



EU:n ilmastotavoite 2040 – tiedonanto

Harri Laurikka
Bioenergia ry

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Komission 2040 – tiedonanto



Komission tarkastelemat skenaariot

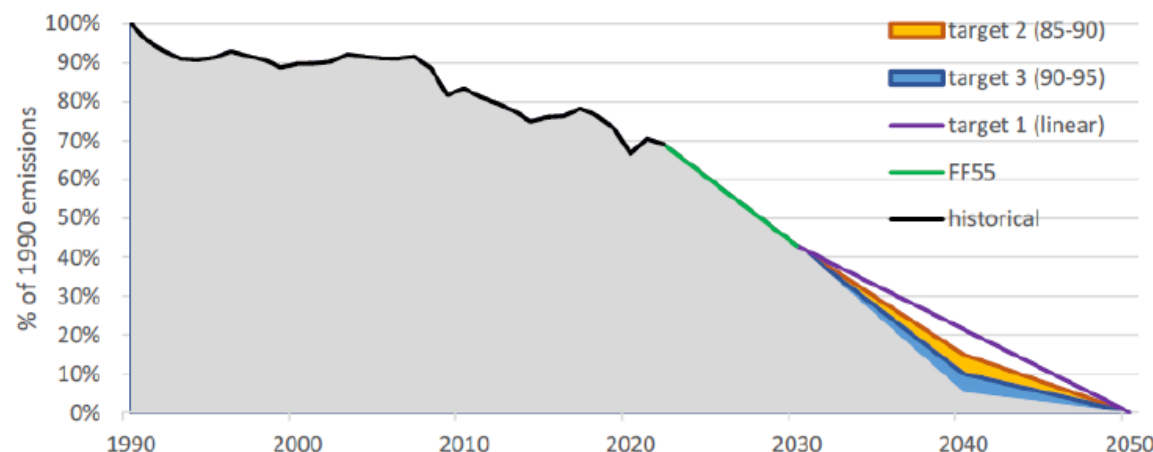
Kolme skenaariota ja niiden mukaiset 2040 tavoitteet:

1) **Up to 80% nettovähennys:** vastaa 2030-2050 lineaarisen suoran mukaista 2040 tavoitetta (-77,5%);

2) **85-90%:n nettovähennys:** ”teoreettinen baseline” - FF55 säädösten toteuttaminen vuoteen 2040 (-88%);

3) **90-95%:n nettovähennys:** linjassa ESABCC:n suosituksen kanssa

Figure 4. Profile of the net GHG emissions over 1990-2050



Note: The net GHG emissions reflect the scope of the European Climate Law, i.e., all domestic net emissions (as under the UNFCCC inventories), international intra-EU aviation, international intra-EU maritime, and 50% of international extra-EU maritime from the MRV scope. 2022 values are based on EEA proxies. The intra-EU / extra-EU international aviation split is estimated based on air transport activity data (passenger-kilometres). The intra-EU / extra-EU international maritime split is based on MRV information for recent years and applied backwards to 1990.

Source: EEA, Eurostat.



Miten komissio hahmottelee 90 % päästövähennyksen toteutuksen 2040?

90%:n nettopäästövähennys vrt. 1990, sis. päästöt ja poistumat

- EU:n kasvihuonekaasupäästöt 2040 vähemmän kuin 850 Mt co₂-ekv. (pl. LULUCF päästöt) sekä luonnolliset ja teknologiset poistumat "up to" 400 MtCo₂
- Co₂ talteenotto 2040 mennessä tasolla 280 Mt co₂/vuosi (ICM-tiedonanto), vaikutusarvioinnin mukaan teolliset nielut 2040 noin 75 Mt co₂ tasolla
- LULUCF-nielu vaikutusarvioinnin mukaan 317 Mt co₂ tasolla vuonna 2040

Lähde: YM, Laura Aho, 2024



Miten komissio hahmottelee 90 % päästövähennyksen toteutuksen 2040?

