo Group

Ilomantsi, Finland  
 Kaskinen, Finland  
 Turenki, Finland  
 Vöyri, Finland  
 Peräseinäjoki, Finland  
 Haapavesi, Finland  
 Kärsämäki, Finland  
 Ylistaro, Finland  
 Tootsi, Estonia  
 Ljusne, Neova, Sweden  
 Främlingshem, Neova, Sweden  
 Fornäs, Neova, Sweden  
 Vaggeryd, Neova, Sweden  
 Vildbjerg, Denmark  
 Toreco, Poland

### Partner Producers

Lapin Ekolämpö Oy, Keminmaa, Finland  
 Paahtopuu Oy, Juupajoki, Finland  
 Parkano Pellet Oy, Parkano, Finland  
 Riika, Latvia  
 Darlowo, Poland

2007: Total capacity approx. 950.000 tonnes



● Factories of Vapo Group

● Partner producers

● Loading port

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## Traded Pellet products

- Woodpellets
  - CEN qualities => Fuel for power plants and retails sales
  - Customised qualities, HP, SP, DINPLUS, Green Gold Label etc..
  - Animal beddings; Cat litter
- Bark pellets
- Peat pellets
- Reed canary grass pellets
- Blended pellets

Certifications for pellet production at the moment:

DINPlus+ (German markets), Green Gold Label (Netherlands)



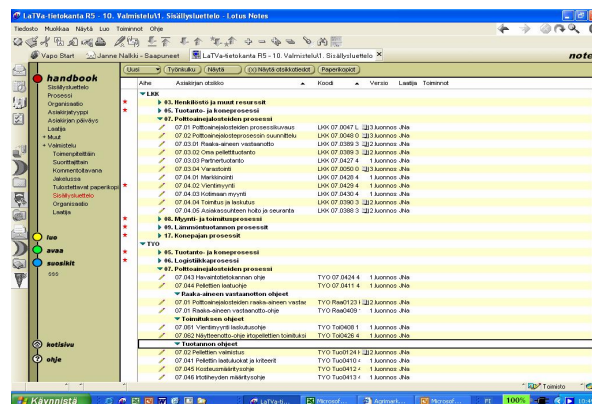
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Actions to develop and upgrade quality

## QMS ISO9001 and ISO 14001

- Under construction, ready 05/2008
  - consists management, sales, logistics and production



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## Factory operational guidelines

- **All Vapo's quality controlling methods and analysing methods are based on CEN/TC 335 methodology**
- **Verification process with ENAS laboratory**
  - Verification sample 6 x year
  - Annual sample 1 x year
  - **Over 1 000 laboratory analyses/ year**
  - Laboratory methods are always based on CEN methods
  - Certified laboratories are used only
- **Guidelines and demands for deliveries**
  - Sampling of deliveries
  - Large R&D programs under working
- **Updating of Analyses and methods (similar way for every factory)**
  - At the factory
    - Basic properties
      - Moisture, bulk density, durability (two ways), length, temperature, fines...
      - New practical test methods are all the time planned
      - Own test laboratory in Mustankorkea
      - Factory laboratories
  - At laboratory
    - Verification of factory measurements
    - Ash melting behaviour, ash, heat values, sulphur, nitrogen, cadmium, Al, Hg, Pb, Cl, ASAE durability, elemental analysis

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## QUALITY OF WOODPELLETS

Domestic market, consumer / retail sales in Finland



### Product specification

Origin: 1.2.1.1. Chemically untreated wood, wood excluding bark  
 Traded form: Wood pellets  
 Manufacturer: Vapo Oy Production

### Dimensions (mm)

Diameter (D) and Length (L) D06 ≤ 6mm ± 0,5 mm and L ≤ 5 x Diameter  
 D08 ≤ 8mm ± 0,5 mm and L ≤ 4 x Diameter

Moisture (w-% as received) M10 ≤ 10 %

Ash (w-% as received) A0.7 ≤ 0,7 %

Sulphur (w-% of dry basis) S0.05 ≤ 0,05 %

Mechanical durability (w-%) DU97.5 ≥ 97,5 %

Fines (w-%, < 3,15 mm) F1.0 ≤ 1,0 % at the factory gate

Nitrogen (w-% of dry basis) N0.3 ≤ 0,3 %

Net calorific value,  $q_{p,net,ar}$  E4.7 ≥ 4,7 kWh/kg

Bulk density BD600 ≥ 600 kg/m<sup>3</sup> loose

Chlorine, Cl (w-%) Cl0.03 ≤ 0,03 %

*Criteria are based on CEN/TS 14961:2005*

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## Market segments / Finland

Medium-sized users such as larger private and municipal district heating plants.  
E.g. schools, hospitals, industrial users etc.



