2030 targets: a lost decade for climate & energy in Europe?

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The Greens | European Free Alliance
in the European Parliament

A carbon budget approach

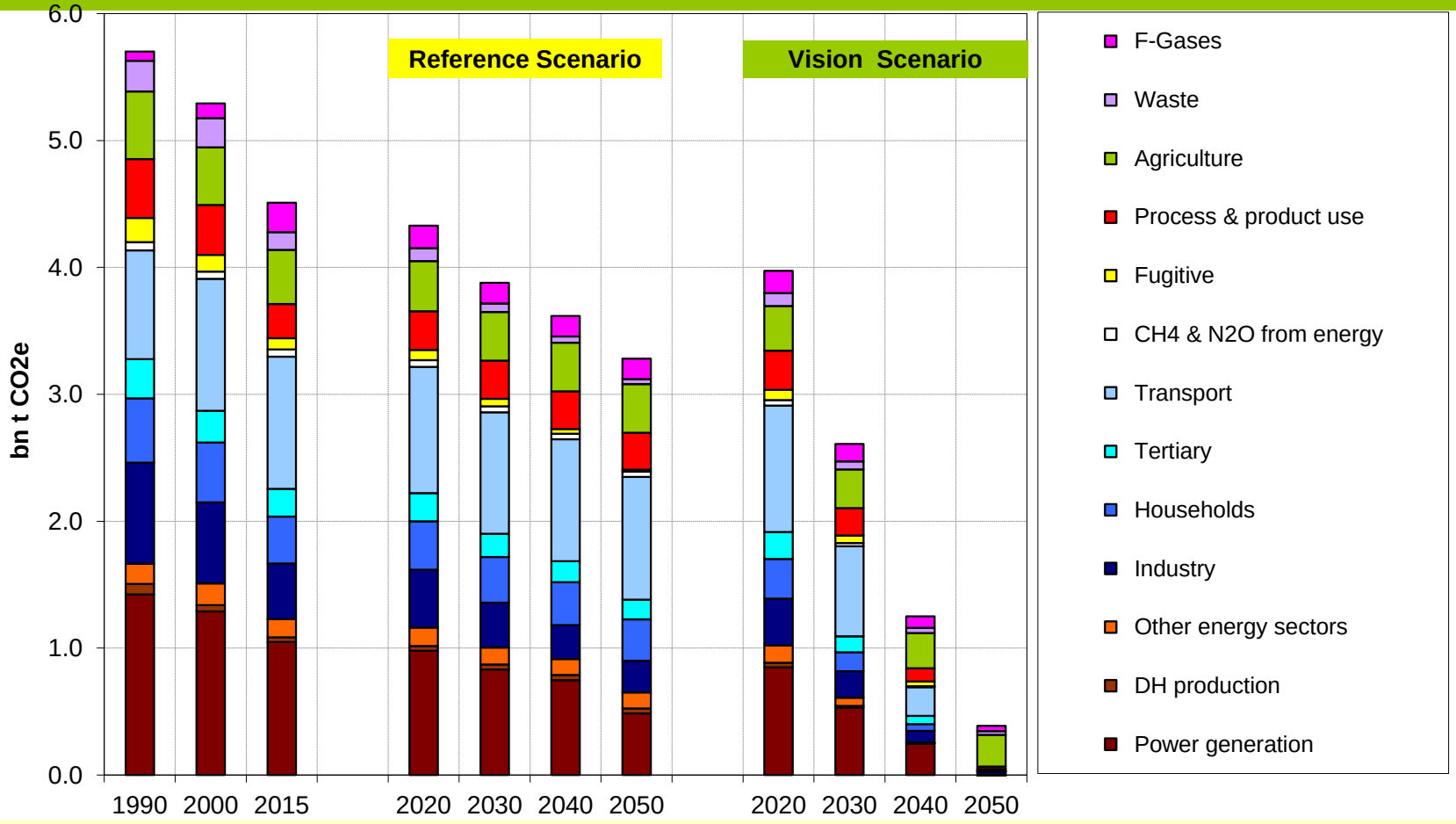
	CO_2 budget globally from 2015	CO_2 budget EU-28		
		Emissions share 2015	Share in population	
			2015	2050
	Gt CO_2	Gt CO_2	Gt CO_2	Gt CO_2
1.5°C for 66% of model runs	240	21,7	16,6	12,9
1.5°C for 50% of model runs	390	35,2	27,0	20,9
1.5°C for 33% of model runs	690	62,2	47,7	37,1
2°C at 66% probability	890	80,2	**61,5**	47,7
2°C at 50% probability	1.000	90,1	69,1	53,6
2°C at 33% probability	1.290	116,2	89,2	69,2
3°C for 66% of model runs	2.240	202,0	154,9	120,2
3°C for 50% of model runs	2.640	238,0	182,6	141,7
3°C for 33% of model runs	3.090	278,6	213,7	165,9