- Fossiiliset polttoaineet 27 % 2040, hiilidioksidista talteen 5 %
- Tuontiriippuvuus 26 %
- Uusiutuva energia:
 - 2022: 23 %
 - 2030: 42,5 %
 - 2040: 75 % (vrt. 2014-2022: +5,6 %)
 - NECP:t arvio (joulukuu 2023) 38,6 – 39,3 % 2030
- Vety: 10-kertaistuu 2030 – 2040
- Sähköpolttoaineet: 18-kertaistuvat 2030 - 2040

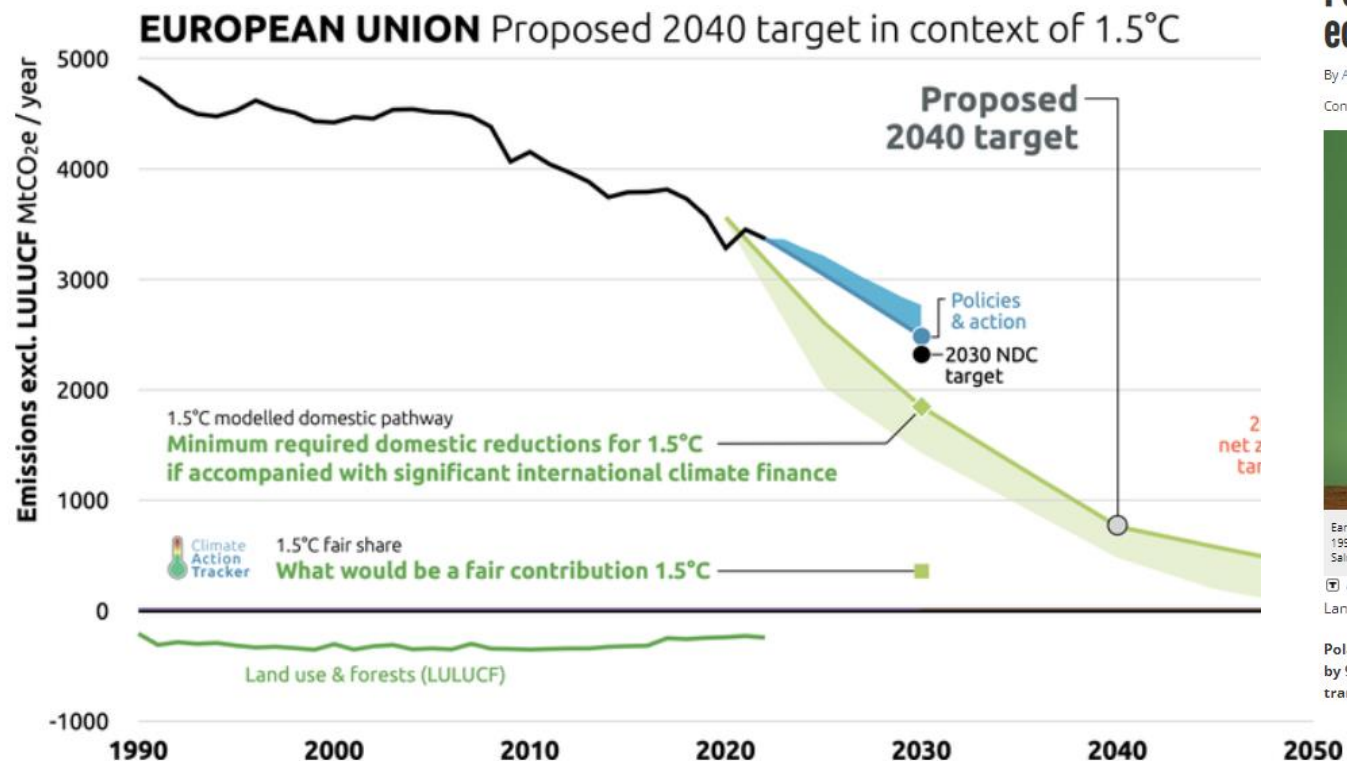


Millainen vastaanotto?

