



THE AIM OF NORTH KARELIA IS TO BE AN **OIL-FREE REGION**. THIS TERM REFERS TO A REGION WHERE FOSSIL OIL IS NOT USED IN ENERGY PRODUCTION. NORTH KARELIA WANTS TO BE A PIONEER IN PRODUCING AND CONSUMING RENEWABLE ENERGY IN A SUSTAINABLE AND SMART WAY.



Both the actors in renewable energy sector and decision-makers of the region believe that the ambitious target can be achieved. The Regional Council Assembly approved the target in 2010 when the **REGIONAL PLAN OF NORTH KARELIA 2030** was under consideration. Thus, the target of being an oil-free region received the strongest political support from regional perspective. Furthermore, in 2014 the Regional Council of North Karelia pledged its support to the society's commitment to sustainable development by its own proposal, "Farewell to fossil oil".

What does oil-free region mean?
Oil-free region refers to a region that by the year 2020 is free of fossil heating oil and where heat production is almost entirely based on renewable energy sources. Secondly, in a longer time frame it refers to a region where, by the year 2030, transport runs also on alternative renewable energy sources.



THE CLIMATE AND ENERGY PROGRAMME OF NORTH KARELIA 2020 was finalized in 2011 and it defines the steps for achieving an oil-free region. The vision of the Climate and Energy Programme of North Karelia 2020 is to have **"a carbon neutral and over self-sufficient region in renewable energy production where fossil oil is not used in energy production"**. In practice this goal means that the annual consumption of approximately 65 million heating fossil oil liters will be replaced with renewable energy sources by the year 2020. This means about circa 65 million euros that the region pays for heating annually.

North Karelia has recently received some interesting **INVESTMENTS NEWS**. The launch of Fortum bio-oil plant at the end of 2013, Stora Enso Enocell Mill's additional investments worth 30 million euros, new investments of Kitee sawmill's pellet plant in spring 2014 and the reopening of the pellet plant in Ilomantsi at the end of 2014 are especially good news. In research and education sector, the newly formed campus of the University of Eastern Finland in Joensuu creates yet a more favorable setting for the co-operation of the University of Eastern Finland, Natural Resources Institute Finland (Luke), European Forest Institute (EFI), Finnish Environment Institute (SYKE) and other actors, including Karelia University of Applied Sciences and North Karelia municipal education and training consortium, not forgetting the wide and diverse business sector in North Karelia.

Although the goals of North Karelia are ambitious, there is proof to support them. The renewable energy sector alone creates circa 1300 person-years of employment regionally and generates annual revenue of around 165 million euros. Greenhouse gas emissions in North Karelia have decreased by over 20 % between 2007 and 2012 and when this is compared with the number of inhabitants the carbon footprint of a North Karelian inhabitant is significantly smaller than that of an average Finn. As a whole, **FOREST BIOECONOMY EMPLOYS CURRENTLY AROUND 600 EXPERTS AND ALL IN ALL OVER 6000 EMPLOYEES IN OVER 500 ENTERPRISES IN NORTH KARELIA**. The sector generates over 1,7 billion euros in annual revenue.



The latest **ENERGY STATISTICS** of 2012 show that North Karelia is on the right path towards a region that is free of fossil heating oil. This means that the share of renewable energy will increase. In 2012 no less than 67 % of the total energy consumed in North Karelia was produced with renewable energy. The share of wood energy from the total energy use of the region was already 51 %. The use of fossil heating oil has decreased and its share of the total energy consumption is currently only around 5 %. In 2008 the use of wood chips was approximately at the same level as oil consumption, but after this the share of wood chips has further increased while oil consumption has fallen. In 2012 the use of wood chips was already almost double the amount of heating oil consumption.



North Karelia is **IN A VERY GOOD POSITION** to achieve the target. Practically all municipal centers and the bigger population centers in our region use district heating that is based on wood energy as their primary source of heating. Oil is used in the production of district heating to smoothen consumption peaks and during maintenance shutdowns in the summer. There are nearly 7000 real estates in North Karelia that use fossil oil as their main source of heating. However, there is a downward trend in the use of heating oil while renewable energy consumption is increasing. Change of heating system and use of bio oil are examples of solutions for giving up fossil heating oil.

Regional forest energy resources are central energy sources for achieving the target of being an oil-free region. Wood in its different forms can be used for heating, in addition to firewood, pellets and wood chips also its most refined forms such as different bio-oils and waxes are suitable for the purpose.



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