Consult GB

International
Market
Strategy

Heating Newsletter

July 2006

TOPICS:

International strategic market research and consultancy on building product and related markets

China: Solar water heaters help Chinese fight pollution

11 June 2006

Even as China's skies darken from air pollution, sunlight is shining on its solar water-heating industry, turning the country into a solar superpower. Thriving firms that manufacture low-priced solar hot-water heaters have helped build the world's largest market for the rooftop solar heaters.

Somewhere between 30 million and 40 million families now have solar water heaters installed on their rooftops, allowing nearly 200 million people to enjoy hot showers and use warm water to wash clothes and dishes. Explosive growth is forecast for years to come, slightly slowing China's surging appetite for conventional energy.

In Shandong province, which juts into the Yellow Sea, and in other rural areas of China, millions of rooftops hold the sloping panels of vacuum-tube heat collectors. The solar collectors cost from $160 to $750 for high-end models. In rural areas, the solar heaters are becoming standard appliances, like gas stoves.

China's solar industry is growing at 20% to 30% a year, according to the state-run PEOPLE'S NET Web site. Sales will double by 2010, when China will rely on solar for 1% of its energy consumption, the official XINHUA NEWS Service said in January.

"The number of rooftop solar hot-water heaters in China now exceeds that of all the rest of the world combined. It's a little known success story in China," said Lester Brown, the founder of the WORLD POLICY INSTITUTE, a Washington-based group that promotes sustainable use of resources. Brown spoke during a recent trip through China in which he also sounded an alarm over expanding deserts, heavy use of pesticides and other examples of environmental devastation.

China passed a law in February pledging to boost its use of renewable energy - such as solar, wind and hydropower - to 10% of its energy consumption by 2020.

Source: Charleston Gazette

USA: WATTS WATER TECHNOLOGIES buys CALFLEX

2 June 2006

WATTS WATER TECHNOLOGIES INC., a maker of valves for the plumbing and heating industry, announced that it bought CALFLEX MANUFACTURING, which makes water connectors. Financial terms were not disclosed.

Vernon, California-based CALFLEX has about $7 million in annual revenue.

Source: AFX Asia

Germany: VAILLANT warning on cost of raw materials

12 June 2006

VAILLANT, the German engineering company that is Europe's second-biggest manufacturer of domestic central heating boilers, has unveiled ambitious plans for growth in China but warned of "unbearable"

raw material price increases that, it says, will hit its profits this year.

Claes Goransson, joint managing director, said the large increases in prices of commodities such as plastics, copper and steel were "very worrying" and would be likely to keep its earnings before interest, tax and amortisation (ebita) flat this year, following a rise of 12% in 2005.

"In the past year we were able to absorb €20 million ($25 million) of extra material costs due to efficiency measures such as higher productivity, but it is harder to maintain this rate of progress when some materials appear to keep going up in price," said Mr Goransson. He said he was particularly concerned about the price of copper - a staple material in plumbing fittings and in the pipe work inside boilers - which has shot up in price by nearly fourfold in the past 18 months.

China accounted last year for sales by the company of just € 6 million, involving the sale of 10,000 boilers, all imported from the company's plants in Europe.

However, VAILLANT recently started construction of a €7 million plant for making boilers in Wuxi, China, which the company hopes will be making 150,000 boilers a year within five years - almost all of them for sale within China. If the 150,000 target is reached, that would represent roughly 10% of the total boiler output of VAILLANT last year. "There are a lot of growth opportunities for us in China as people become more wealthy and as a gas pipeline infrastructure gradually takes shape," said Mr Goransson.

VAILLANT last year had sales of €1.79 billion, with ebita of € 228 million. Net earnings were €200 million, more than double the €81 million in 2004. The privately-owned company has about half its manufacturing in Germany but gets four-fifths of its revenues from outside the country, making it a large exporter.

Source: Financial Times

USA: NORTHEAST states push for boiler controls sparks industry outcry

29 June 2006

NORTHEAST air officials are eyeing stringent new controls on industrial boilers as part of a region-wide plan to reduce emissions to meet EPA's air standards, but the plan is drawing fierce opposition from boiler owners who say the cost of the controls would be too high.