Lähde: Climate Action Tracker 6.2.2024

The new 2040 proposal assumes no update to the 2030 target, although the COP three years in a row has urged countries to increase 2030 ambition. It doesn't include a phase-out of fossil fuels, and relies heavily on fossil carbon capture and storage (CCS) including in the power sector. Fossil CCS just continues dependency on fossil fuel and is absolutely not needed in the power sector.

The EU continues to fail to contribute its fair share to global climate action, to do so deeper reduction for 2040 and more climate finance would be needed.



Poland sceptical about EU's 90% emissions reduction target, cites economic concerns

By Aleksandra Krzysztosek | EURACTIV.pl | Est. 3min

9. helmik. 2024

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Content-Type: News



Earlier this week, the European Commission recommended a 90% net reduction in greenhouse gas emissions by 2040 compared to 1990, in line with the latest scientific advice and the EU's commitments under the Paris Climate Agreement. (Shutterstock/Black Salmon)

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Poland is unlikely to back the European Union's new climate target of cutting CO₂ emissions by 90% by 2040, citing the economic and social risks that come with speeding up the green transitions, Polish media reported.

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Lähde: Euractiv 9.2.2024

Talkoiden osallistujaluettelo

CRITICALLY INSUFFICIENT	HIGHLY INSUFFICIENT	INSUFFICIENT	ALMOST SUFFICIENT	1.5°C PARIS AGREEMENT COMPATIBLE
ARGENTINA	CANADA	AUSTRALIA	BHUTAN	
INDONESIA	CHINA	BRAZIL	COSTA RICA	
IRAN (ISLAMIC REPUBLIC OF)	EGYPT	CHILE	ETHIOPIA	
MEXICO	INDIA	COLOMBIA	KENYA	
RUSSIAN FEDERATION	NEW ZEALAND	EU	MOROCCO	
SAUDI ARABIA	SOUTH KOREA	GERMANY	NEPAL	
SINGAPORE		JAPAN	NIGERIA	
THAILAND		KAZAKHSTAN	NORWAY	
TÜRKIYE		PERU	THE GAMBIA	
UAE		PHILIPPINES		
VIET NAM		SOUTH AFRICA		
		SWITZERLAND		
		USA		
		UNITED KINGDOM		





Komission näkökulma bioenergiaan: tiedonantodokumentti

“Given the intensifying competition for land and water, policies can be designed to ensure the sustainable, water efficient production and consumption of food, materials and bioenergy.

“Bioenergy should go in priority to sectors where the potential for electrification is limited, such as air or maritime transport. ”

“8 building blocks for achieving the 2040 target:

*All zero and low carbon energy solutions will be necessary (renewables, nuclear, energy efficiency, **more sustainable bioenergy**, storage, CCU, carbon removals, and all other current and future net-zero energy technologies)*

→ Bioenergialle laitetaan kestävyyskatto ja painopiste siirtyy 2050 mennessä vaikeasti sähköistettäviin sektoreihin. 2040 mennessä kuitenkin rooli kasvaa muillakin sektoreilla

Oletuksia komission skenaarion taustalla...