Consumers who are reached through local retailers



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## Current market situation in Finland

- The pellet market is currently growing (but how fast?)
- Especially as far as the consumer and mid segment market is concerned
- Sales 2006 (total market): 90 000 metric tonnes
  - Vapo's share about 80 000 metric tonnes
- Consumers stand for about 50% of Vapo's Finnish consumption
- Few big local Vapo's retailers with about 800 outlets in Finland
- Mostly bulk pellet deliveries

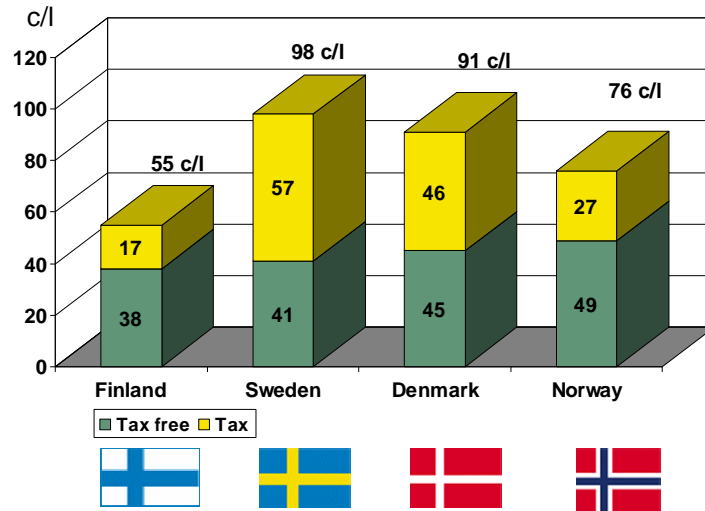


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## Heating oil Taxation

Oil prices and taxation 15.1.2007 in Nordic countries

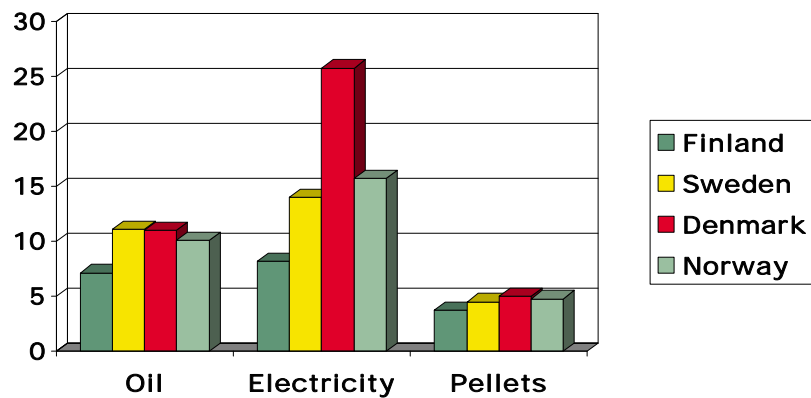


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## Energy prices for consumers, cnt/kWh, autumn 2006



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Lähteitä: Vapo, Öljy- ja kaasualan keskusliitto, Energiateollisuus ry



## A Case Example of Vapo Pellet Heat

- Vapo makes a 10-15 years heat supply contract with the customer
- Vapo builds a pellet heat plant and is responsible for the maintenance, fuel supply and usage
- Invoicing is based on the measured monthly heat consumption



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## Vessels and lorries for large users

- Vessel capacity 1000 – 5000 tonnes
- Lorry capacity 38 tonnes



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## Vapo as a Pellet Supplier

- Strong Partner
- Excellent Quality
- Reliable Deliveries
- Flexibility in Logistics



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## Customer benefits Vapo offers:

- Experienced fuel supplier – action since 1940
- Proven reliability:
  - Strong ownership
  - Production is spread into several locations and factories in several countries
  - Contracts will hold
- Wide pellet delivery capacity into whole Europe, references in Sweden, Denmark, Netherlands, UK and Germany
- Quality experience:
  - Customers in all pellet segments
  - Own heating units
  - Own R & D



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Thank You!

