

Electric-Corporate
Finland
Credit Analysis

Teollisuuden Voima Oyj

Ratings

	Current Ratings
Long-Term IDR	A-
Short-Term IDR	F2

Outlook

Foreign-Currency Long-Term IDR Stable

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Related Research

- [Nordic Utilities 2009 Outlook \(February 2009\)](#)

Rating Rationale

- The ratings of Teollisuuden Voima Oyj (TVO) reflect its position as a highly competitive not-for-profit nuclear generator, producing at-cost electricity for its shareholders, which are mainly in heavy industry and utilities.
- TVO is a key generator of base load electricity, producing some 17% of total Finnish electricity consumption in 2008 (2007: 16%). Shareholders are off-takers of the electricity and as such have an incentive to keep costs low. Output is effectively contracted to each shareholder over the life of the plant. The shareholder base has been stable for a long time. None of the shareholders have majority rights and important decisions such as investment plans and cost budgets are decided one year in advance, requiring a three-quarters majority on the board. Shareholders take their share of electricity at cost (having paid fixed costs in advance), any unwanted portion being sold on the liquid Nord Pool electricity exchange. The company's management has a proven track record and nuclear liabilities are funded. Shareholders cannot extract dividends and the company is unlikely to be subject to any acquisition risk.
- The rating is constrained by asset concentration risk, although TVO's excellent operational record (load factors consistently above 95% since 1999) and safety record mitigate this. Given the full-cost pass-through mechanism, financial ratios, which are weak, are less meaningful than for most corporates.

Key Rating Drivers

- Downside to the ratings could/would arise from adverse regulatory changes; a decline in operating performance and loss of cost competitiveness; substantially lower wholesale electricity prices, below TVO's very low average production costs; or significantly reduced liquidity reserves.

Recent Events

As at May 2009, the new Olkiluoto 3 (OL3) plant is likely to be commissioned by 2012, a delay of 38 months. However, given the fixed-price, turn-key nature of the contract with the Areva-Siemens Consortium, Fitch Ratings expects TVO's exposure to the delay to be relatively modest, with only a small impact on annualised production costs.

TVO submitted an application to the government for a "decision in principle" in April 2008 regarding a fourth 1,000-1,800MW nuclear plant in Olkiluoto. The decision process is lengthy, requiring parliamentary and host municipality consent. The proposed plant will cost an estimated EUR3bn-4bn, with construction taking place in the 2010s and commissioning by the end of the decade.

Liquidity and Debt Structure

The company has a good liquidity position, due to a favourable cash management regime whereby fixed costs of the power plants (some 80% of total cost) are charged one month in advance to shareholders. TVO has a minimum cash reserve policy of EUR90m. Cash and cash equivalents were EUR202m, while undrawn committed credit lines were EUR1.5bn in 2008. Fitch also notes that TVO has a EUR300m committed subordinated loan from its shareholders. Total debt was EUR2.1bn at end-2008, of which only EUR451m was short-term.

Mankala Model

Power-generating cooperatives, the so-called “Mankala model”, have a long history in Finland, dating back to when their founders required electricity for their operations but could not afford to build power plants on their own. Under the Mankala model, the company produces electricity at cost only for its shareholders; thus profits are zero or close to zero for any financial year.

TVO is the only cooperative in Finland with predominantly nuclear plants. Examples of other power-generating co-operatives include Pohjolan Voima (PVO), established by the forestry industry and Etelä-Pohjanmaan Voima.

Business Overview

Background

TVO, established in 1969, is a not-for-profit generator, producing electricity for its shareholders at cost. It is building new nuclear power capacity in Finland.

TVO’s main business is power generation, accounting for some 95% of revenues in 2008. The company has two wholly owned nuclear plants and a 45% stake in the Meri-Pori coal fired plant.

In 2008 TVO’s total annual output was 15.2TWh (2007: 15.8TWh), 95% of which derived from nuclear generation. Over the past decade, TVO has generated some 17% of total electricity consumption in Finland a year, making TVO a key generator of base load electricity.

TVO Power Plants

Power plant	Plant type	MW	Commercial operation	Upgrade year
Olkiluoto 1 (OL1)	Nuclear, BWR Westinghouse Atom	860	1979	1984, 1998, 2006, 201x
Olkiluoto 2 (OL2)	Nuclear, BWR Westinghouse Atom	860	1982	1984, 1998, 2005, 201x
Olkiluoto 3 (OL3)	Nuclear, PWR Framatome-Siemens	1,600	2012	n.a.
Meri-Pori	Coal condensing	257 ^a	1994	n.a.