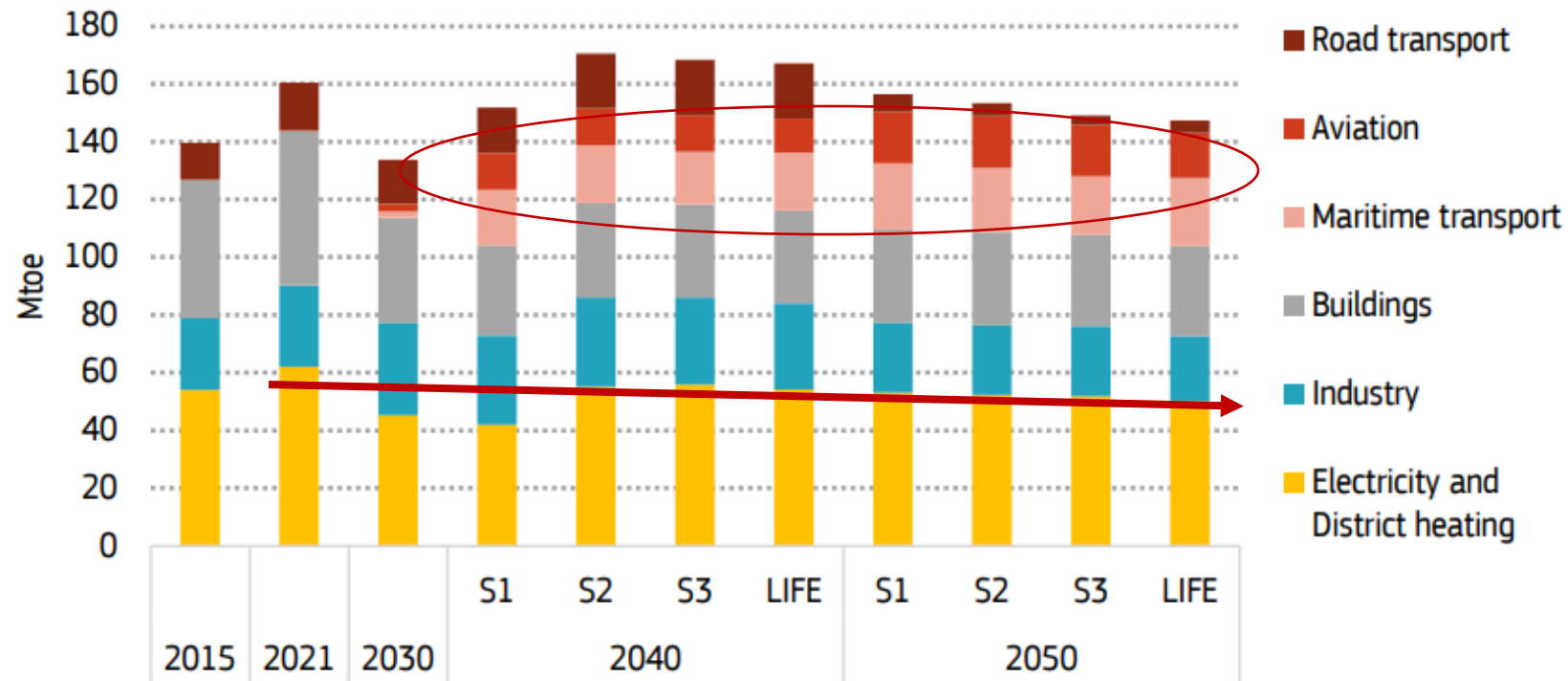
	S1	S2	S3	LIFE
Power system	Limited remaining CO2 emissions in 2040, share of renewables in total electricity production increases compared to 2030	Close to decarbonised in 2040, larger deployment of renewables	Fully decarbonised in 2040, the system operates mostly with renewables	
	The deployment of renewables is facilitated by system optimisation (interconnections, storage and demand-side response). Nuclear according to MS policies until March 2023; plays a comparable role in all scenarios.			
Bioenergy	Moderate increase by 2040 compared to current, stabilises over 2041-2050	Larger increase by 2040 compared to current, and slightly declines after 2040		
H2 & e-fuels	Some increase in 2040 above 2030 levels	Stronger increase than in S1, notably in the transport sector	Stronger increase than in S2 in all sectors	
Carbon capture	Limited uptake in 2031-2040 and large deployment in 2041-2050	Deployment in 2031-2040, in particular in industrial processes, maintained in 2041-2050	Further deployment in 2031-2040 to cover remaining energy and industrial process emissions	
Carbon removals	Very limited uptake of BECCS by 2040	Some deployment of BECCS and DACCS by 2040	Higher deployment by 2040 of both BECCS and DACCS	

“This evolution is mostly driven by advanced liquid biofuels and biomethane, while direct consumption of solid biomass is projected to decrease.”



