



EXPERT NEWS 1/2015

**20 kWh  
per m<sup>2</sup>/year**

SOLAR & GROUND ARE  
RECORD-BEATING

**THE WIND FARM  
HEATED BY AIR**

**IN THE AIR**

MEET NIBE's air/air heat pumps

# Sense of sameness in the heating industry?

YET AGAIN, WE ARE ASTOUNDED by how representatives of the Swedish energy sector are unilaterally trying to favour one particular area instead of taking advantage of Sweden's uniquely strong position in the world. On 23rd February, the DN newspaper published a debate between ten "energy and environmental experts". The Swedish District Heating Association has apparently requested a legal review of the Swedish building regulations, which it believes are flawed. The implication, which is totally incomprehensible, is that heat pumps are something negative. It has been stated numerous times by several non-partisan energy experts that Sweden is in a class of its own when it comes to using heat pumps and renewable energy. Johan Barth, CEO of Geotec (the trade organisation for Swedish drilling entrepreneurs) quite rightly points out in his response to the article, "We have some of the foremost researchers and best manufacturers. The systems provide huge amounts of free, local and renewable heating and cooling energy."

EXEMPLARY HEAT PUMP TECHNOLOGY, which makes us a leading country in the world, is used by more than 1 million of the 1.9 million single-family houses in Sweden. Of all the EU countries, Sweden has by far the highest percentage of renewable energy consumption. Our entire industry is proud to be able to promote well-being, help enhance the indoor and outdoor environment and reduce energy consumption. All at a lower cost to the end consumer and supported by a successful Swedish industry.

The freedom of choice we have in Sweden has meant that most home owners have understood and chosen heat pump technology rather than other alternatives. District heating is also a qualifying technology, for example, in cities where it is not always possible to drill for geothermal energy. However, we should avoid a revision of tough building regulations in order to "persuade" consumers one way or the other, and trust them to make their own intelligent choices.

EUROPE'S LARGEST marketing initiative in our industry this year will take place in March. The ISH trade fair in Frankfurt is an event that we are looking forward to and all readers of Expert News are most welcome to join us there. The NIBE Group

will be showcasing various brands and products in several booths in two exhibition halls. The main NIBE brand will have its booth in Hall 8. We are delighted that we have finally managed to get twice the space in the main hall, which means we have 548 square metres in which to display our range of products and we'll be doing our utmost to present them to your overseas counterparts on the installer and wholesaler side. We greatly appreciate your participation too, as Swedish product and installation experience is once again in the spotlight with glowing optimism and willingness to invest.

A team of young, newly-appointed, well-trained, international, sales people will be at the trade fair, representing NIBE's newly-launched trainee programme in Europe. You can find out more in Expert News about the people who, in the future, will be helping to convert overseas markets' use of fossil fuels into future product solutions.

At last, we are introducing NIBE's Aria air/air heat pump to the Swedish market and are already preparing for the tremendous interest this entails. We're excited about the new products we are launching, our offers in solar panels and other areas and our enhanced sales force. All of this bodes well for our progress together this year too.

DEAR READERS, let us hold our heads high and, sustained by decades of successful Swedish design, production and installation, move on to new achievements. Let us do this by allowing renewable resources to contribute to a far better world, ensure satisfied end customers and, at the same time, generate strong business results.



## NIBE ENERGY SYSTEMS

Sales  
Customer support  
Marketing communication  
Tel: +46 (0)433-73 000

## NORTHERN NORRLAND

Lars-Göran Andersson, UMEÅ  
Tel: +46 (0)433-27 34 54  
Text message: +46 (0)70-209 73 02

## CENTRAL NORRLAND

Patrik Åhman, DOMSJÖ  
Tel: +46 (0)433-27 34 62  
Text message: +46 (0)70-190 04 79

## SOUTHERN NORRLAND

Tommy Landin, HUDIKSVALL  
Tel: +46 (0)433-27 34 65  
Text message: +46 (0)70-213 69 19

## STOCKHOLM

Stefan Lundqvist, STOCKHOLM  
Tel: +46 (0)433-27 34 63  
Text message: +46 (0)73-057 00 02

Mikael Andersson, STOCKHOLM

Tel: +46 (0)433 – 27 3557  
Text message: +46 (0)70 – 570 80 08

Per Mollstedt, STOCKHOLM

Tel: +46 (0)433 – 27 3464  
Text message: +46 (0)70 – 349 66 17

## WEST

Mikael Albo, FALKÖPING  
Tel: +46 (0)433-27 34 60  
Text message: +46 (0)70-699 55 80