BWR - boiling water reactor, PWR - pressurised water reactor
^a 257MW stake in 565MW coal condensing plant, which represents TVO’s 45% ownership stake (the other 55% is owned by Fortum Heat and Power Oy, which also operates the plant)
 Source: TVO, Fitch

In addition to its main generation business, TVO has a 60/40 joint venture, Posiva Oy, with Fortum Power and Heat Oy. Posiva is responsible for research and the final disposal of spent nuclear fuel at the Olkiluoto plants and the two Loviisa nuclear plants (the latter owned by Fortum Corporation (Fortum, Long-Term IDR ‘A’/Negative Outlook). TVO Nuclear Services, a wholly owned TVO subsidiary, provides consulting services drawing on TVO’s expertise.

Shareholders are at-Cost Electricity Off-Takers

TVO’s six shareholders – five utilities (some municipally owned) and Kemira, a chemicals company, with large electricity needs – are the off-takers of the electricity generated in its plants. The two largest are PVO (57.9% stake), itself a not-for-profit generator owned by a consortium of Finnish industrials (mainly in pulp and paper) and municipally owned utilities, and Fortum Power and Heat (26.1% stake), a wholly owned subsidiary of Fortum.

Three share series entitle shareholders to the electricity generated by OL1 and OL2 (A-series), OL3 under construction (B-series) and coal-fired Meri-Pori (C-series); see table below.

Percentage Shareholdings by Share Series as of 31 Dec 2008

(%)	A-series for OL1 and OL2	B-series for OL3	C-series for Meri-Pori ^b	Total
EPV Energia Oy ^a	6.5	6.6	6.5	6.6
Fortum Power and Heat Oy	26.6	25.0	26.6	26.1
Karhu Voima Oy	0.1	0.1	0.1	0.1
Kemira Oyj	1.9	0.0	1.9	1.2
Oy Mankala AB	8.1	8.0	8.1	8.1
Pohjolan Voima Oy (PVO)	56.8	60.2	56.8	57.9
Total	100.0	100.0	100.0	100.0

^a Formerly Etelä-Pohjanmaan Voima Oy
^b TVO’s share of output i.e.45%
 Source: TVO

Key Rating Drivers

High Operational Performance and Safety

TVO has an excellent operational track record, with capacity factors consistently above 95% since 1999 and very low unplanned outages, which have averaged 0.5% a year. The company has increased output at its nuclear plants through regular upgrades, from 10.9TWh in 1985 to 14.4TWh in 2008. The company has an outstanding safety record.

Plant Operating Performance

	Total annual production (TWh)			Capacity factor (%)		
	2008	2007	2006	2008	2007	2006
OL1	7.1	7.3	6.9	93.7	97.5	93.8
OL2	7.3	7.0	7.3	96.9	93.7	96.9
OL1 & OL2	14.3	14.3	14.2	95.3	95.6	95.4
Meri-Pori	0.9	1.4	1.5	nm	nm	nm
Total	15.2	15.7	15.7	nm	nm	nm

Source: TVO

Competitive, Low-Cost Production Compared with Nord Pool Wholesale Price

TVO has very low operating cost production of EUR15.9/MWh in 2008 (2007: EUR16/MWh), which compares favourably with an average Nord Pool system price of EUR45/MWh during the same period. The one-year and two-year forward Nord Pool prices were EUR40/MWh and EUR41/MWh at 10 May respectively, well above current production costs.

Average production costs will increase with the commissioning of OL3 in 2012. However, according to management, average production costs will remain below EUR30/MWh, which is significantly lower than forward prices at 10 May of EUR43/MWh for 2012, EUR46/MWh for 2013 and EUR47/MWh for 2014. Senior executives have stated that they do not envisage any risk of TVO's production costs being uncompetitive in the foreseeable future.

As shareholders are off-takers, there is an incentive to keep costs to a minimum. Additionally, executives are rewarded for keeping the difference between budgeted and actual costs to a minimum.

TVO's competitiveness is further strengthened as it provides low-cost base load electricity in Finland, where thermal generation dominates. With supply/demand remaining very tight in Finland it is difficult to envisage a situation where this competitiveness might be eroded (see the *Nordic Electricity Market* section below).

Risk of Non-Paying Shareholders Low

Under the company's articles of association, each shareholder is severally liable for annual fixed costs, including debt instalments, and for variable costs in proportion to the off-take electricity. In theory, TVO could face financial distress if shareholders failed to pay costs according to their obligations. However, should a shareholder fail to cover these costs, TVO would immediately cut its supply and sell the electricity to another shareholder, or onto the liquid Nordic electricity exchange, Nord Pool.

The process of selling a stake in TVO is initiated by the shareholder. As the shareholders are active participants in the management of TVO, a shareholder transfer would be encouraged to occur swiftly. A defaulting shareholder is likely to benefit from the rapid receipt of proceeds and has an incentive for a timely sale. A shareholder transfer is conditional on all prior costs being settled, including any loans from the nuclear fund. This is the joint responsibility of both the buyer and the seller.