The climate impact of energy and emission pathways can be assessed on the basis of cumulative CO2 emissions

The IPCC provides CO2 emission budget specifications that are widely used in analytical exercises on Paris-compatible pathways (e.g. by IEA/IRENA)

The EU's fair share in the global budget is based on a per-capita (equity) basis on the post-Paris (post-2015) CO2 emissions

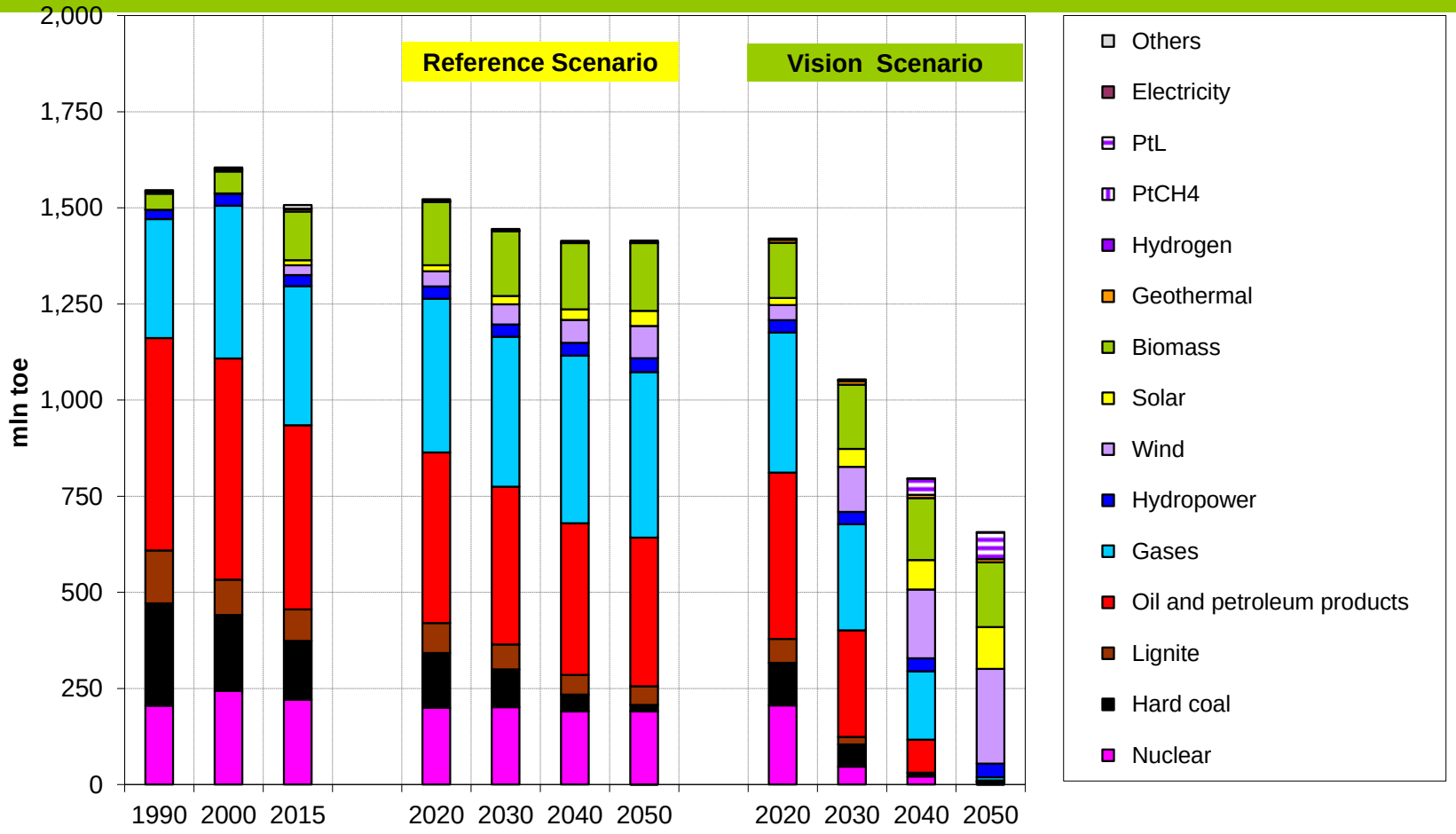
GHG & CO2 - carbon budget requires deep decarbonisation



