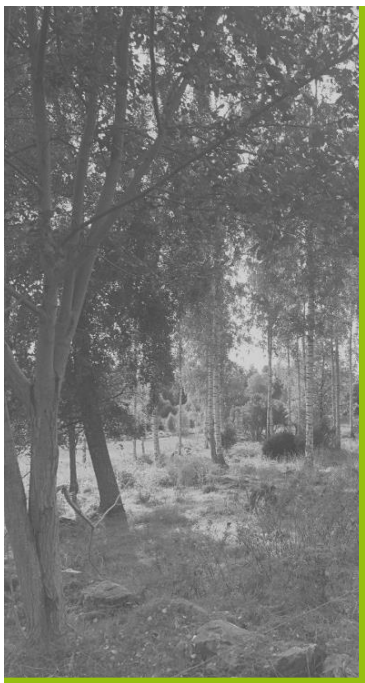
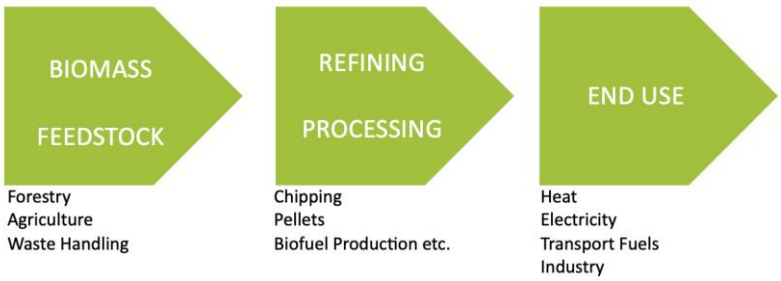
A wise implementation of Fit for 55 can help us mobilise more sustainable biomass to benefit climate mitigation and energy independence for EU

XX October 2023

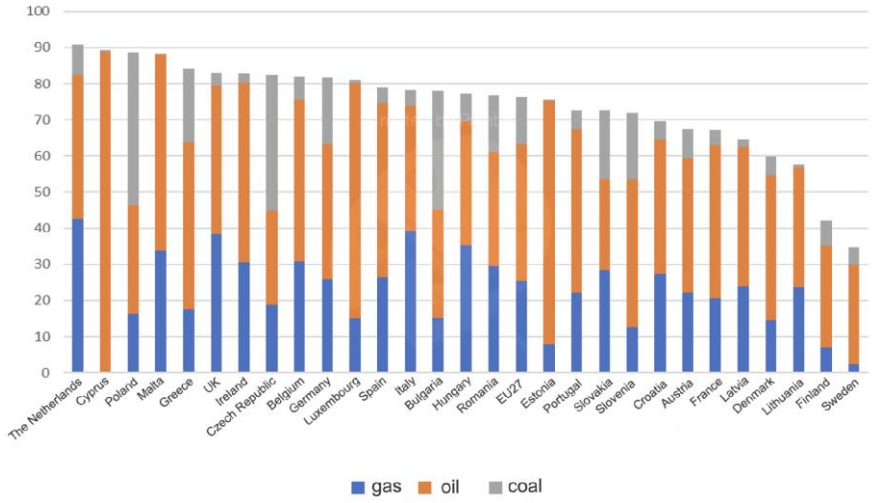


Svebio in the whole supply chain



250 members: companies, institutions, private members

Share of fossil fuels in EU countries in 2019



EU countries' dependence on fossil fuels for their energy supply (percentage of total energy use).

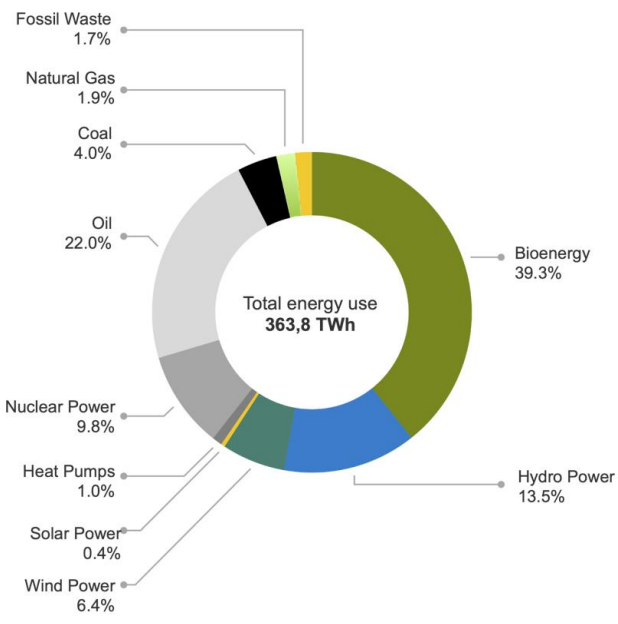
The figures apply to 2019, the last year for complete EU statistics before the outbreak of war.

