



## Assessment of the impact of the LULUCF sector on the emissions reduction target for the non-ETS sector

*Carbon dioxide emissions from land use and forestry changes (LULUCF) have been linked with effort sharing. They may lower the emission reduction target for Finland by 1,3 percentage points, however, when using the proposed calculation methodology, the already very challenging emissions reduction target for Finland (39%) may be further increased even by several percentage points.*

*The essential factor when calculating the impact is determining the reference level for forest carbon sinks as well as the use of forests in the future. Growth plans for bioeconomy (including increased use of renewable energy in energy production and as fuel for transport) may face challenges or bring additional costs if the definitions are very limiting.*

### 1 Background

In the Energy Union summer package 2016 proposals for emissions reductions for Member States for 2030 (so called effort sharing) were introduced for non-ETS sectors (transport, buildings, agriculture, waste treatment, F gases). Additionally, the package included a proposal on how to link land use sector and forestry with the EU 2030 targets, as well as a communication on decarbonising transport. In October 2014, it had been agreed at the European Council that effort sharing between Member States follows the same principle as the 2020 targets, i.e. GDP/capita, ranging from 0 to 40% so that the combined EU reduction is 30%.

### 2 Key content from industry perspective

According to the Commission proposal the calculation methodology for the changes in the carbon sinks in land use and forests is more or less as follows:

Article 2:

**LULUCF flexibility = a) reforestation + b) deforestation + c) crop land + d) grass land + [ e) forest land ]**

- Article 6: categories a) and b) emissions calculated in full
- Article 7: categories c) and d) emissions are calculated in comparison with the emissions from 2005-2007
- Category e) calculation methodology is more complicated:
  - According to Article 7(a) of the Effort Sharing Regulation category e) forest land is applicable if everything has been agreed on
    - Active forestry can be excluded when defining the LULUCF flexibility, which would mean that Finland would not be able to use forest carbon sinks to compensate for the emissions from crop land and area based deforestation (area based forest loss, even if Finland's forests grow in total volume every year). This would result in an additional burden on the 39 % target from effort sharing or, alternatively, Finland should purchase

carbon sink credits or emission allowances. On the other hand, if the reference level for carbon sinks in forests is unfavourable, forest land would add even more theoretical emissions and thereby further increasing the burden.

- LULUCF Article 8: the emissions are calculated in comparison to the reference level. The yearly maximum credit (ceiling) is 3.5% of the emissions from 1990 (for Finland 2-2.5 MtCO<sub>2</sub> depending on which emissions are included in the base year). The burden is calculated in full. According to the proposal, the maximum credit for Finland over ten years is 4.5 MtCO<sub>2</sub> i.e. on average 0.45 MtCO<sub>2</sub> per year.
  - Norbert Lins, the rapporteur for LULUCF in the European Parliament, proposes the ceiling to be doubled to be 7%, which would be good.
- The reference level for Finland in Kioto 2 is -19.3 MtCO<sub>2</sub>/year. In the national energy and climate strategy it is anticipated that the forest carbon sink in 2030 will be lower, -13 MtCO<sub>2</sub>/year as the use of forests for the purposes of bioeconomy and emission reductions is growing. Therefore, in comparison with the Kioto 2 reference level the theoretical emission reduction target or requirement to purchase carbon sinks would be approximately 6 MtCO<sub>2</sub>/year, even if the forests would still clearly remain a carbon sink on a yearly basis. The LULUCF proposal suggests that the reference level would be based on the average from 1990-2009, which would mean that the reference level for carbon sinks would be -29.9 MtCO<sub>2</sub>/year and the difference to what has been estimated in the national strategy would be 16.9 MtCO<sub>2</sub>/year (= theoretical emissions).
  - MEP Lins proposes to use 2000-2012 as the reference period, which would make the reference level even worse, the forest carbon sink reference level would be 35.1 MtCO<sub>2</sub>/year (theoretical emissions in 2030 at 22 MtCO<sub>2</sub>/year).
  - All these reference levels would mean that Finland would suffer from an additional burden from the yearly growth of the forest carbon sinks and would have to compensate the theoretical emissions with some other measures.

