

ANNEXE 1. Greenpeace statistics under 3 scenarios

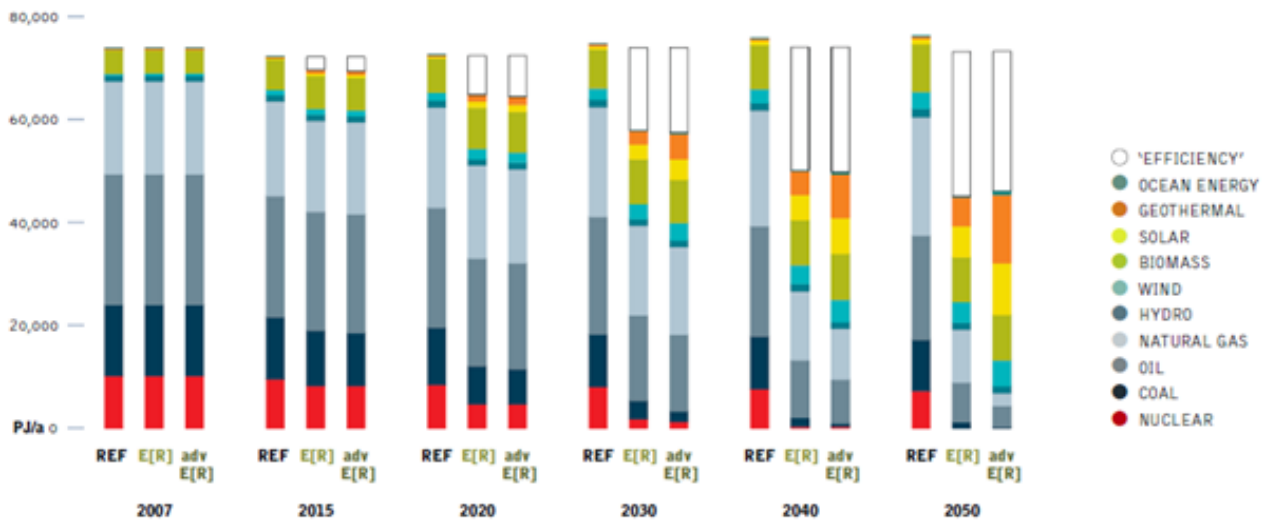
1.1. Projection of renewable electricity generation capacity under both energy [r]evolution scenarios

IN GW		2007	2020	2030	2040	2050
Hydro	E[R]	140	155	157	157	156
	advanced E[R]	140	155	157	159	163
Biomass	E[R]	20	59	76	98	112
	advanced E[R]	20	59	77	93	100
Wind	E[R]	57	251	330	382	398
	advanced E[R]	57	251	376	443	497
Geothermal	E[R]	1	5	13	27	35
	advanced E[R]	1	7	34	58	96
PV	E[R]	5	125	196	282	340
	advanced E[R]	5	144	241	381	498
CSP	E[R]	0	9	17	27	31
	advanced E[R]	0	15	43	73	99
Ocean energy	E[R]	0	1	4	11	18
	advanced E[R]	0	3	21	37	66
Total	E[R]	223	605	792	985	1,090
	advanced E[R]	223	634	949	1,244	1,518

