The bioeconomy is based on renewable natural resources and new operating models

- Bioeconomy refers to an economy that relies on renewable natural resources to produce food, energy, products and services. The bioeconomy strives to reduce our dependence on fossil natural resources, to prevent biodiversity loss and to create new economic growth and jobs in line with the principles of sustainable development.
- The most important renewable resources in Finland are the biomass, or organic matter, in the forests, soil, fields, water bodies and the sea, and fresh water. Ecosystem services are the services offered by the environment, including binding carbon dioxide and opportunities for recreation. Another key aspect of the bioeconomy is not wasting natural resources but using and recycling them efficiently.
- The objective of the Finnish Bioeconomy Strategy is to generate new economic growth and new jobs from an increase in the bioeconomy business and from high added value products and services while securing the operating conditions for the nature's ecosystems. The leading idea of the strategy is that competitive and sustainable bioeconomy solutions for global problems will be created in Finland, and that new business will be generated both in the Finnish and the international market, thus boosting the welfare of the whole of Finland

Facilitated by the actions contained in the strategy, the bioeconomy output will grow to EUR 100 billion from its current level of EUR 60 billion, and 100,000 new jobs will have been created in the bioeconomy by 2025.



The vision and quantitative targets of the Bioeconomy Strategy will be implemented by means of four strategic goals:

• A competitive operating environment for the bioeconomy:

a competitive operating environment will be created for bioeconomy growth,

• New business from the bioeconomy:

new business will be generated in the bioeconomy by means of risk financing, bold experiments and the crossing of sectoral boundaries,

A strong bioeconomy competence base:

the bioeconomy competence base will be upgraded by developing education, training and research,

Accessibility and sustainability of biomasses:

functioning raw material markets and sustainability of the use of biomass will be secured.



New bioeconomy business opportunities

New bioeconomy business opportunities in Finland will be based on smart exploitation of biomasses and water resources, the development of technologies associated with this, and high added value products and services. The role of services will have even more emphasis in the future.

Bioeconomy provides business opportunities on many ways. In the following, there is a list of items, how bioeconomy impacts on business. Details you can find in the source mentioned below.

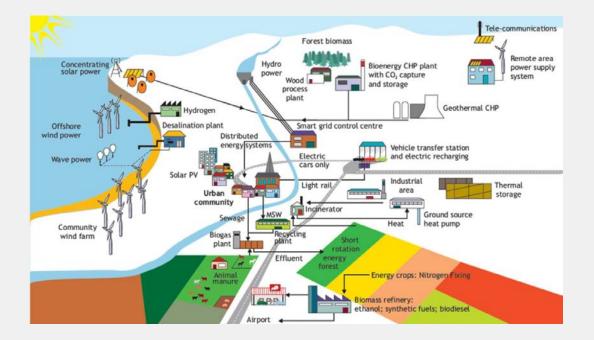
- Diversification through bio-based products.
- Pioneering bioenergy production and use..
- Increased use of bio-based raw materials in the chemical industry.
- Timber construction to account for a significant share of urban construction.
- Increase in forest use on a sustainable basis.
- Cost-effectiveness and environmental benefits from efficient biomass utilisation.
- Bioeconomy provides openings for cleantech.
- Bioeconomy boosts food industry turnover.
- Biotechnology enables growth in the health sector.
- Bioeconomy creates new service business.
- Water resources support the bioeconomy.
- Decentralised, resource-efficient bioeconomy solutions enhance the viability of regions.
- The role of cities, municipalities and regions in introducing bioeconomy solutions. .

<u>Source: http://biotalous.fi/wp-content/uploads/2014/08/</u> <u>The Finnish Bioeconomy Strategy 110620141.pdf</u>



Practical gains from local co-operation

In bioeconomy, local resources are utilized and industrial symbiosis are created for example in energy
production. By using local resources, we will improve Finland's current account balance, reinforce our
security of supply and increase our self-sufficiency in energy, and create local jobs and diversify
production. Utilization of side flows of industry and society is and essential part of bioeconomy. In the
picture below, there are examples of energy production by utilizing local resources.



Energy production by utilizing various local resources. Source: Pour l'Agence Internationale de l'Energie, le développement des ENR en ville passe par les transports, Publié le 08/12/09