Christer Svensson\*, GOTHENBURG

Tel: +46 (0)433-27 34 56  
Text message: +46 (0)70-209 06 11

Magnus Ström, KUNGÅLV

Tel: +46 (0)433-27 35 06  
Text message: +46 (0)70-590 35 06

## SOUTHWEST

Arne Gustafsson, HALMSTAD  
Tel: +46 (0)433-27 34 55  
Text message: +46 (0)70-942 91 50

## EAST

Magnus Lindberg\*, KUMLA  
Tel: +46 (0)433-27 34 91  
Text message: +46 (0)70-590 11 91

Tord Beurling, MJÖLBY

Tel: +46 (0)433-27 35 20  
Text message: +46 (0)72-239 03 90

## SOUTH

Fredrik Steiner, HÖLLVIKEN  
Tel: +46 (0)433-27 34 58  
Text message: +46 (0)70-516 39 86

Fredrik Snygg\*, VITTSJÖ

Tel: +46 (0)433-27 34 57  
Text message: +46 (0)70-190 03 16

Fredrik Bäckman, MARKARYD

Tel: +46 (0)433-27 35 29  
Text message: +46 (0)730-58 00 98



\* Sales Manager commercial buildings.



## NIBE™ ARIA

- Three sizes with outputs to meet all needs
- Up to approx. 180 m<sup>2</sup>
- Inverter-driven
- Remote control via App
- Remote control with room sensor
- Condensation run-off
- Tested in Swedish winter conditions

# It's in the air!

## FULL SPEED AHEAD FOR AIR/AIR HEAT PUMPS AT NIBE

It is almost exactly a year since NIBE unveiled its brand-new air/air heat pumps at the Nordbygg trade show in Stockholm. Sales are now well under way and more and more installers are seeing the new product range as a way of creating additional sales.

### FOR MANY YEARS, AIR/AIR HEAT PUMPS

**HAVE** been something of a market for fortune seekers. Mail order, e-commerce and pallet sales in home electronics and home appliance mega stores have exerted downward pressure on profits and confidence in the products.

But this is changing now.

Jonas Thörnqvist, who is responsible for the air/air heat pumps at NIBE, says "If it's thought easy money can be made in a sector, it can often become a bit of a Klondike situation.

We now feel that the market has matured and customers understand that there is a difference between the products offered in low-price stores and the products that come from the building services sector. The difference applies to those who sell and install the products too."

### NEW LAW STOPS OVER-COUNTER TRADING

New legislation, introduced on 1st January, states that anyone who sells a heat pump\* to a consumer is obliged to guarantee that it is installed by a qualified and certified professional.

In practice, this means that it will not be possible to sell these heat pumps in the same way as before.

"It gives all professional installers an excellent opportunity to sell a combination of a good product, qualified installation and a comprehensive heating solution for the home."

### NEW MARKET

The new range and the new legislation open a new market for installers. Until now, few installers have been able to offer a good solution for houses with electric central heating, without proposing a total conversion.

"It's now possible for all NIBE installers to offer a solution with the same assurance and reliability as with our products for water-based systems. We test all of our outdoor units in our extreme climate lab and in real operating conditions in the toughest imaginable climates. And of course, we have exactly the same warranties and guarantee insurance for as the rest of our range."

"You could say it's a golden opportunity in many ways..."



## TAKE THE BAIT and enter our competition!

### How about a fishing trip to Norway?

Take up the challenge and win a trip to Norway.

The competition starts on 1st March 2015 and is open for six months.

The three installers who sell the most air/air heat pumps in that time will win a place on board. Another four winners will be drawn from the 20 installers who've sold the most.



### TALK TO YOUR SALES REP FOR MORE INFORMATION!

\* Applies to all systems of "split type" where the refrigerant goes from indoor to outdoor unit.



Twelve solar panels and a small ground source heat pump keeps the energy price to a minimum.

# MEGA EFFICIENT MAIL-ORDER HOUSE!

Expert News has featured several articles on energy-efficient buildings over the years. Perhaps Solgläntan from A-hus is one of the most interesting. Let's find out. It is, in fact, a prefabricated "mail-order house" that can be purchased directly today and it beats all the recommended energy requirements by a mile!