Countries such as Sweden, Finland and Lithuania with a high share of bioenergy also have a low share of fossil fuels.

Source: Processing statistics from Eurostat.

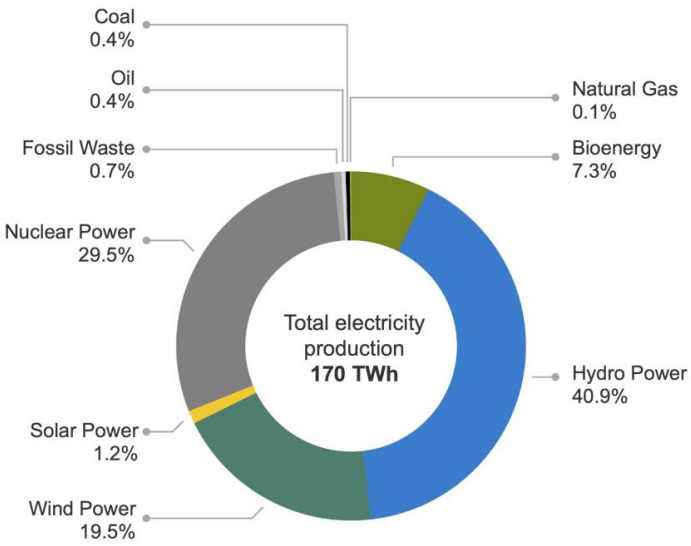
Energy use in Sweden 2022

Bioenergy is the largest energy source in Sweden's energy use since 2009

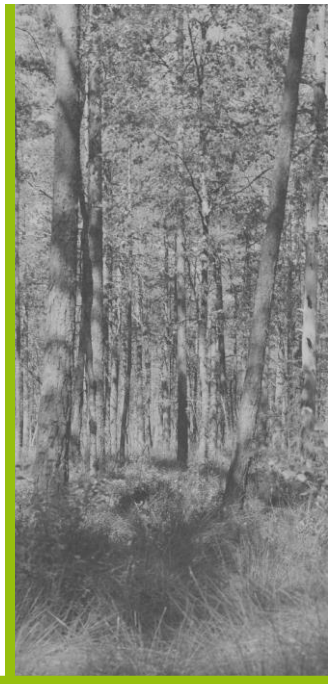


Source: Svebio's processing of statistics from the Energy Agency (Short-term forecast March 2023).

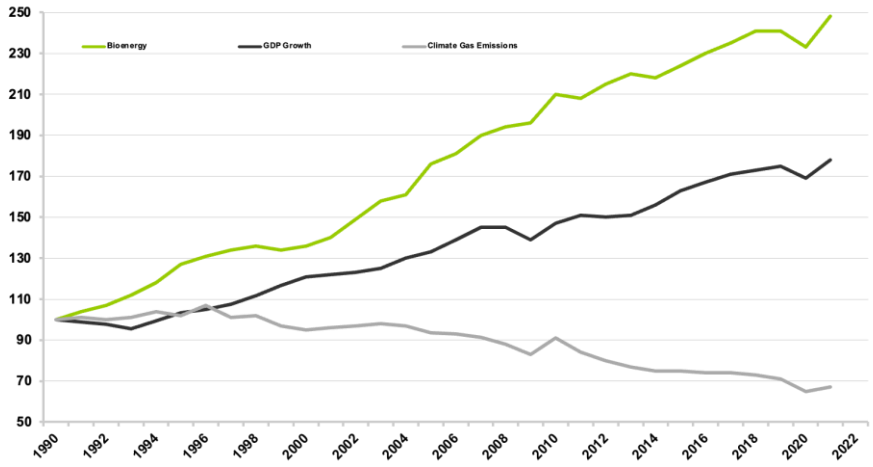
Electricity production in Sweden 2022



Source: Preliminary electricity statistics from the Swedish Energy Agency.



Decoupling of growth and GHG emissions



Emissions of greenhouse gases in Sweden have decreased by 33 percent since 1990, while the economy has grown with 78 percent.

At the same time, the use of bioenergy has increased by 148 percent.