In the past, available shareholdings have generated a large number of interested buyers. Fitch notes that the shareholder structure has been very stable since TVO's inception, with virtually no shareholder changes over the last 20 years. Under existing circumstances, Fitch believes TVO's risk of not finding new shareholders is low. TVO has to date never experienced a defaulting or late paying shareholder.

Beneficial Liquidity Management

The requirement that shareholders pay fixed costs (which amount to some 80% of total costs) one month in advance secures a steady cash flow and ensures a favourable cash management system. The cost level is based on the annual budget, decided by the board.

Funded Nuclear Liabilities

According to the Finnish Nuclear Energy Act, each nuclear operator is fully responsible for the costs of waste management and final cost of decommissioning. These future costs are assessed annually and reviewed by two independent bodies. The non-discounted liability must be fully funded by the nuclear operator through contributions to a centrally administered fund, the State Nuclear Waste Management Fund (SNWMF); see the *Nuclear Waste Management and Provisions* section below for further details.

Fitch notes that the future nuclear liability is assessed on a non-discounted basis and that contributions to the fund are recorded as an operating cost, and therefore future liabilities of waste disposal and decommissioning are fully reflected in the operating costs of the nuclear plants. Thus, future liabilities are effectively funded as a levy on sales.

TVO's assessed liability increased by EUR136m in 2008 due to a rise in estimated costs for its final storage facility to be commissioned in 2020. The cost increase will be included in the plants' operating costs over the next five years, increasing average production costs modestly.

Supportive Regulatory Environment

Finland has a highly supportive regulatory environment for the build-out of nuclear, given concerns over the security of supply (the country remains a large net importer of electricity, mainly from Russia), the competitiveness of energy-intensive Finnish industries and stringent ETSIII CO2 emission requirements (see sections on *Nordic Electricity Market* and *Finnish Regulatory Environment* below).

Limited Cost Impact of Delay in OL3

TVO is constructing a third 1,600MW nuclear generation plant based on the European pressurised water reactor, originally scheduled for completion by summer 2009, but delayed by 38 months to June 2012. The construction work was originally carried out by Areva-Siemens Consortium. The project carries construction and project risks that are largely mitigated by the fixed-price turn-key nature of the contract. Under the contract, TVO can claim liquidated damages to cover increased costs caused by late commissioning. Fitch expects the impact on annualised production cost to be relatively small, despite the delay.

For the construction of OL3, shareholders have committed to providing equity and subordinated loan contributions of 25% of the total investment cost (including the increased costs related to the delays), with the rest financed by debt, which TVO's current undrawn committed facilities of EUR1.5bn would substantially cover.

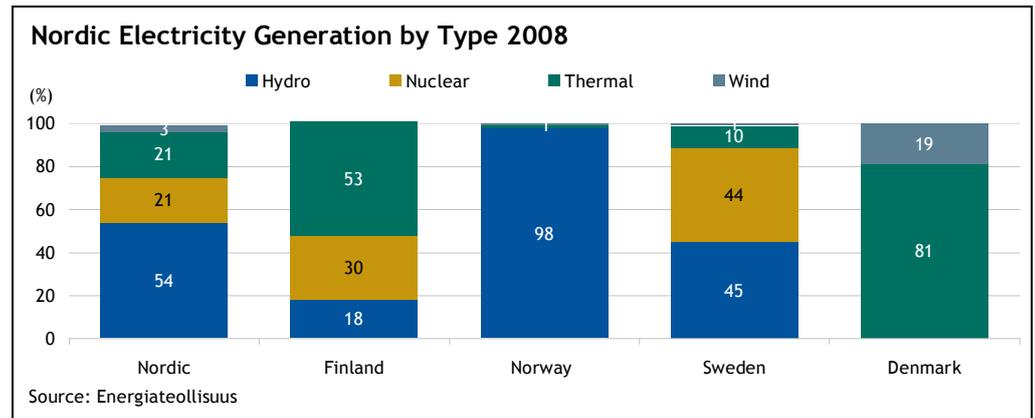
The Nordic Electricity Market

Nord Pool

Finland, Sweden, Norway and Denmark together make up a single electricity market. In the Nordic electricity market, the price of electricity is established by free

trading on the electricity exchange, Nord Pool. Nord Pool is the Nordic electricity exchange for physical trading. Nord Pool quotes the day-ahead market price for each hour, on the basis of purchase and sale bids. Some 60% of electricity is traded through the spot market in the Nordic area, while the rest is based on bilateral transactions.