**THE CONSTRUCTION INDUSTRY IS THE** largest consumer of energy in the European Union. It also accounts for 36% of the EU's total CO<sub>2</sub> emissions. The EU is therefore now investing heavily in encouraging the construction of energy-efficient buildings. As part of this initiative, it has launched a project called NEED4B in which it supports a number of companies that are constructing houses designed to inspire others. These houses are studied for two years and then evaluated. The objective of the project is to develop new methods and techniques that can be freely shared with anyone who wants to benefit from them.

Sweden is one of the five countries involved in the project

and is building two houses, one in Borås and one in Varberg. The company, A-hus, built a house in Varberg and called it Solgläntan. At first glance, you'd think it a fairly standard Swedish house, with a living area of 146 m<sup>2</sup> and solar panels on the roof.

Yet this is a completely unique house, with an annual energy consumption for heating, hot water and ventilation of 20 kWh per m<sup>2</sup>. That is 60% below the requirements of the BBR building regulations.

**ITS SOURCE OF HEATING IS THE SMALLEST** ground-source heat

pump in the market, the NIBE F1255-6, which operates entirely without an electric heating element. The panels on the roof have also been supplied by NIBE and produce about 3 000 kWh per year. This means that the total amount of electricity that the household purchases is an estimated 4,761 kWh/year, when the energy produced by the solar panels has been deducted.

"These figures are astounding," says Richard Carlholmer at NIBE.

"You've got to remember that this house is not "odd" in any way either. It hasn't been built to any special dimensions and its windows are not tiny or few in number." On the other hand, it incorporates quite a lot of smart technologies to give it the perfect climate shell, plus a state-of-the-art heat pump solution.

Two of the most outstanding solutions are highly visible, however, even if you don't immediately think of them as "energy savers".

There is a classic-style, unheated entrance vestibule for outdoor clothes and other items. The vestibule creates a sluice that prevents warm air from disappearing when the door is opened. It also means there aren't piles of shoes spread across the floor in the hallway...

**THE BACK OF THE HOUSE** has a conservatory. It is like an outdoor room that can be used in the winter. It also means you can have large windows and glazed doors in the living room and kitchen without losing any of the waste heat.

"According to A-hus, its costs about SEK 60,000 more to build Solgläntan than an equivalent house with conventional solutions. Considering it is almost self-sufficient in terms of electricity and has one of the most advanced heating systems currently available in the market, that extra cost is extremely low. It also features those attractive additional spaces. I think we'll soon be seeing similar solutions in more homes." Heat pump and solar panels make an unbeatable combination.



The classic entrance vestibule is coming back into favour and is now serving as a "heat sluice".

# 2015

## THE YEAR OF SOLAR PANELS!



Many experts believe that 2015 will be the year when solar panels take the Swedish market by storm. The combination of a new tax reduction incentive, higher outputs, lower electricity consumption and high-quality heat pumps means that more and more households can make considerable savings that will benefit not only their wallet but the environment too.

We've been hearing about solar panels since the nuclear power debate in the 1970s. But it's only now that the technology and legislation seem to be falling fully into place. From 2012-2013, the installed output doubled each year from about 8.3 to 19 MW. There is much to suggest that the curve was moving along the same trajectory in 2014.

Although good solutions have been available on the market for years, the technology is evolving at lightning speed. Today's solar panels produce electricity even in the winter when the sky is overcast and the prices have fallen by more than 80% in six years. Richard Carlholmer at NIBE says, "Here at NIBE, we started selling our own solar panel packages a few years ago. This year, we have launched a new generation of panels. They produce 260 watts compared to the previous 240 watts. That might not sound like much of a difference. But it means that the 12 panels you have today generate as much power as the 13 panels used to do.

Another difference is that the panels can now be installed in far more ways, depending on what is appropriate for the building. Previously, they could only be installed 2x6, but now they can be arranged in far more formations, such as 1x12, 3x4, or 2x3 + 2x3 by dormer windows.

### TAX CREDIT

Better solar panels, more efficient heat pumps and lower energy consumption of lighting, etc. mean that households with solar panels do not need to purchase as much electricity.

New tax rules, introduced on 1st January, have the effect of lowering costs even more. Homes now receive a tax credit of SEK 0.60 per kWh for the renewable electricity that is fed into the grid. However, only up to as many kWh that the home draws from the grid, with a maximum limit of 30,000 kWh.