The OZONE TRANSPORT COMMISSION (OTC), which represents 12 Northeast states and the District of Columbia, is also urging EPA to issue or revise a host of air rules for several other industry sectors in order to help the region attain the agency's 8-hour ozone standard.

OTC unanimously passed a resolution at the group's annual meeting here on June 7 approving guidelines that all member states will use to develop controls on industrial, commercial and institutional (ICI) boilers, which combust coal, oil or natural gas and are used in a wide range of industry sectors including chemical, metals, paper, petroleum and food production.

The resolution calls on states to develop boiler emission control rules mandating nitrogen oxide (NOx) reductions of between 10 and 75% depending on the size of the boiler and the type of fuel it uses, with a

compliance date of Jan. 1, 2009. Relevant documents are available on INSIDEEPA.COM.

OTC is considering a host of control measures for various industries to reduce NOx and volatile organic compounds (VOCs), which contribute to ozone formation.

But a source within the COUNCIL OF INDUSTRIAL BOILER OWNERS (CIBO) says existing and pending federal rules covering ICI boilers represent the most cost-effective measures available.

The source says that although new boilers may be able to meet the OTC targets, for existing boilers it is not financially or technologically feasible to achieve some of the emission limits the Northeast states are suggesting, given the federal and state rules that already regulate the boilers.

ICI boilers are currently governed by new source performance standards and state rules mandating reasonably available control technology (RACT) to reduce emissions. Future emission reductions also are expected from an EPA maximum achievable control technology standard for boilers and the co-benefits likely to result from NOx reductions under EPA's clean air interstate rule (CAIR), according to an OTC candidate control measure summary.

But the OTC summary notes that reducing emissions beyond levels expected as a result of existing and pending rules has "the potential to achieve significant reductions" in the region because ICI boilers are a significant emissions source and are projected to account for "an even greater contribution" in coming years.

The OTC resolution suggests states develop rules to reduce NOx (10% from natural gas, coal and oil boilers with less than 25 per million British thermal units per hour (MMBtu/hr) heat input; 50% for natural gas, coal and oil boilers between 25 and 50 MMBtu/hr input; 10% for natural gas, coal and oil boilers between 50 and 100 MMBtu/hr input; and 75% for natural gas boilers between 100 and 250 MMBtu/hr input).

OTC's control measure summary says NOx emissions can be reduced using a number of controls such as low NOx burners, selective catalytic reduction and flue gas recirculation, but decisions on which control to use will depend on the boiler configuration, size and fuel type in question.

But the CIBO source says many of these controls would require excessively expensive control technologies and the group will be seeking meetings with OTC and individual member states to "try and bring some sense into what they're doing."

One state official says the emissions reduction targets in the resolution are only guides to states, and officials can stray from the numbers in the resolution if necessary.

Meanwhile, OTC members at the meeting agreed to a separate resolution calling on EPA to either issue new rules or tighten existing federal rules for eight emissions sources, including ICI boilers of over 100 MMBtu/hr input.

The resolution says that although the Northeast states will pursue state and regional measures, "in several instances, control measures are truly best implemented on a national level, and, as national programs, would prove to be

environmentally significant efforts at managing ozone formation."

The resolution calls on EPA to "at a minimum" develop and implement national control measures for the following emission sources: architectural and industrial maintenance coatings; consumer products; ICI boilers over 100 MMBtu/hr input; portable fuel containers; municipal waste combustors; regional fuel blends beyond the OTC region; small engine emission regulations; and gasoline vapour recovery rules.

Scott Mathias of EPA's Office of Air Quality Planning & Standards said at the meeting that the agency is already working with OTC on developing a "consistent, uniform" consumer products rule. Mathias added that EPA is also looking at a "sector-based program" for ICI boilers and municipal waste combustors but that these efforts "are still in their infancy," and he did not offer further details.

In the OTC's control measure summary, the group suggests that one way to reduce NOx emissions from municipal waste combustors would be to install selective non-catalytic reduction on combustors that are not currently fitted with the emissions control.