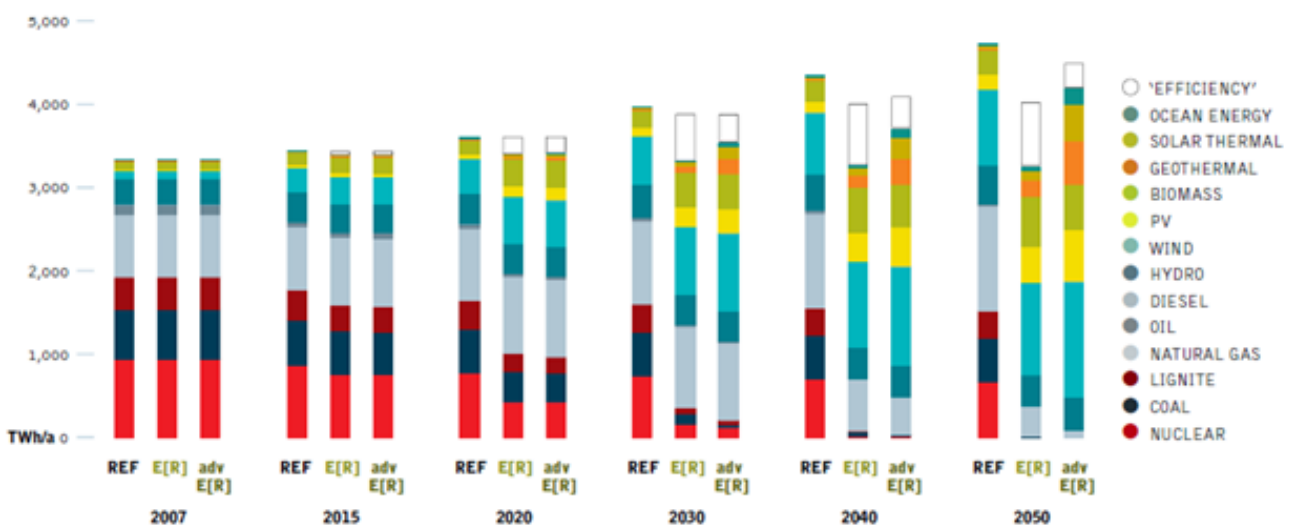
The development of the electricity supply sector in the advanced Energy [R]evolution scenario is characterised by a rapidly growing renewable energy market. This will compensate for the phasing out of nuclear energy and reduce the number of fossil fuel-fired power plants required for grid stabilisation. By 2050, nearly all the electricity produced in EU 27 will come from renewable energy sources (97%). Figure 4.5 shows the evolution of the European electricity mix under the three different scenarios. Up to 2020, hydro and wind power will remain the main contributors to the growing RES market share. After 2020, the continued growth of wind will be complemented by electricity from photovoltaic, biomass, geothermal and solar thermal (CSP) energy. The advanced Energy [R]evolution scenario will lead to a higher share of variable power generation sources (photovoltaic, wind and ocean) of 36% by 2030 and 52% in 2050. Therefore, the expansion of smart grids, demand-side management (DSM) and storage capacity from an increased share of electric vehicles and pumped hydropower will be used for better grid integration and power generation management.

The installed capacity of renewable energy technologies will grow from the current 223 GW to 1,518 GW in 2050, increasing renewable capacity by a factor of almost 7 in the advanced Energy [R]evolution scenario. Wind power and photovoltaic each cover around a third of the total installed renewable capacity, around 500 GW each. The remaining third is mainly provided by hydro power (160 GW) and equal 100 GW shares of biomass, geothermal and CSP power.

1.2. Development of primary energy consumption under three scenarios



1.3. Development of electricity generation under three scenarios



1.4. Employment and Investment

Jobs	2015	REFERENCE		ENERGY [R]EVOLUTION			ADVANCED ENERGY [R]EVOLUTION		
		2020	2030	2015	2020	2030	2015	2020	2030
Construction & Installation	0.12	0.08	0.06	0.18	0.09	0.13	0.20	0.14	0.20
Manufacturing	0.17	0.12	0.09	0.17	0.15	0.17	0.27	0.23	0.23
Operations & maintenance	0.34	0.36	0.42	0.40	0.56	0.68	0.40	0.56	0.73
Fuel	0.32	0.30	0.28	0.34	0.30	0.21	0.35	0.30	0.17
Coal and gas export	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Jobs	0.94	0.87	0.85	1.09	1.11	1.20	1.22	1.23	1.33
Coal	0.27	0.25	0.23	0.27	0.20	0.08	0.28	0.20	0.04
Gas, oil and diesel	0.06	0.05	0.04	0.07	0.07	0.07	0.07	0.07	0.07
Nuclear	0.04	0.04	0.03	0.03	0.02	0.01	0.03	0.02	0.01
Renewables	0.57	0.53	0.54	0.72	0.82	1.04	0.83	0.94	1.22
Total Jobs	0.94	0.87	0.85	1.09	1.11	1.20	1.22	1.23	1.33

This table shows the increase in job numbers under both Energy [R]evolution scenarios for each technology up to 2030. Both scenarios show losses in coal generation, but these are outweighed by employment growth in renewable technologies and gas. Wind shows particularly strong growth in both Energy [R]evolution scenarios by 2020, but by 2030 there is significant employment across a range of renewable technologies. In both Energy [R]evolution scenarios, renewable power jobs reach over 70% of total energy sector jobs by 2020, with a share of over 80% by 2030.