Supplement S1. Key assumptions and results of five bioenergy studies

Reference, year	Time horizon	Feedstocks	Support options	Constraints	Scenario model	Geographical scope	Bioenergy (PJ per year)
[31] (2019)	2030	agricultural and forestry biomass, biowaste	Technical progress considered	Climate protection, Market development	Sustainable	EU27, UK	7.950
	2050		Technical progress considered	Land use	Sustainable		7.954
			Technical progress, fossil CCS considered				6.280
[32] (2022)	2030	Agricultural residues, forestry residues			<2°C target	West, central, east Europe	5.400
					<2°C, fossil CCS		5.200
	2050	Agricultural residues, forestry residues	60% import	10% non-energy use	<2°C target	West, central, east Europe	18.000
					<2°C, fossil CCS		14.000
[33] (2021)	2030	According Annex IX of REDII	2050 PJ imported		Low biomass mobilisation	EU27, UK	8.700
					Improved biomass mobilisation		11.550
					High mobilisation, techn. Progress		14.400
	2050	According Annex IX of REDII	2345 PJ imported	30% reduction of farm land, H2 supply, waste recycling	Low biomass mobilisation	EU27,UK	9.127
					Improved biomass mobilisation		12.160
					High mobilisation, techn. Progress		15.323
[34] (2020)	2050	Agricultural residues, forestry residues	650 PJ import		Sustainable	EU27	5.000
	2050		76% import, ETS, improved crop yield, technical progress	10% non-energy use	Sustainable		19.000
	2030			Land use	Theoretical		6.000

Reference, year	Time horizon	Feedstocks	Support options	Constraints	Scenario model	Geographical scope	Bioenergy (PJ per year)
[35] 2012		energy crops major share, forest biomass, agricultural residues			Economical	EU27, CH, NO	4.300
	2050				Theoretical	EU27, CH, NO, IS, Balkan	56.000
					Economical		3.000

Table S1: Key assumptions of bioenergy studies