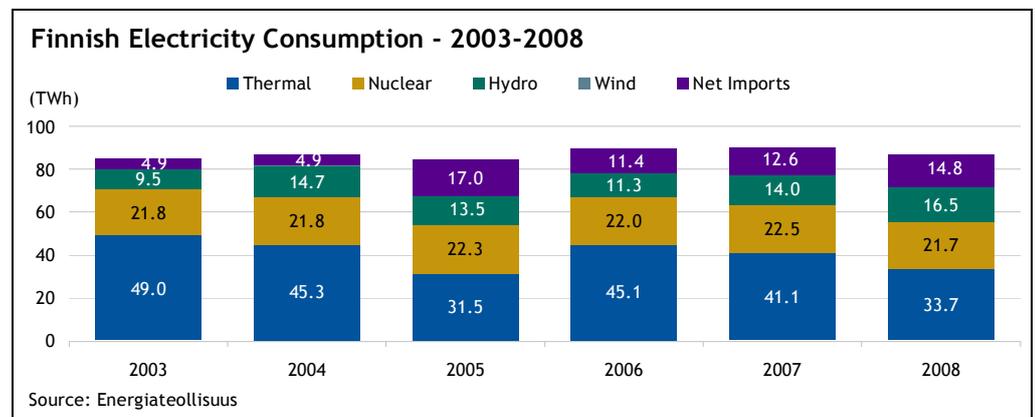
In the hydro-dominated Nordic market, where 54% of total generation is hydropower (see chart below), precipitation and reservoir levels are key drivers of wholesale electricity price fluctuation. Further factors include a warm/cold winter, the price of CO2 emission allowances, capacity development, and fuel prices (coal and oil). Wholesale price fluctuations, however, tend to average out, and judging from prices in forward contracts, expected prices tend to be quite stable.



Tight Demand/Supply Balance in Finland

Finland has the third-highest per capita electricity consumption in Europe at 16,600kWh due to its energy-intensive industries (pulp and paper, steel, manufacturing) and a cold climate. Demand from industrial players contributed over 50% to the total electricity consumed in 2008. Of the Nordic countries, Finland has one of the lowest proportions of hydropower to total generation at 18% (compared with Norway's 98% and Sweden's 44%), with thermal generation dominating its generation mix.

Finland remains a net importer of electricity: imports, primarily from Russia, were 17% of total consumption of 86.9TWh in 2008 (amongst the highest proportion in Europe); see chart below.



Supply remains tight in the short to medium term. Thermal generation plants will gradually be phased out, as government commitments to reduce CO2 emissions will entail a switching to clean energy sources. With growing concern over Finnish reliance on electricity imports, particularly from Russia, the nuclear option is

attractive and widely accepted. Rising commodity prices and CO2 emission rights have also raised concerns about the competitiveness of Finnish industry.

In the Finnish government's long-term climate and energy strategy paper, presented to Parliament in November 2008, the intention is that domestic electricity production should be sufficient to meet domestic demand (including peak load demand) by 2020. It has been estimated by various industry sources that new electricity production of at least 4,000MW will be required to meet increased consumption and the self-sufficiency requirement.

Finnish Regulatory Environment

The Finnish Ministry of Employment and Economy is responsible for supervising nuclear power generation and for waste disposal under the Energy Act 1987. Regulation and inspection are carried out by the independent Radiation and Nuclear Safety Authority (STUK), responsible for issuing detailed safety regulations and safety-related review of licence agreements. The government grants licences for nuclear facilities and issues general safety regulations.

Nuclear Waste Management and Provisions

In Finland, the nuclear operator is responsible for all costs relating to nuclear waste management, including future decommissioning and R&D. The whole liability must be covered by the operator through annual contributions (or pay-backs, if the liability decreases) to a centrally administered fund, the SNWMF. Cost estimates are based on current price levels (i.e. not discounted) and reviewed annually by two independent bodies. The SNWMF is administered by the Ministry of Employment and Economy.

Contributions to the fund are recorded as an operating cost and included in the price of the electricity produced by the nuclear operator. According to the Ministry of Employment and Economy, the nuclear waste management liability adds some 10% to the production cost of the nuclear operator.

This framework ensures that nuclear waste liabilities are fully funded over time and that any estimated cost increases are passed through the P&L and reflected in the production cost of electricity.

Under the Energy Act, TVO and its shareholders can borrow back 75% of the funded nuclear liabilities in SNWMF at current interest rates and against guarantees.

Nuclear Generation in Finland

Finland has four nuclear plants, which produce over a quarter of Finland's electricity: TVO's OL1 and OL2 (860MW each) and Fortum's Loviisa 1 and Loviisa 2 (488MW each). The plants were constructed in the late 1970s to provide reliable low-cost base load power. Since commissioning in 1977-1980, the plants have all been up-rated and their lifetimes extended: by 20 years to 60 years for OL1 and OL2, and by 10 years to 50 years for Loviisa 1 and 2. TVO plans further capacity increases for OL1 and OL2.