Therefore, the maximum possible tax credit each year is SEK 18,000.

"Everything is pointing in the same direction," says Richard.

"I believe that solar panels will be as common a feature on houses in the future as chimneys have been in the past. We'll probably be installing solar panels on every second small house within three to five years."



# HUNDREDS

*wanting to sell heat pumps!*

When NIBE Energy Systems advertised for young people in Europe interested in a future in heat pump sales, the response was overwhelming. It received hundreds of applications from 45 countries for the ten positions in NIBE's brand-new trainee programme for the future.

**HEAT PUMPS ARE PART AND PARCEL OF** everyday life for everyone in the construction or building services sectors in Sweden. That's not the case in most other parts of the world – not yet. This is the reason why NIBE is now investing in the people who will be selling tomorrow's heating.

Kjell Ekermo is the Business Area Manager at NIBE Energy Systems. He tell us, "The market for heat pumps is going to grow strongly in much of the world. As one of the world's leading manufacturers, it is not just obvious that we should have the best products, we should have the most talented sales force too. That requires skills and expertise, especially in the markets where the customers are unfamiliar with heat pumps."

**IN 2014, NIBE LAUNCHED A NEW, TWO-YEAR PROGRAMME** for ten sales trainees in Germany, the UK, the Netherlands and Switzerland. The requirements included a university degree, fluency in English and a keen interest in sales. Hundreds of applications were received from 45 different countries and the programme began in October, since when there have been several training sessions and assignments.

At the same time, all nine of the trainees are working in the company in their respective sales departments.

"They have learned a tremendous amount in a short period of time," says Karolina Marcelius, Business Area Coordinator at NIBE Energy Systems and Project Manager for the programme.

"It will be very exciting to monitor their progress and that of the entire project."

## Lots of new sales staff!

There are many new faces in NIBE's Sales Department right now. Here's a short presentation of the names and places you might be in contact with in the future.

**AFTER 40 YEARS OF LOYAL SERVICE, NILS-OLOF PETERSSON HAS** retired.

**Linda Persson**, who has worked for the company for 17 years, and knows the products and procedures inside out, has taken over his role. Stepping into Linda's role is one of our new appointees, **Åsa Olsson**. Eva Blank will be retiring at the end of April, also after many years of dedicated service! Eva's role will be taken over by **Anna Nilsson**.

**WE HAVE THREE NEW SALES REPS IN STOCKHOLM:**

**Per Mollstedt** is responsible for the northern districts of Stockholm up to Uppsala. He joins the company from Wavin and prior to that he was with Bravida for 8 years.

**Stefan Lundqvist** is in charge of the districts in the west of Stockholm out to Västerås. He joins us after five years working for Bravida.

**Mikael Andersson** is responsible for the southern districts of Stockholm down to Södertälje. Michael was previously employed by HP Pipes for 8 years.

We also have a new contact for Gotland. **Fredrik Bäckman**, who has been working at NIBE in Markaryd since 2004, and in the past few years as a district sales rep. Fredrik is based in Markaryd and is responsible for Småland and Gotland.

**You'll find all their phone numbers** on page 2.



Linda Persson



Per Mollstedt



Stefan Lundqvist



Åsa Olsson



Anna Nilsson



Mikael Andersson



## SELF-SUFFICIENT AIR IN THE COLD

**IT'S SAFE TO** say that Trattberget/Skallberget wind farm outside Örnsköldsvik is self-sufficient in the generation of electricity. The company, Vindin, has about 30 wind turbines here producing some 200 million kWh of electricity a year. That's sufficient capacity to heat as many as 20,000 homes – or 40 000 if they are as modern as the Solgläntan house featured elsewhere in the magazine! The wind farm's offices are heated by a NIBE F2030 air/water heat pump with a VVM 310 indoor

unit that operates with an FTX system.

Stefan Eklund at Myresjöhus, which constructed the building, says "Some people still think that air/water heat pumps can only be used in the south of Sweden.

It's clear from these pictures that such a theory is no longer true."

"Ground/rock heat was never an option as the conditions aren't right. Since the building was to house seven work stations, an FTX was installed because a high air exchange rate was needed. Naturally, this

is also suitable bearing in mind the cold outdoor temperatures you get here.

The system meets all of requirements of the Swedish National Board of Housing (Boverket) and its installation cost was minimal.

"I'm sure that more people will start thinking along these lines, even those who live in the north of Sweden," says Stefan with satisfaction.