An EPA spokesman did not return calls, but the agency is already eyeing controls on portable fuel containers in its proposed mobile source air toxics rule, and is developing a small engine emissions regulation that it has not yet proposed. OTC's resolution is intended in part to push the agency to act on any rules it has been delaying, according to a second state official.

Officials at the meeting also agreed to preliminary model rules that would establish new emissions controls on consumer products, adhesives and sealants and portable fuel containers in the absence of federal action. Another model rule would mandate the installation of "low-NOx chip reflash" kits on certain engines in order to reduce NOx emissions.

OTC officials at the meeting also discussed possible model rules to mandate new emissions controls on utilities, including a "CAIR-Plus" cap-and-trade strategy that would set tighter NOx and sulfur dioxide emissions caps than EPA's plan.

Part of the discussion on utility controls focused on peaking units, which are electric generating units that operate only during times of peak energy demand, such as hot summer days. Most existing peaking units do not have a NOx control device, the second state official says. OTC is considering control measures such as water injection or new turbines that could reduce daily and annual NOx emissions from peaking units.

OTC also agreed on a statement saying it would continue to evaluate and develop options to address emissions from the utility sector using a cap-and-trade program. The statement also recognizes that a separate program for addressing peak demand days also may be required under any CAIR-Plus strategy, and directs state officials to provide a model utility rule no later than OTC's fall meeting in November.

But EPA is already questioning the legality of OTC's plan to mandate the retirement of a set number of emissions credits even before trading begins under CAIR Plus. Sam Napolitano, director of EPA's clean air markets division, told state officials meeting here June 6 not to "monkey with" emissions

credits allocated under CAIR, saying it is legally "problematic"

Source: Clean Air Report

Austria: Austrians install 8,847 wood pellet-fired boilers 2005

29 June 2006

A total 8.874 wood pellet-fired heating systems were sold in Austria in 2005, up 46% year-on-year, exceeding the number of oil-fired heating systems sold for the first time, it was reported on June 29, 2006.

The higher interest in biomass-fired heating systems is mainly attributed to the growing oil prices and the improved marketing. Some 37,000 wood pellet central heating systems and 9,000 fireplaces with a combined heating capacity of 790,000 kW were installed in Austria by the end of 2005.

Most the of the pellet-fired heating systems were installed in Upper Austria, followed by Lower Austria and Styria. The pellet consumption in Austria rose to 280,000 tonnes from 220,000 tonnes, while domestic production stands at some 490,000 tonnes.

Source: APA Economic News Service

Sweden: DANFOSS to invest €7.6 million in Global R&D Centre in Swedish Arvika

19 June 2006

Danish industrial group DANFOSS A/S will invest some €7.6 million ($9.6 million) in the construction of a global research and development (R&D) centre for heat pumps in Arvika, western Sweden, it was reported on June 16, 2006.

The company said it would be the largest of its type in Europe and will provide jobs for 40 engineers and researchers. Arvika is the headquarters of THERMIA VARME AB, a Swedish heat pumps specialist that DANFOSS acquired in late 2005.

DANFOSS investment would have a positive effect on THERMIA, enabling it to strengthen its position, THERMIA CEO Mats Bergsjo said. The DANFOSS heat pump business has annual sales of €43 million ($54.1 million), the majority of which is generated in Sweden. THERMIA currently has 275 employees.

THERMIA (www.thermia.se) manufactures heat pumps and water heaters, including geothermal heat pumps and air/water heat pumps, as well as heat pumps that provide heating and cooling. The company has an annual turnover of 500 million Swedish crowns ($67.8 million/€53.9 million).

Source: Swedish News Digest

China: China invests 3.5 billion Yuan to popularise use of new energy in rural areas: white paper

5 June 2006

The Chinese government spent 3.5 billion yuan (around $438 million) during the Tenth Five-Year Plan period (2001 - 2005) to popularise new types of energy in China's rural areas, says a white paper entitled Environmental Protection in China (1996-2005).

