



**With a little energy,  
we can make the  
world a better  
place**



**Jämtkraft**

*Environmental enthusiasts since 1889*

In order to curb climate change, the EU wants 20 percent of the energy consumed in 2020 to come from renewable sources. Jämtkraft has produced only renewable energy since it was founded in 1889. We are ahead of the EU's target, to say the least.

Are we going to sit back and relax, feeling smug?

Not likely.

## **If everyone was like Jämtkraft, there wouldn't be a climate issue**

We are far from perfect; 82 percent of the electricity we sell comes from renewable sources\*. We can definitely improve on this and we are going to make sure that we do. Our plan is to double our production of renewable energy by 2020, whilst showing the same uncompromising concern for the environment.

We will use our experience and our resources to squeeze more energy from every drop of water, every breath of wind and every piece of timber.

All of us are responsible for doing as much as we can. At Jämtkraft, we believe in making small changes, combined with perseverance and a touch of the tenacity that is so characteristic of Jämtland.

These are just a few aspects of our long term commitment to making the world a better place. Find out more at [www.jamtkraft.se](http://www.jamtkraft.se).

\* Jämtkraft's sales 2007



## Water

Hydropower is the foundation of Jämtkraft's power production. Raindrops, rivulets and streams all combine to form the enormous forces found in the rivers. The hydroelectricity we produce using this water provides 80 percent of our renewable energy.

Since buying our first power plant, 100 years ago, we have continued to strive for new knowledge and potential improvements. We are currently renovating the Näsaforsen hydropower plant and taking the opportunity to make it more efficient, so we can get even more electricity from the same amount of water. We estimate this will be 5 GWh, which is enough to supply power to around 700 homes. At Hissmofors, our largest plant, we intend to build a new plant that will provide an additional 10 GWh, or enough power for around 1,400 homes.

Hydropower is becoming increasingly important due to the expansion of wind power. When the wind doesn't blow, hydropower is needed instead – without hydropower, there would be no wind power.

## Wind

Over the next few years, we will be investing billions of kronor in the expansion of wind power.

We are carrying out wind surveys in Moskogen, south of Järpen, and evaluating its potential as a location for a wind farm – the first stage of a partnership between Jämtkraft and Persson Invest, JP Vind, that may result in up to 60 new wind turbines. This would mean a huge expansion of our current wind power capacity, which consists of six wind turbines – one on Almåsaberget and the rest on Hornberget in Malå.

By 2020, wind power will comprise up to half of our production, far exceeding Sweden's national targets.

## Forest

Our cogeneration plant is 98-99 percent fuelled by pure bioenergy from our forests.

The white smoke that you can see rising from the tall flue gas stack consists of hot air, steam and CO<sup>2</sup> from renewable biofuels. The cogeneration plant provides electricity and heat for tens of thousands of households and replaces the same number of boilers and chimneys.

Biofuel is composed of the parts of trees that are left over after felling, the branches and tops, as well as residual products from the timber industry, demolition timber and peat. We also use landfill gas from the municipality's landfill site in our biogas engines.

We are always looking for new ways to optimise and expand our use of bioenergy. For example, we purchase forest in order to develop silviculture that focuses on bioenergy. We are optimistic about our stump project, as stumps contain almost twice as much energy as tops and branches for the equivalent area. We are now conducting research into developing a sustainable model for their use. We are eagerly awaiting the next project, which is the planting of fast-growing trees such as hybrid aspen and larch.

## Energy efficiency

We want individuals and companies to buy less electricity. This might seem strange, but the fact is that many more people can benefit from electricity from renewable sources if we use it efficiently.

We think that this is a more desirable target than maximising our profits.

We offer services to companies that can help them get more out of their power consumption. There are often great gains to be made in ventilation, hot water, lighting and through evaluating the use of sustainable forms of heating, such as district heating and pellets.

Did you know that if everyone in Jämtland replaced one light bulb with a low-energy bulb, we would save electricity equivalent to 4 tons of CO<sup>2</sup> in just one hour!



## Electric mobility

We believe that cars that run on wood, wind and water are the future. Transport is one of the biggest climate villains, but we can change this and achieve the climate targets for 2020 if we start to use electric motors.

Rapid developments are being made in the field. The auto industry and other manufacturers are making big investments in electric motors and cars. Prices are expected to fall and many people believe there will be a commercial breakthrough in the next few years.

There are many advantages; driving an electric car costs just 0.1–0.2 Swedish kronor per kilometre and electric motors are four times as efficient as combustion engines. If we fuel electric cars with power from wood, wind and water, things are looking really good.

We are now involved in a project, Green Highway, as part of the SÖT partnership (the municipalities of Sundsvall, Östersund and Trondheim). The aim is that there will be green charging stations all the way from Sundsvall to Trondheim. Jämtkraft is contributing charging posts and charging stations in our region, so that it will soon be possible to refuel using power from water or wind.



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