OL3, under construction, is Finland's fifth nuclear reactor. Parliamentary and governmental approval for OL3 (provided in 2002), as well as the current consideration of a sixth nuclear reactor, reflects an acceptance of nuclear power as a viable source of low-cost, emission-free energy in Finland, in contrast to some of the other Nordic countries.

Sixth Nuclear Reactor

Three generators are applying for permission to build a sixth nuclear reactor: TVO, Fortum and Fennovoima, a consortium of E.ON AG ('A'/Stable) and Finnish and Swedish industry and energy companies. The potential nuclear plant must be deemed to be in line with the overall social good. The approval process is typically lengthy, with the government reaching a decision in principle to issue a licence only

Three Categories of Nuclear Waste

Operating Waste

Low-level waste includes protective plastic sheets and clothing used in service work and intermediate-level waste consists of ion-exchange resin to purify process water.

High-Level Waste

A quarter of the fuel rod assemblies are replaced each year. Spent fuel is cooled in a water pool for a few years, then transferred to interim storage on the plant site.

Decommissioning Waste

This occurs once a nuclear plant closes and includes disposal of structures that have become radioactive.

after the proposed host municipality has granted its consent and parliament has approved it. Detailed plans for the decommissioning and final storage must be submitted prior to the government issuing a construction and operating licence.

Final Disposal

Under the Energy Act, any nuclear waste generated in Finland must be processed, stored and finally disposed of in Finland. The disposal of low- and intermediate-level waste is already underway and is carried out on site at each power plant.

Spent nuclear fuel (high-level waste) generated by the existing nuclear plants (OL1, OL2, and Fortum's Loviisa 1 and Loviisa 2) as well as the new OL3 will be disposed of in a deep rock repository under construction at Olkiluoto, with final disposal scheduled to commence in 2020. Until then, spent fuel is in interim storage within the plant sites. The final disposal facility will also house decommissioning waste.

Financial Analysis

The company has reported under IFRS as of January 2006. Accounts for 2005 remain according to Finnish Accounting Standards. The main difference under IFRS is TVO's share in the SNWMF (which shows on the balance sheet) and derivative positions being marked to market in accordance with IAS39.

As TVO is a non-profit company, financial ratios are less relevant than for most corporates. Generally, financial ratios are weak, reflecting the break-even cost structure of the company.

Debt and Capital Structure

Debt Structure

(EURm)	2008 (IFRS)	2007 (IFRS)	2006 (IFRS)
Short-term bank loans	123	9	16
Commercial paper	338	474	462
Long-term bank loans	1,277	705	588
Other long-term debt	88	0	0
Sub-shareholder loan	179	179	179
Total debt	2,005	1,367	1,245
Loan from SNWMF	696	648	620
Equity	823	918	758

Source: TVO

Changes in debt and equity in 2008 relate to the financing of OL3. Shareholders have committed to contributing 25% of total investment costs in the form of equity and subordinated shareholder loans. The EUR95.6m B-series share issue, decided in 2007, was paid in November 2008 for the funding of OL3.

The remainder of the investment will be financed by bilateral loans, revolving credit facilities, buyer's credit (France), commercial paper (CP), back-up facilities, private placements and public bonds. Fitch notes that TVO has sufficient un-drawn committed (long-term) facilities to cover the financing (see *Liquidity* section below).

Due to the delay in OL3, TVO raised fewer loans than originally planned in 2008. Short-term funding is provided by a EUR1bn CP programme, which is typically drawn by EUR400m-500m (EUR348m in 2008).

Loan from SNWMF

Under the Energy Act, TVO can borrow back 75% of the funded nuclear liabilities in SNWMF at current interest rates and against guarantees. These funds are on-lent to shareholders on the same terms and in proportion to their shareholding. TVO receives promissory notes from the shareholders, which it then uses as guarantees

for SNWMF. SNWMF can therefore require payment from TVO or its shareholders. Fitch does not include the loan from SNWMF or to the shareholders in its debt calculations.

Liquidity

TVO's liquidity is good, with cash and marketable securities of EUR207m in 2008. The company has a policy of maintaining at least EUR90m of on-balance-sheet cash to cover any unexpected shortages in liquidity in the CP market. Additionally, committed facilities must cover all payments (including maturing debt) for the next 12 months. Un-drawn committed facilities of EUR1.5bn in 2008 consisted of EUR1.18bn in a EUR1.53bn revolving credit facility (maturing June 2012) and EUR334m of a EUR550m coface facility (French buyer's credit), maturing in April 2012. Fitch also notes that TVO has a EUR300m committed subordinated loan from its shareholders.