Bioenergian sektorikohtainen käyttö

Figure 87: Final bioenergy demand by sector and scenario



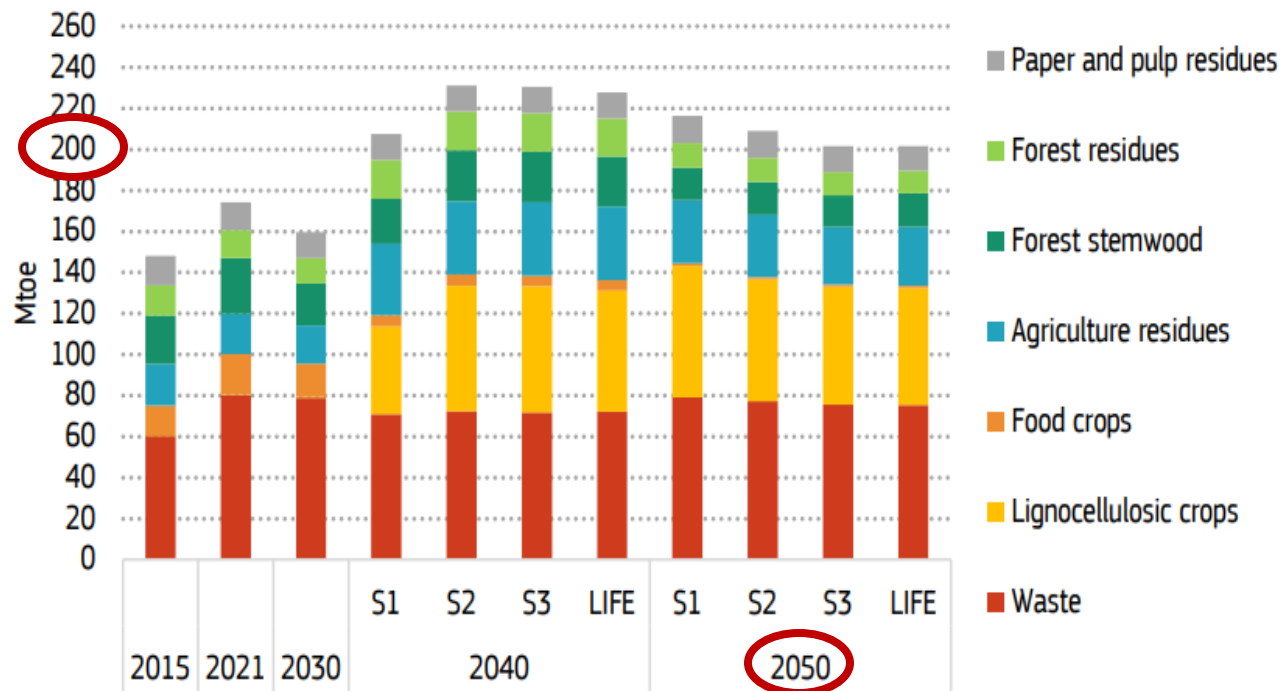
Note: Graph includes consumption of waste for energy purposes. 'Industry' includes energy sector. 'Buildings' cover household buildings, services, and agriculture.

Source: 2015 and 2021 from Eurostat, projections from PRIMES



Bioenergian raaka-aineet

Figure 88: Domestic supply of feedstock for bioenergy and waste



Note: 'Lignocellulosic crops' includes short rotation coppice and lignocellulosic grass. Manure is included in 'Waste'.