**As a flexibility measure included in the Effort Sharing Regulation LULUCF is very important for Finland and it can have a significant impact on the final emission reduction target and the related costs.** When combining the one-time flexibility (max 2 percentage points per year) with the LULUCF flexibility and changing the assumptions, the difference is several percentage points in both directions.

### 3 Current status

The aim of the Council Presidency is to get a political overview of the matter at the Environment Council's meeting on 19 June.

In the European Parliament, the Environment and Public Health Committee (ENVI) and the Committee on Agriculture and Rural Development (AGRI) are responsible for the processing of the draft Regulation. Rapporteur of the LULUCF Regulation is Mr Norbert Lins (EPP). Nils Torvalds is ALDE's shadow rapporteur. The AGRI Committee is due to vote on 30 May and the ENVI Committee on 22 June. The opinion is also provided by the Committee on Development (DEVE) and the Committee on Industry, Research and Energy



(ITRE). Parliament's plenary vote is, according to preliminary information, on 12 September 2017.

If the deliberations of the Council and Parliament proceed as planned, tripartite trilogues will be during the Estonian Presidency and agreement could be reached by the end of 2017.

#### 4 Industry key messages

As described above, the LULUCF flexibility can turn into a significant additional burden for the non-ETS sector in Finland. If the reference level for the carbon sinks is unfavourable and/or the change in yearly carbon sinks is negative (because of additional use of forests and calculation methodology), **LULUCF sector may cause (theoretical) additional emissions that have to be compensated by additional reductions from the non-ETS sector or by purchasing carbon sink credits from other Member States.**

In the most unfavourable situation the emission reduction target for 2030 for Finland would be much bigger than 40%, when with the best possible parameters it would be 35.7 %, if all the flexibilities can be used and carbon sinks are developing in a positive manner. The range is very big and therefore the costs for emissions reductions can also be significantly different (based on calculations by VTT/VATT between 50... 200 (?) €/t CO<sub>2</sub>). **Additionally, this may also limit the planned growth in the bioeconomy sector.** Therefore, it needs to be ensured that in any case the actual emission reduction target cannot be higher than 40% for any Member State (because of LULUCF flexibility), as decided in the European Council in October 2014.

#### **Having a fair reference level is critically important for Finland.**

Making the calculations is very complicated and sensitive for assumptions:

- According to Commission estimates Finland would get a net credit (=a+b+c+d+e) of approximately 0.1 MtCO<sub>2</sub>e / year.
- By changing the assumptions, the results can be both positive and negative.
- For example, based on figure 11 in a report by the Finnish Natural Resources Institute ([http://jukuri.luke.fi/bitstream/handle/10024/536237/luke-luobio\\_36\\_2016.pdf?sequence=1](http://jukuri.luke.fi/bitstream/handle/10024/536237/luke-luobio_36_2016.pdf?sequence=1)) the emissions from category e) forest land in 2030 would be either -12 MtCO<sub>2</sub> or -45 MtCO<sub>2</sub>. Figure 7 in the same report gives a range from +5 ... -22 MtCO<sub>2</sub>. Depending on the reference level in this category alone, the change in the target can be significant. The maximum credit would be 2.5 MtCO<sub>2</sub>.
- The alternative proposal from the Commission on a one-off flexibility was 4 percentage points for Finland. This should be further pursued in negotiations on the basis of uncertainty in the sink flexibility calculations.

Using existing and planned calculation methodologies, it should be clarified what kind of changes in land use and forest use would increase the emission reduction targets in the non-ETS sector and what kind of cost impact this would have, for example on transport.



## Contact information

### EK Helsinki:

- **Mikael Ohlström**, Chief Policy Adviser, energy, climate, bioeconomy  
tel. +358 50 4681022, [mikael.ohlstrom@ek.fi](mailto:mikael.ohlstrom@ek.fi), Twitter: @MikaelOhlstrom

### EK Brussels:

- **Salla Ahonen**, Senior Adviser, energy, climate, environment, transport, SMEs and trade policy  
tel. +32 495 56 22 95, [salla.ahonen@ek.fi](mailto:salla.ahonen@ek.fi), Twitter: @ahsalla