Cash Flow and Capex

TVO's increased contributions to the SNWMF, due to a rise in its assessed nuclear liability (see *Nuclear Provisions* section below), decreased EBITDA and impacted cash flow measures. The increased contributions required by SNWMF will be made over five years, after which the nuclear liability will again be fully funded.

Most of the total capex of EUR579m in 2008 related to the OL3 project, although this amount was lower than anticipated due to delayed construction work. TVO estimates maintenance capex on the existing nuclear plants at EUR30m a year.

Nuclear Provisions

TVO's assessed liability rose to EUR1,137m in 2008 (2007: EUR1,080m) due to increased estimated costs for its final storage facility to be commissioned in 2020. The funding target in SNWMF was set at EUR1,001m. TVO is required to cover the difference between the assessed liability and funding target (EUR136m), as well as 10% of the total assessed liability through guarantees. The assessed liability will be fully funded in five years as the increased costs are reflected in production costs.

TEOLLISUUDEN VOIMA OYJ

	31 Dec 2008 EURm IFRS	31 Dec 2007 EURm IFRS	31 Dec 2006 EURm IFRS	31 Dec 2005 EURm FAS
Summary Balance Sheet				
ASSETS				
Cash and Marketable Securities	202.7	81.5	88.7	58.8
Accounts Receivable/Trade Debtors	46.6	39.1	30.2	12.1
Inventory	181.3	159.7	147.4	151.9
Other Current Assets	45.6	145.1	52.6	230.7
Property, Plant & Equipment	2,484.6	1,937.0	1,728.5	1,451.6
Intangible Assets	21.8	12.1	22.5	17.5
Other Non-current Assets	1,316.4	1,244.2	1,157.8	606.5
TOTAL ASSETS	4,299.0	3,618.8	3,227.7	2,529.1
LIABILITIES				
Short-term Debt (inc. CPLTD)	460.4	483.6	479.2	466.2
Accounts Payable/Trade Creditors	15.4	9.0	23.1	15.2
Provisions	0.0	0.0	0.0	0.0
Other Short-term Liabilities	159.8	107.6	76.1	63.6
Other Long-term Liabilities	1,295.6	1,216.2	1,125.0	594.5
Long-term Secured Debt	0.1	0.0	0.0	0.0
Long-term Unsecured Debt	1,544.8	884.2	766.6	682.9
TOTAL LIABILITIES	3,476.2	2,700.6	2,469.9	1,822.4
EQUITY				
Minority Interest/Minorities	0.0	0.0	0.0	0.5
Equity Capital & Reserves	822.8	918.2	757.8	706.2
TOTAL LIABILITIES & EQUITY	4,299.0	3,618.8	3,227.7	2,529.1
Adjusted Gross Debt	2,005.3	1,367.8	1,245.8	1,149.1
Debt Schedule				
DEBT PRIORITY				
Lease Liabilities	0.6	0.9	0.9	0.0
Secured	0.0	0.0	0.0	0.0
Unsecured	2,004.8	1,367.0	1,244.9	1,149.1
Convertible	0.0	0.0	0.0	0.0
Subordinated	0.0	0.0	0.0	0.0
Total Debt	2,005.3	1,367.8	1,245.8	1,149.1
Off-Balance Sheet Debt	0.0	0.0	0.0	0.0
Total Adjusted Debt	2,005.3	1,367.8	1,245.8	1,149.1
Non-recourse + Equity Hybrid Component	0.0	0.0	0.0	0.0
Total Adjusted Debt with Equity Credit	2,005.3	1,367.8	1,245.8	1,149.1
Adjusted Liabilities~~	2,005.3	1,367.8	1,245.8	1,149.1
DEBT SOURCE				
Bank	1,346.6	703.9	595.1	530.7
Capital Markets	0.0	0.0	0.0	0.0
Other	658.8	663.9	650.7	618.4
TOTAL DEBT	2,005.3	1,367.8	1,245.8	1,149.1
DEBT MATURITY				
Less than 1 Year	451.0	481.0	469.0	466.2
1 To 2 Years	114.0	107.0	7.0	0.0
2 To 5 Years	793.0	302.0	336.0	247.2
More than 5 Years	647.3	477.8	433.8	435.7
TOTAL DEBT	2,005.3	1,367.8	1,245.8	1,149.1
Unrestricted Cash & Deposits	202.7	81.5	88.7	58.8
CURRENT DEBT NET OF CASH	257.7	402.1	390.4	407.4
TOTAL DEBT NET OF CASH	1,802.6	1,286.3	1,157.0	1,090.3
TOTAL ADJUSTED DEBT NET OF CASH	1,802.6	1,286.3	1,157.0	1,090.3
Adjusted Liabilities Net of Cash	1,802.6	1,286.3	1,157.0	1,090.3
Restricted Cash & Deposits	0.0	0.0	0.0	0.0