The EU's energy supply needs to be CO2-free by 2050 at the latest

All sectors need to decarbonize/contribute to massive emission reductions; power, transport and buildings are however the key sectors for action

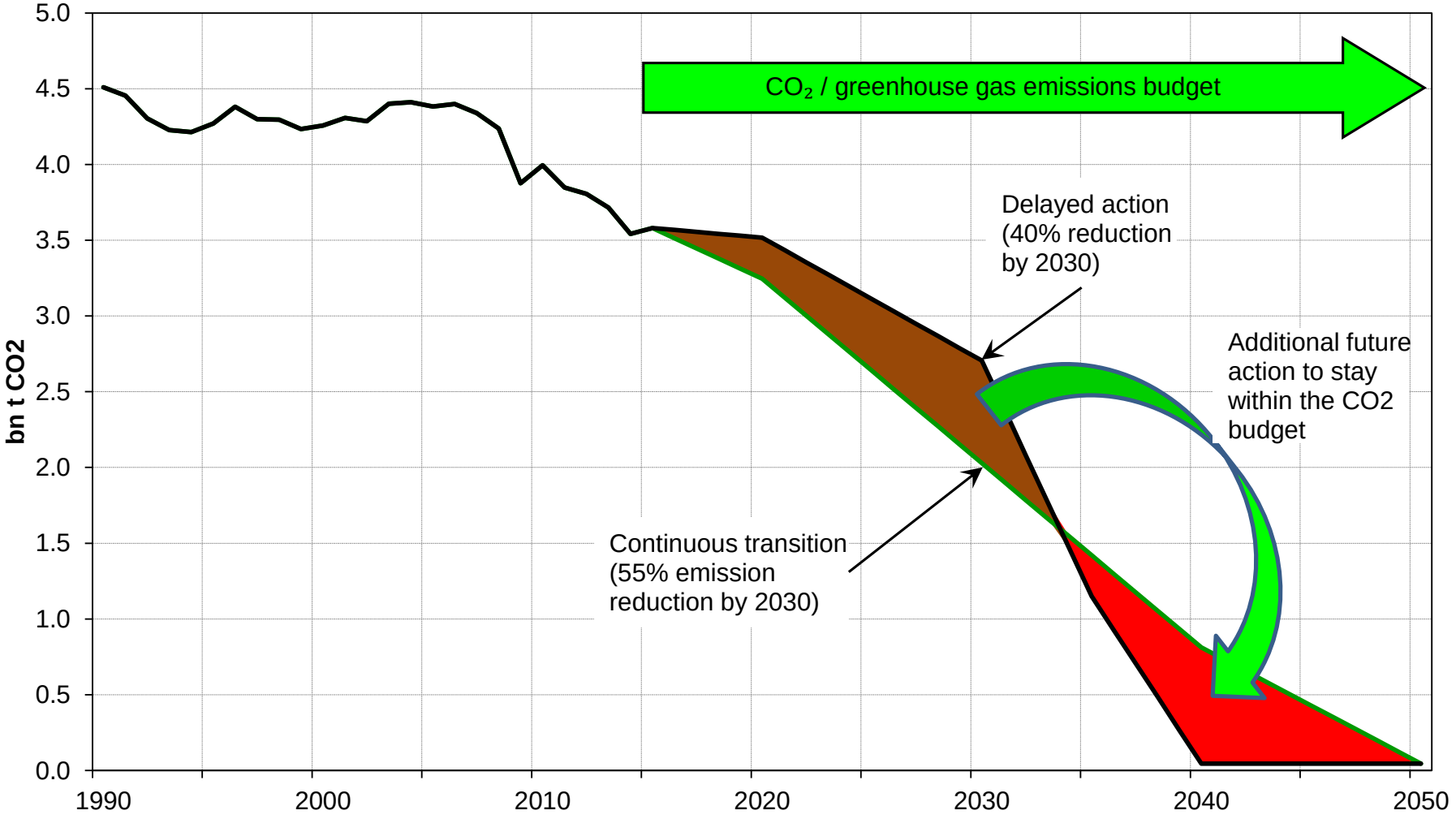
Primary energy supply: system transformation towards RES