All curves were affected downward due to the pandemic in 2020, but in 2021 there was a return to previous trends. index values, 1990 =100.

Source: Statistics from the Swedish Environmental Protection Agency, the Swedish Energy Agency/SCB and Ekonomifakta, processed by Svebio.

Biopower 2023

Biopower ON in Sweden

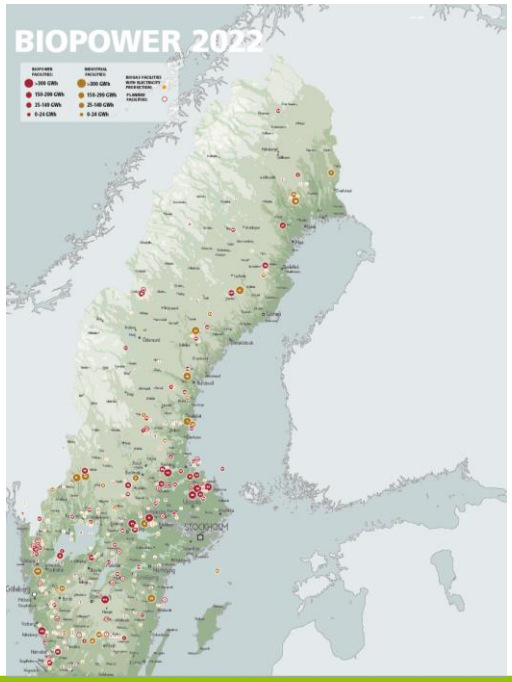
117 CHPs in district heating

37 Installations in forest industry (mainly pulpmills)

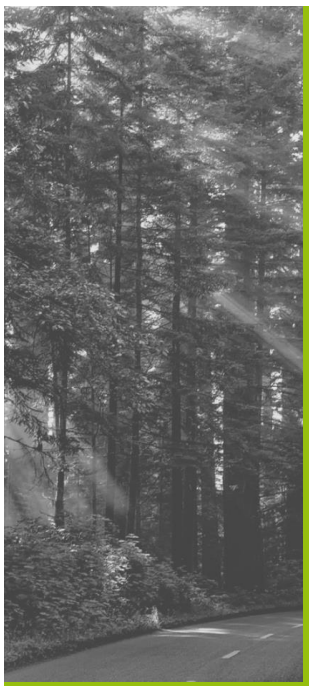
89 Biogas power units

Total capacity 4 200 MW

Possible production 17.5 TWh



Biopower map by Svebio & Bioenergitidningen

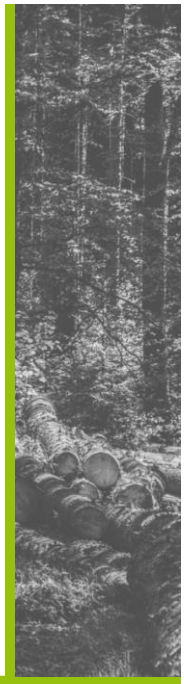


Positive for bioenergy in Fit for 55

- Higher targets for renewable energy
- Increased reduction in EU-ETS - higher prices on CO2 emissions
- ETS-2 for buildings and other sectors outside ETS
- Targets for heating sector and district heating

All of this creates a growing market for bioenergy solutions and biomass as bioenergy often is the most competitive alternative to fossil fuels.

Fit for 55 – issues of concern to Svebio



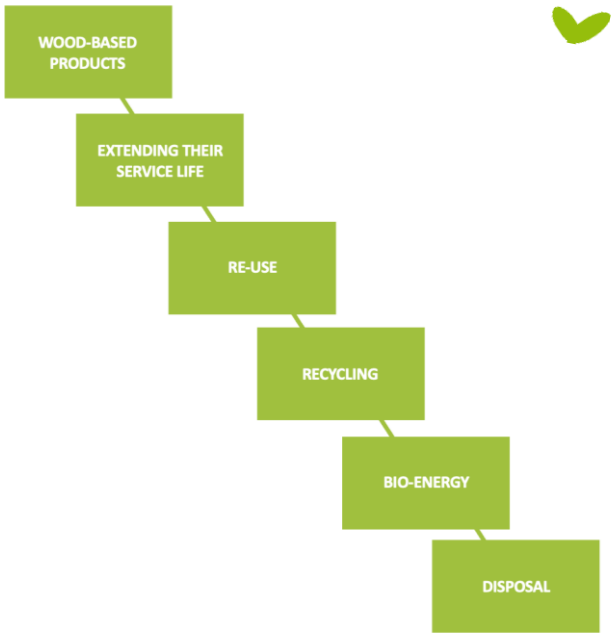
- Restriction on harvesting levels in forestry (LULUCF, nature restauration law, RED III harvesting criteria)
- Restrictions on feedstocks (roundwood, stumps, cascading)
- Increased administrative burden to show compliance with different directives
- Continued restrictions on crop-based biofuels and future restrictions for cars using biofuels

These concerns must be handled in a constructive manner.