~ includes Restricted Cash

~~ Total Adjusted Debt with Equity Credit plus Debt-like Pref. Stock

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Summary Income Statement

	31 Dec 2008	31 Dec 2007	31 Dec 2006	31 Dec 2005
	EURm	EURm	EURm	EURm
	IFRS	IFRS	IFRS	FAS
SUMMARY INCOME STATEMENT				
Revenue*	257.3	232.3	230.4	209.0
Cost of Goods Sold	131.8	100.3	97.0	99.2
GROSS PROFIT	125.4	132.1	133.4	109.8
Selling, Distribution & Administrative Expenses	129.8	116.5	108.3	94.0
Other Operating Expenditure**	-27.1	-18.3	-16.7	-19.3
Presentational only: L-T Rentals (incl. in SG&A above)	0.0	0.0	0.0	0.0
Operating EBITDAR	22.8	33.9	41.8	35.1
Depreciation & Amortisation	51.5	50.3	49.3	51.8
Non-recurring, non-operational and non-recourse income***	0.0	0.0	0.0	0.0
Associate Income/Loss	0.8	0.0	0.0	0.0
Other Income/Expense	0.0	0.0	0.0	0.0
EBIT	-27.9	-16.4	-7.5	-16.7
Interest Income	3.5	0.0	0.0	0.0
Interest Expense	17.8	14.4	10.2	8.1
Non-interest Financial Income/Charges	-10.9	-6.9	20.5	25.0
PBT	-53.1	-37.8	2.8	0.2
Taxation	0.0	0.0	0.0	0.0
Minorities	0.0	0.4	0.8	0.0
NET INCOME	-53.1	-37.4	3.6	0.2
Extraordinary Items/Accounting Changes	0.0	0.0	0.0	0.0
NET INCOME AFTER EXTRAORDINARY ITEMS (before dividends)	-53.1	-37.4	3.6	0.2

Summary Cash Flow

	31 Dec 2008	31 Dec 2007	31 Dec 2006	31 Dec 2005
	EURm	EURm	EURm	EURm
	IFRS	IFRS	IFRS	FAS
SUMMARY CASH FLOW				
Operating EBITDAR	22.8	33.9	41.8	35.1
Cash Interest Paid, Net of Interest Income	-5.7	5.2	7.5	12.9
Cash Tax Paid	0.0	0.0	0.0	0.0
Associate Dividends	1.2	1.2	0.6	0.3
Other Changes before Funds From Operations****	-9.6	-23.4	-15.6	-0.6
FUNDS FROM OPERATIONS	20.0	6.5	19.3	21.9
Working Capital	-0.3	-4.8	9.7	-14.2
CASH FLOW FROM OPERATIONS	19.7	1.7	29.0	7.7
Non-Operational Cash Flow***	0.0	0.0	0.0	0.7
Capital Expenditure	579.1	229.9	257.8	652.7
Dividends Paid	0.0	0.0	0.0	0.0
FREE CASH FLOW	-559.3	-228.2	-228.8	-644.3
Receipts from Asset Disposals	0.1	0.1	0.6	0.0
Business Acquisitions	11.1	0.2	9.2	0.0
Business Divestments	0.0	0.0	0.0	0.0
Exceptional & Other Cash Flow Items	-37.6	-27.4	-26.7	-21.4
NET CASH IN/OUTFLOW	-607.9	-255.7	-264.0	-665.7
Equity Issuance/(Buyback)	95.6	100.0	179.3	81.5
FX movement	0.0	0.0	0.0	0.0
Other Items Affecting Cash Flow****	-4.0	26.4	18.0	20.2
NET CASH FLOW AVAILABLE FOR FINANCING	-516.3	-129.3	-66.7	-564.0
OPENING TOTAL DEBT NET OF CASH	1,286.3	1,157.0	1,090.3	526.3
Net Debt Increase/(Decrease)	516.3	129.3	66.7	564.0
CLOSING TOTAL DEBT NET OF CASH	1,802.6	1,286.3	1,157.0	1,090.3