By the end of 2005, there were more than 17 million households using methane, and the yearly output of methane reached 6.5 billion cubic metres, according to the white paper, released by the Information Office of the State Council of China.

China regarded the development of new-energy projects, including an ecological model of marsh gas in rural areas, as an important approach to protecting and improving the rural ecological environment.

The government has devoted major efforts to developing a project producing methane from wastes in livestock and poultry breeding, the white paper says.

So far, more than 2,200 such methane projects have been completed, treating more than 60 million tons of faeces. 137,000 methane pits for purifying domestic sewage and over 500 central heating projects with gas from burning stalks have been built, according to the white paper.

In addition, 189 million households now use fuel-saving stoves, and solar water heaters cover a total of 28.5 million sq m. Meanwhile, the government has been actively promoting the use of renewable solar, wind and geothermal energy sources, the white paper says.

Source: Xinhua News Agency

China: DJ CHINA BEIJING ENTERPRISES cuts stake in heat pump manufacturer

29 June 2006

Chinese conglomerate BEIJING ENTERPRISES HOLDINGS LTD announced it had sold part of its stake in its heat pump manufacturing joint venture for HK $99.3 million.

The company said its holding in BEIJING ENTERPRISES EVER SOURCE ENERGY LTD. dropped to 51% from 87.8%. Its partner, JASON NEW RESOURCES HOLDINGS Ltd., raised its holding to 49% from 12.2%.

JASON NEW RESOURCES is owned by Xu Shengheng, who founded BEIJING ENTERPRISES HOLDINGS' heat pumps business. BEIJING ENTERPRISES said the deal will help 'increase motivation for Xu to pursue success and growth of the business.'

BEIJING ENTERPRISES EVER SOURCE posted an unaudited net loss of CNY 45.5 million in 2005. Its 2004 net profit was CNY 49.2 million.

BEIJING ENTERPRISES HOLDINGS said it spent HK$14.4 million to raise its stake in a profitable heat pump manufacturer, BEIJING EVER SOURCE HOT PUMPS CO., to 96.8% from 47.8%. The holding company invested in BEIJING EVER

SOURCE HOT PUMPS through BEIJING ENTERPRISES EVER SOURCE.

BEIJING ENTERPRISES said the deals would help improve its geothermal systems business. 'The heat pump manufacturing business in China has great potential for expansion,' it said.

Source: Dow Jones Chinese Financial Wire

Europe: Renewable energy : solar thermal energy still posting double-digit growth

4 July 2006

The solar thermal industry in Europe has posted glowing results for 2005, with a 26% growth rate in installed capacity over the previous year. In other words, almost 1.400 MWth of solar thermal capacity (2 million square metres of collector area) was newly installed in Europe in 2005, according to the EUROPEAN SOLAR THERMAL INDUSTRY FEDERATION (ESTIF). By the end of 2005, the total capacity in operation in the EU (plus Switzerland) had reached 11.175 MWth (15.9 million m2 of collector area).

While the traditional lead markets like Germany, Austria and Greece have all performed well in 2005, ESTIF points up some very good developments in several of the high-potential markets like France and Spain. New installations more than doubled in France where 85 MWth were added in 2006.

The European solar thermal industry reckons that it will finish the year with another growth rate of 20% or more. Several governments have introduced new solar thermal support programmes. Spain has gone a step further by introducing an obligation to use solar thermal in nearly all new buildings. With this decision, it has created stable framework conditions which are a prerequisite for strong long-term growth of solar thermal.

For the heating and cooling sector, ESTIF urges governments to support solar thermal in order to minimise the use of conventional fossil fuels.

Source: Europolitics

Romania: Romania to borrow €3.4 billion to upgrade central heating system

14 June 2006

Romanian Finance Ministry will contract loans worth a total of 12.17 billion Romanian lei ($4.3 billion/€3.4 billion) to finance a project to upgrade the country's central heating system as well as the thermal insulation systems in apartment buildings in the country, the ministry said on June 14, 2006.

The total cost of the project will run up to 13.419 billion lei ($4.76 billion/€3.79 billion), the ministry said.