Cascading use of biomass

Member States may derogate from the cascading principle on the basis of the need to ensure security of energy supply or when the local industry is quantitatively or technically unable to use forest biomass according to a higher economic and environmental added value than energy, for feedstocks coming from:

(i) necessary forest management activities, aiming at ensuring pre-commercial thinning operations or in compliance with national legislation on wildfire prevention in high-risk areas;
(ii) salvage logging following documented natural disturbances, or
(iii) harvest of certain woods whose characteristics are not suitable for local processing facilities.



Examples of discarded wood. Crooked stem. Splinted stem. Insect infested stem. Fire damaged, charred stem. Rotten stem.

What is ”industry grade roundwood”?
And how should cascading be interpreted for wood?

Discarded wood

Wood of low value

Wood with no industrial demand

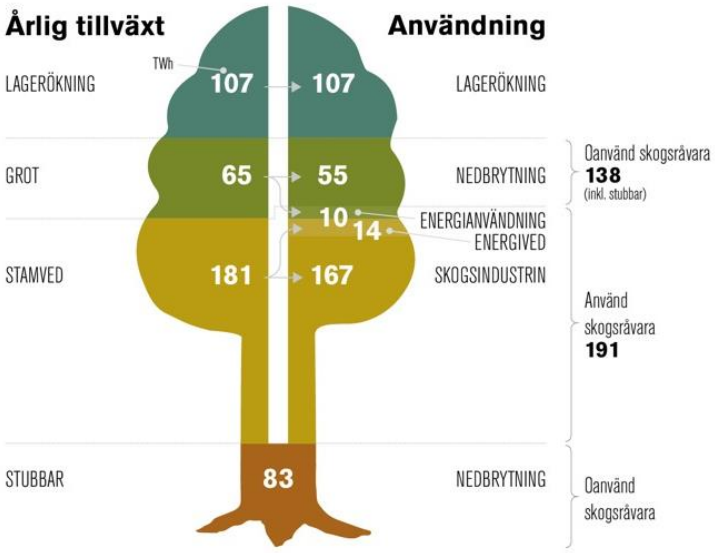
Why shouldn’t the forest owner be allowed to sell to whoever pays him/her the best price?

Market economy or planned economy?

Still large potentials to increase the supply of biomass in Europe and Sweden

One example: harvesting residues from Swedish forestry

Swedish Bioenergy Association (Svebio), Kammakargatan 22, SE 111 40 Stockholm

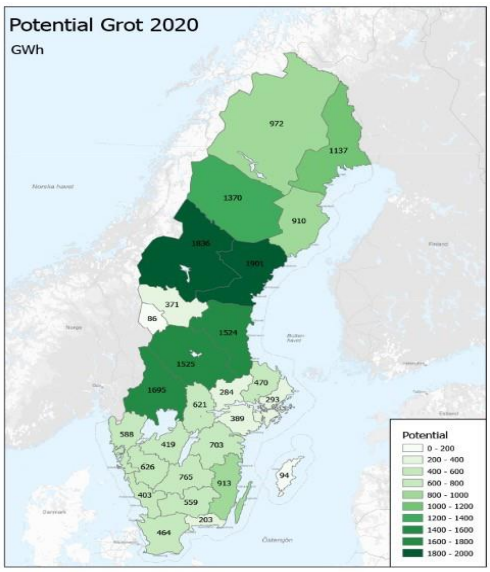


Annual Forest Growth on Productive Forest Land in Sweden is approx. 436 TWh.

About 191 TWh of this is now used of which about half finally is used for energy.

Annual logging residue potential (grot) 2023

- Gross ~ 60 TWh
  - ~40 TWh at clear-cuttings
  - ~20 TWh at thinnings
- Net ~ 45 TWh (considering Swedish Forestry Agency recommendations)
  - ~ 30 TWh at clear-cuttings
  - ~ 15 TWh at thinnings
  - In practice, some 20-25 TWh (much needles remain, branches are used to protect the soil, etc)



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