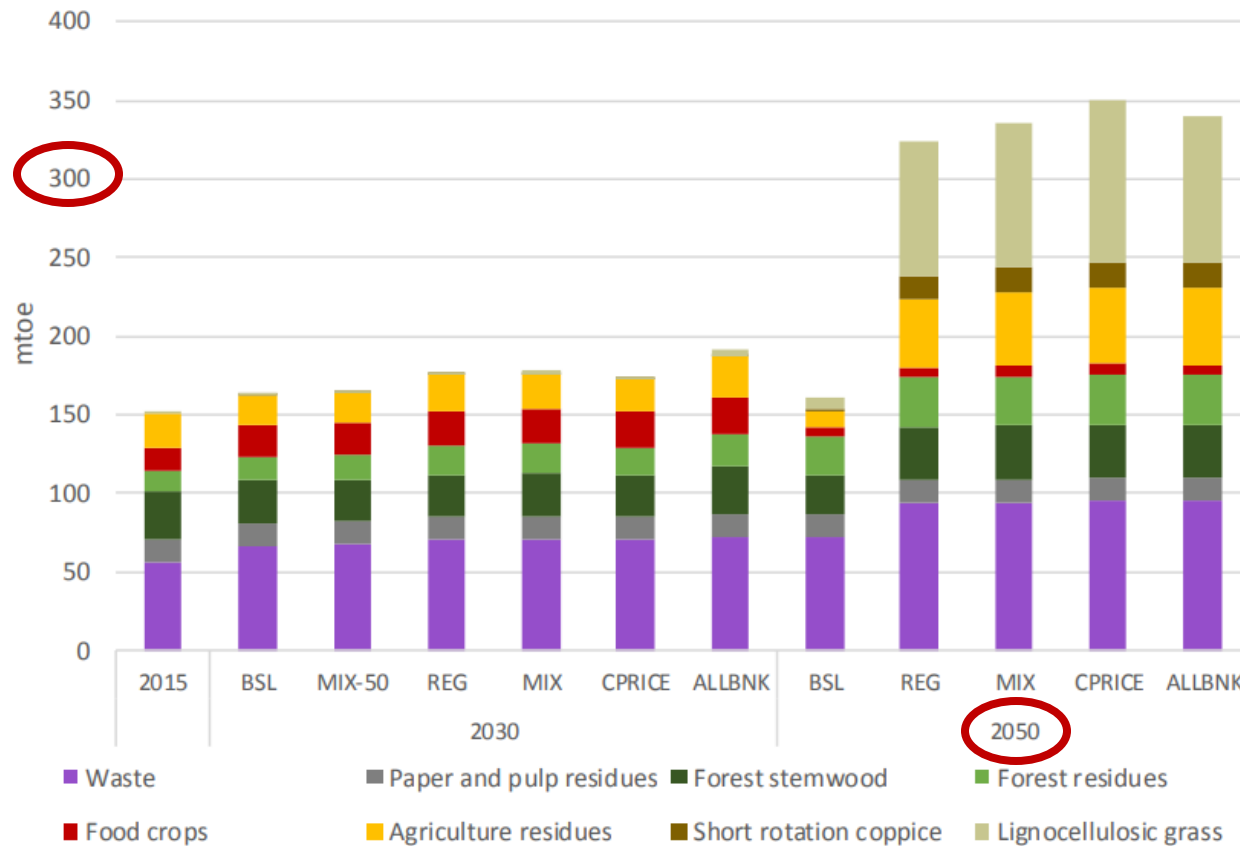
Source: PRIMES, GLOBIOM

1. Jätejakeet vakiintuvat tietylle tasolle
2. Metsäperäiset yhteensä saman verran 2040, vähentyen n.30 % 2050
3. Maataloustähteillä kasvava rooli
4. Lignoselluloosakasvit vahvin kasvu (läpi skenaarioiden)



Vertailu Climate Target Planiin (9/2020) v.2050

Figure 79: Break down of bioenergy feedstocks



Source: PRIMES model

1. Kokonaismäärä 300 Mtoe → 200 Mtoe
2. Jäte 100 Mtoe → 80 Mtoe
3. Metsäp. 60 Mtoe → 30 Mtoe
4. Lignokasvit 100 Mtoe → 60 Mtoe
5. Agritähteet 50 Mtoe → 30 Mtoe

“gross available energy” from biomass is capped at 9 EJ, the environmental risk level for “primary bioenergy use” indicated by the ESABCC



Bioenergia ja LULUCF läheisesti linkitetty

“The differences between S1, S2 and S3 are driven by the different bioenergy needs in the energy systems underpinning the scenarios (see section 1.8 in this Annex). LIFE is characterised by a different food system that frees up land for carbon farming activities such as afforestation. ”

Table 4: LULUCF net removals by scenarios in 2040 and 2050

MtCO2-eq	2040				2050			
	S1	S2	S3	LIFE	S1	S2	S3	LIFE
Lower level	-218	-213	-215	-243	-213	-202	-206	-234
Central level	-319	-316	-317	-360	-341	-332	-333	-389
Upper level	-376	-374	-376	-410	-403	-394	-396	-436