# 5

### SALES ARGUMENTS FOR NIBE AIR/AIR HEAT PUMPS.

- 1. YOU.** NIBE's products are only sold by installers. This means the customer gets one point of contact who is fully responsible for both the product and installation.
- 2. CLIMATE LAB.** NIBE's products are all designed for Nordic climates and undergo tests in our demanding climate lab.
- 3. BACKUP.** Our products are ours – all the way. We assume as much responsibility for air/air heat pumps as for all other products. With regard to both service and warranties.
- 4. INVERTER-DRIVEN TECHNOLOGY.** Inverter-driven technology is dear to us at NIBE. It's more cost-efficient and causes less wear and tear.
- 5. SMART SOLUTIONS.** Examples include remote control with room sensors, condensation diversion and app-control.



# THERE'S SO MUCH HEAT OUT THERE...

– Just waiting to be collected

Some 30 years ago the Swedish company NIBE started to manufacture ground source heat pumps. What was then seen as a novelty is today the primary source of heating in new houses in large parts of Scandinavia. Heat pumps has also played a major part in Sweden reducing its dependency of fossil fuels for heating by close to 80%.

And as someone said – if it can heat a house in Scandinavia, it can heat a house anywhere!

**TODAY NIBE IS A MAJOR** player in the heating industry with an annual turnover of some € 900 million and more than 6,000 employees on three continents.

A large part of this is the result of the success of ground source heat pumps. With the aid of a ground source heat pump, solar energy stored in the ground can be collected and used to heat homes and commercial buildings.

Warmth builds up underground from

the first days of spring when the surface of the earth starts to thaw, to high summer, when the rays of the midday sun penetrate deep down into the ground. By the time the autumn leaves are falling, there's enough energy stored in the ground to heat up any house throughout the coldest winter. A heat pump collects and upgrades this naturally occurring warmth.

Even a wet and cool summer can still provide enough energy to maintain a

comfortable indoor temperature in the coming winter.

If at any point it gets too hot inside the house, the same system can be used for cooling.

Drawing on the lower temperature underground (between 4 and 12 C° ) passive cooling also exploits nature's own resources – simply for cooling instead of heating.

It's amazing, but true.

## THREE KINDS OF HEAT PUMPS

Heat pumps is a word with many different meanings. Today NIBE produces three kinds of heat pumps.

### Exhaust air heat pumps

An exhaust air heat pump ventilates the building and recovers the energy in the warm air, reusing it to warm up your sanitary water and fuel a central heating system. Ideal for heating domestic premises and tap water.

### Ground source heat pumps.

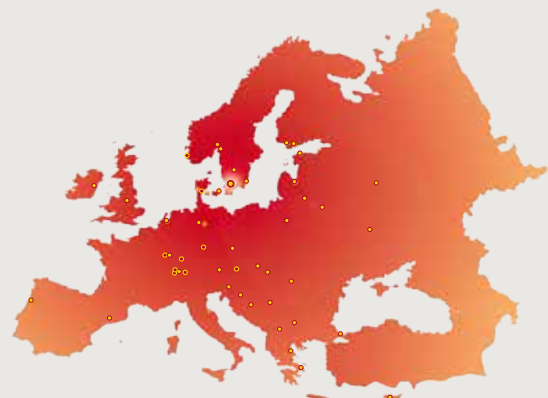
Drawing heat from surface soil, bedrock or the water in a nearby lake, this is a great option for heating houses, multiple-unit properties and other larger buildings. Available with or without an integrated water heater.

### Air/water heat pumps

These pumps extract heat from the ambient outside air. In contrast to simpler types of air-to-air heat pumps, they are connected to the building's heating system and are able to produce both heat and hot water.

## HEAT PUMPS MEAN RENEWABLE ENERGY!

The 20/20/20 European directive imposes compulsory targets on the EU's 27 member states, specifying that 20% of energy consumption must be met by renewable sources by 2020. Since ground source heat pumps are now classified as a renewable energy source their installation will help member states reach this ambitious target. And in many cases, local or regional authorities are offering home owners subsidies to switch their existing.



● NIBE Energy Systems  
● Schulthess Group AG



**NIBE ENERGY SYSTEMS**  
BOX 14, 285 21 MARKARYD, SWEDEN  
Tel: +46 433 - 73 000  
[www.nibe.eu](http://www.nibe.eu)