* Net of Sales, Royalty & Other Operational Taxes

** Excludes Depreciation & Amortisation

*** Analyst Estimate

**** Balancing Item

TEOLLISUUDEN VOIMA OYJ

Ratio Analysis

	31 Dec 2008	31 Dec 2007	31 Dec 2006	31 Dec 2005
	EURm	EURm	EURm	EURm
	IFRS	IFRS	IFRS	FAS
EARNINGS/PROFITABILITY				
Revenue Growth (%)	n.a.	n.a.	n.a.	n.a.
Gross Profit/Revenues (%)	48.8	56.8	57.9	52.5
Op. EBITDAR/Revenues (%)	8.8	14.6	18.1	16.8
EBIT/Revenues (%)	-10.9	-7.1	-3.3	-8.0
Pre-Tax Profit/Revenues (%)	-20.7	-16.3	1.2	0.1
Profit after tax/Revenues (%)	-20.7	-16.3	1.2	0.1
Effective Tax Rate (%)	0.0	0.0	0.7	0.0
Profit after tax/Average Equity (%)	-6.1	-4.5	0.4	0.0
Return on Average Assets (%)	-0.9	-0.7	0.5	0.4
FFO Return on Adjusted Capital (%)	1.3	0.9	1.5	1.6
Free Cash Flow Margin (%)	-217.4	-98.2	-99.3	-308.3
COVERAGES				
FFO/Gross Interest Expense and Preferred Dividends (x)	2.1	1.5	2.9	3.7
FFO Fixed Charge Cover (x)	2.1	1.5	2.9	3.7
(Op. EBITDAR-Capex)/Gross Fixed Charges(x)	-31.3	-13.6	-21.3	-76.3
Op. EBITDAR/Net Fixed Charges (x)	1.6	2.4	4.1	4.3
FFO/Interest Expense Net of Interest Income (x)	2.4	1.5	2.9	3.7
Free Cash Flow Debt Service Coverage (x)	-1.1	-0.4	-0.5	-1.3
Net Fixed Charges Cover (x)	-5.8	0.7	0.5	-2.4
LEVERAGE				
Total Adjusted Debt/Op. EBITDAR (x)	88.1	40.4	29.8	32.7
Total Adjusted Debt Net of Cash/Op. EBITDAR(x)	79.2	38.0	27.7	31.1
Adjusted Liabilities Net of Cash/Op. EBITDAR (x)	79.2	38.0	27.7	31.1
Adjusted Net Leverage/FFO (x)	52.5	61.5	39.3	36.3
Adjusted Leverage/FFO (x)	53.1	65.4	42.3	38.3
Free Cash Flow/ Adjusted Liabilities (%)	-27.9	-16.7	-18.4	-56.1
CFO/Total Debt Net of Cash (%)	1.1	0.1	2.5	0.7
CFO/Adjusted Liabilities Net of Cash (%)	1.1	0.1	2.5	0.7
Total Adjusted Debt/Total Adjusted Capitalisation (%)	70.9	59.8	62.2	61.9
FINANCIAL STRUCTURE				
Secured and Lease Debt/Total Debt (%)	0.0	0.1	0.1	0.0
Current Debt/Total Debt (%)	22.5	35.2	37.7	40.6
Off-Balance Sheet Debt/Total Adjusted Debt (%)	0.0	0.0	0.0	0.0
Total Debt Net of Cash/Tangible Equity (%)	225.0	142.0	157.4	158.2
PENSION ADJUSTED RATIOS				
Mixed Scheme Pension Liability	0.0	0.0	0.0	0.0
Pension Adjusted Net Leverage	79.2	38.0	27.7	31.1
Pension Adjusted Net Coverage	0.0	0.0	0.0	0.0
Pension Adjusted Net Coverage (Implied)	0.0	0.0	0.0	0.0
Implied Interest Cost	0.0	0.0	0.0	0.0
Pension Adjusted Gross Coverage	0.0	0.0	0.0	0.0
Pension Adjusted Gross Coverage (Implied)	0.0	0.0	0.0	0.0
WORKING CAPITAL CYCLE				
Average Inventory Processing Period (days)	472.0	559.0	563.0	556.5
Average Receivables Collection Period (days)	60.8	54.4	33.5	16.7
Gross Cash Cycle (days)	532.9	613.4	596.5	573.2
Average Payables Payment Period (days)	33.7	58.3	72.1	60.2
Cash Conversion Cycle (days)	499.1	555.1	524.5	513.0
ADDITIONAL INFORMATION				
Depreciation	51.5	50.3	49.3	51.8
Amortisation	0.0	0.0	0.0	0.0
Capital Expenditure/Depreciation (x)	11.3	4.6	5.2	12.6
CFO/Capital Expenditure (x)	0.0	0.0	0.1	0.0
Interest Capitalised	0.0	0.0	0.0	0.0
Hire/Lease/Rent Costs for Current Assets	0.0	0.0	0.0	0.0
Hire/Lease/Rent Costs for Long-term Assets	0.0	0.0	0.0	0.0
Contingent Liabilities	0.0	0.0	0.0	0.0
Operating Exceptionals in Operating Costs	0.0	0.0	0.0	0.0
Staff cost/Revenues (%)	0.0	0.0	0.0	0.0
R&D (net)/Revenues (%)	0.0	0.0	0.0	0.0

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