

CEO Jouko Karvinen  
Inauguration of NSE Biofuels demonstration plant  
Stora Enso Varkaus Mills 11 June 2009

Dear Minister and Invited Guests,

The forest products industry can make our country a trailblazer for the modern bioeconomy. Cost pressures have taught us the importance of continually developing our operations to utilise materials and energy more economically and efficiently. This is the way forward for the forest products industry.

Biomass-based fuels accounted for 72% of Stora Enso's energy generation last year, and the world's paper industry is renowned as the largest industrial producer and consumer of bioenergy.

-

We are gathered here to witness an innovative step towards the bioeconomy that will benefit our industry and society as a whole. Many more similar steps will be needed, and there will be many technological and business challenges to be solved. But we are fully committed to making progress and achieving success.

The primary challenge for which we are providing a practical initiative here today is the climate change targets set by the European Union. By 2020, which is only a little over ten years from now, 10% of the fossil fuel for transport should be replaced by biofuel to reduce greenhouse gas emissions. It is estimated that this would require about 30 million tonnes of biofuels, which corresponds to the output of about 300 commercial-scale plants of this new technology being tested here – biofuels are also produced with other technologies.

Another challenge is how to utilise energy and materials ever more efficiently. Synthesis gas, the main product of the trial operations at this demonstration plant, will be burnt in the chemical processes in the pulp mill, replacing about 8 000 tonnes of heating oil. This will cut the carbon dioxide emitted by the Varkaus mills from fossil fuels by one third.

However, the hardest challenge for this demonstration plant to solve is finding and developing the right production technology. The constructors and users of the plant must be capable of excelling in unprecedented achievements.

We in Stora Enso believe the plant we are inaugurating today is indicative of the strenuous efforts of the forest products industry to meet these challenges through research and development. This is a long-term commitment, and alternatives must be tried and discarded along the way to find the best solution. But we strongly believe that the millions invested in this demonstration plant will in due course be rewarded many times over.

-

It will take more than hard work to overcome these challenges. We will need the vision to keep the overall goal in view despite the many underlying details, plus a commitment to look far ahead into the future and confidence to endure the setbacks that will inevitably be encountered along the way.

A prerequisite for an industrial-scale plant is a regular flow of fairly priced raw material, which makes the logistics absolutely crucial. All the types of wood to be harvested – sawlogs, pulpwood, felling residues and stumps – must be handled and transported by machines and vehicles that make as few journeys to the forest and back as possible.

As we can see, in this field even a demonstration plant is a rather massive undertaking. An industrial-scale production plant would be at least twenty times bigger, and need about a million cubic metres of raw material per year.

Efficient use of the heat generated as a by-product is also essential to maximise profitability. We cannot afford to offer free heating for the birds. It will be most economic – and in fact necessary – to build production plants at mill sites that can utilise vast amounts of heat.

The mills where production plants are built must already be profitable. The bark and other wood residues from sawlogs and pulpwood that are now burnt to provide heat could then be used as raw material for a new product. As regards the by-products of the production process, legislation should enable the ash from the wood residues to be returned to the forest economically for use as fertilizer for the forest.

It is important to bear in mind that fair-priced electricity to keep the processes going, either self-generated or purchased, is a fundamental

requirement of industrial operations. Energy has to be sourced from somewhere.

For us, a vital prerequisite for our operations is a reliable partner with a wealth of experience. Neste Oil is an innovative partner with vast expertise. We have jointly established our objectives in harmony.

I would like offer my sincere thanks to Neste Oil for excellent co-operation. I would also like to take this opportunity here today to thank all our other important partners, such as the Technical Research Centre of Finland and Foster Wheeler and other equipment suppliers.

The Finnish Ministry of Employment and the Economy and the Finnish Founding Agency for Technology and Innovation (Tekes) have shown great interest and understanding of our project, and supported us through public research and development funding. This support enabled the project to be increased in scope and developed more rapidly. We are very grateful for it.

Finally, I would like to express my heartfelt thanks to the management and personnel of NSE Biofuels, and to congratulate you. We who have come here today applaud your efforts to develop the production process of this demonstration plant, which will enable production of new-generation biofuels.

Decisions on industrial-scale plants can be taken in due course based on your work. We will then need to be able to rely on access to fairly priced raw material and long-term demand for heat from a nearby pulp and paper mill complex.

Public sector solutions will also be required to ensure a level playing field as regards the general prerequisites for industrial operations.