The finance ministry will make the funds available to local administrations in the country as of 2007 in an effort to optimise distribution of heating to apartment buildings.

Source: Romanian News Digest

COUNTRY SPECIAL FINLAND

Overall Country Background

Finland is the furthest east of the five Nordic countries and its mainland border with Russia runs for over 1,200km. Finland also shares a 600km border with Sweden and a 700km border with Norway. Almost its entire national territory is situated between 60 and 70 degrees Northern latitude, and a quarter of its surface area lies north of the Arctic Circle. Boreal coniferous forests cover 68% of the country, 10% is covered by lakes and other water systems, and only 9% of the country is cultivated area. Finland is the second largest Nordic country after Sweden with a total surface area of 338,145km^2.

The population in Finland is concentrated in the Southern, milder climatic region surrounding Helsinki, Tampere and Turku. The Southern regions are where the highest density of urban conglomerations is to be found, and the Northern regions are in contrast the more sparsely populated regions. This disparity is increasing as demographic trends suggest a population shift from rural to urban areas.

Finland has a highly industrialised, largely free-market economy, with per capita output roughly equal to that of the UK, France, Germany, and Italy. Its key economic strength is in manufacturing – principally in the wood, metals, engineering, telecommunications, and electronics industries. Trade is important, with exports contributing two-fifths of GDP in 2005.

Overall Market Development

The Finnish heating market is dominated by domestic producers and does not conform to European norms since Finnish consumers demonstrate a demand for quite unique heating solutions in a country of low ambient temperatures. The overall Finnish domestic heating products market fell considerably at the beginning of the 1990s, largely as a knock-on effect of the economic slowdown in Europe. The overall construction market fell by 48% between 1991-1993. Since 1994, however, as the economic situation has improved, demand for heating products has increased.

2005 Heating Market

The total market for central heating hot water generators (boilers and heat pumps) grew by around 4% in volume terms in 2005 on the preceding year (lower than the 10% growth observed in 2004):

- Despite a tough year, standard efficiency jet burner boilers (the majority of which are oil fuelled) continued to dominate the market, accounting for around 60% of total boiler sales. The penetration of condensing technology is still insignificant.

- Solid fuel boilers accounted for around 13% of the total market in 2005. Wood (log and chip) burning units account for the majority of this market, due largely to the abundance and low cost of the fuel source. However pellet boilers are now gaining share and are likely to account for the bulk of growth in this market in the next few years.

- A stable market for electric boilers exists which remained small despite a slight fall in electricity prices in 2005.

- The hydraulic heat pump market sustained good growth at 18% in 2005. Sales of geothermal heat pumps grew significantly, accounting for two thirds of sales and exhaust-air heat pumps accounted for around a third of the 2005 market, while sales of air/air heat pumps continued to grow in 2005. Growth in this sector is attributable largely to government initiatives. Heat pumps are fast taking share from boiler alternatives, particularly in the new house-building sector.

The jet burner market is increasingly supported by replacement demand (97% of burners sold in 2005 were for solo/ replacement purpose). Demand in 2005 for burners sold for fitting to new (predominantly large gas boiler) units remained quite stable whilst the market for solo/ replacement burners fell by nearly 30% on the preceding year. A 33% hike in fuel oil prices in 2005 goes a long way to explaining the fall in jet burner demand.

The total market for radiators declined in 2005 by 1.4%:

- The main part of this decline is attributed to wet system steel panel radiators – accounting for about two thirds of total radiator sales – the market for which fell by around 5%. Recent price rises are thought to have frustrated replacement demand.

- In the new build sector, radiators are losing significant share to wet system underfloor heating.

- The current consumer trend towards design and aesthetics coupled with steady increases in residential renovation spend are the main factors supporting growth in the wet system towel warmer and decorative steel tubular radiator markets in the past few years.

- A trend of decline can be observed in the electric radiator market.

In 2005, the overall water heater market was fairly stable with gains in the 'linked to boiler' segment and a decline in the dedicated segment. This trend can be explained in part by growth in geothermal heat pump sales. There exists no significant market for combi boilers, instantaneous electric or gas water heaters in Finland.

`