Wind, solar and biomass will/can fully deliver almost all primary energy in 2050

(Limited) imports of CO2-free motor fuels as a long-term option (beyond 2030)

2020-2030: a lost decade for climate in Europe?



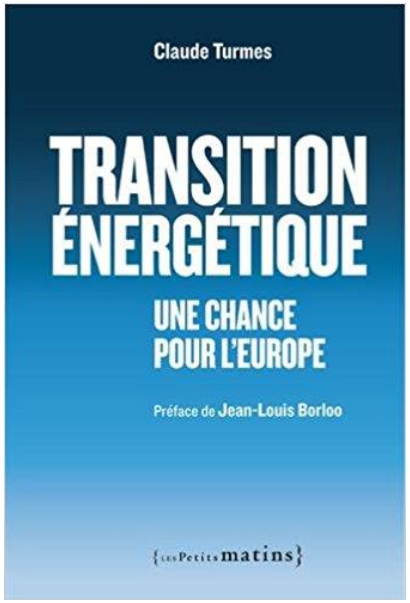
Selected results from the Vision Scenario

	Reference Scenario					Vision Scenario			
	2015	2020	2030	2040	2050	2020	2030	2040	2050
Share of renewables									
Power generation	29%	37%	43%	45%	53%	39%	70%	84%	100%
District heat*	26%	24%	23%	22%	22%	27%	60%	84%	96%
Final energy*	15%	19%	22%	24%	27%	19%	37%	65%	96%
Industry	*18%*	*24%*	*30%*	*34%*	*38%*	*24%*	*47%*	*67%*	*88%*
Tertiary	*18%*	*23%*	*28%*	*31%*	*36%*	*23%*	*48%*	*69%*	*99%*
Households	*25%*	*28%*	*29%*	*30%*	*33%*	*29%*	*55%*	*78%*	*100%*
Transport	*4%*	*7%*	*7%*	*8%*	*9%*	*7%*	*14%*	*57%*	*99%*
Primary energy	15%	17%	19%	21%	13%	20%	40%	70%	98%
Energy Efficiency	Change from Primes Baseline 2007**								
Primary energy	-	-18%	-23%	-	-	-23%	-44%	-	-
Primary energy imports***	17%	13%	13%	14%	17%	13%	10%	7%	7%
GHG emissions	Change from 1990								
Total****	-21%	-24%	-32%	-37%	-42%	-30%	-54%	-78%	-93%
CO2****	-21%	-22%	-30%	-35%	-42%	-28%	-55%	-82%	-99%

Notes: * The share of renewable energy sources includes indirect contributions from electricity, heat, hydrogen & synfuels. The statistically unaccounted ambient heat delivered by heat pumps represents additional contributions to the final energy supply from renewables. - ** The 2007 Primes Baseline projection for the EU-27 was adjusted for Croatia. - *** Excluding primary energy for non-energy uses, nuclear fuel was fully considered as imported primary energy. - **** Including international aviation and excluding LULUCF.

For a more continuous & consistent transformation towards a 2°C-compatible economy higher ambition levels of energy & climate policy are needed

Energy transformation: an opportunity for Denmark and for Europe!



Thank you for your attention!

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