*Note: The ‘Central level’ is derived from applying in the modelling the same policy intensity as the one necessary to meet the 2030 target, except for S1 in 2040. The ‘Lower level’ is derived from assuming no additional cost as the lower boundary of the LULUCF net removals level. The ‘Upper level’ is derived from the maximum mitigation potential as the upper boundary of the LULUCF net removals level. The **numbers in bold** are used to compute the overall net GHGs for the different scenarios.*

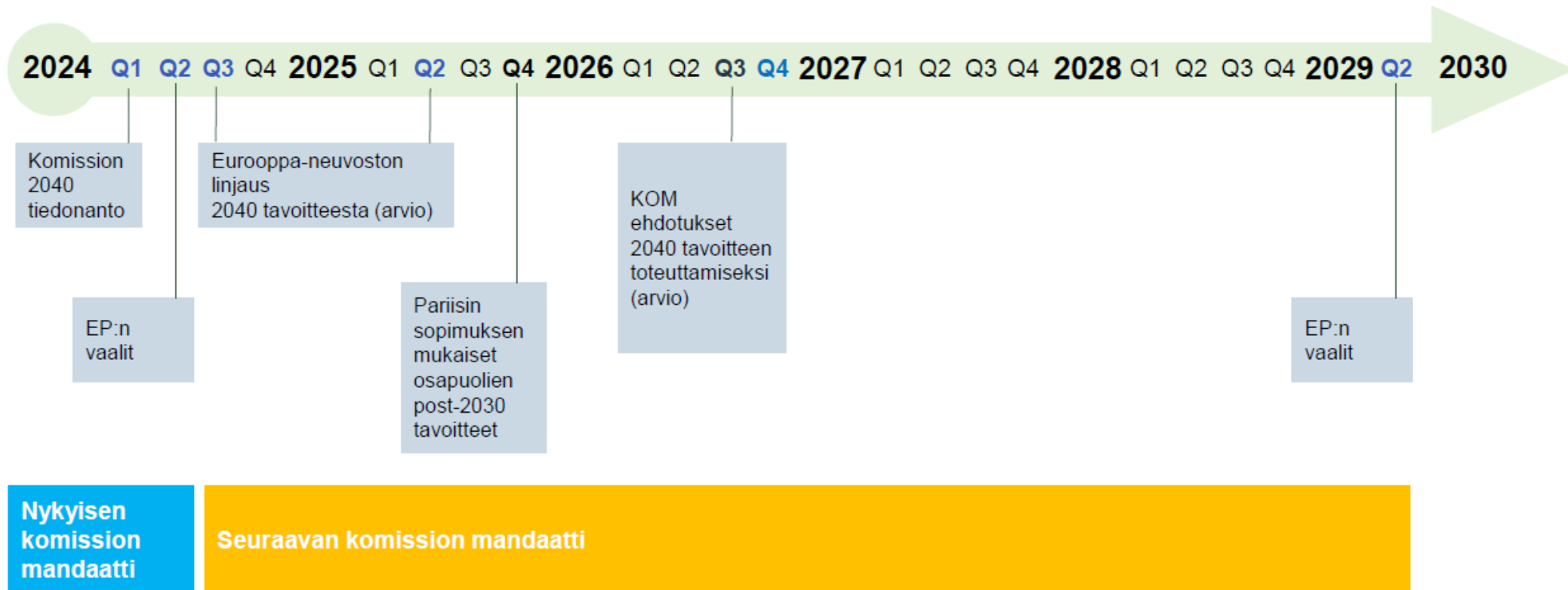
Source: GLOBIOM





EU-politiikan jatkoaskeleet...

Keskeiset ajankohdat: 2040 ilmastotavoite ja post-2030 säädöskehikko





KIITOS! – Lisätiedot:

Harri Laurikka & Hannes Tuohiniitty
etunimi.sukunimi@bioenergia.fi