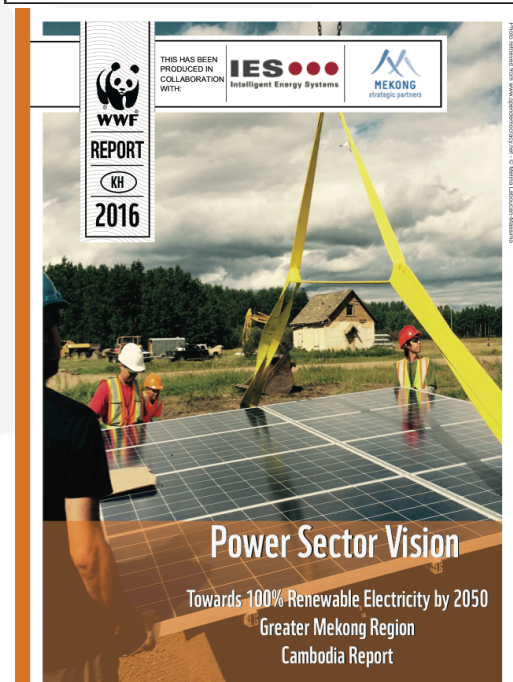
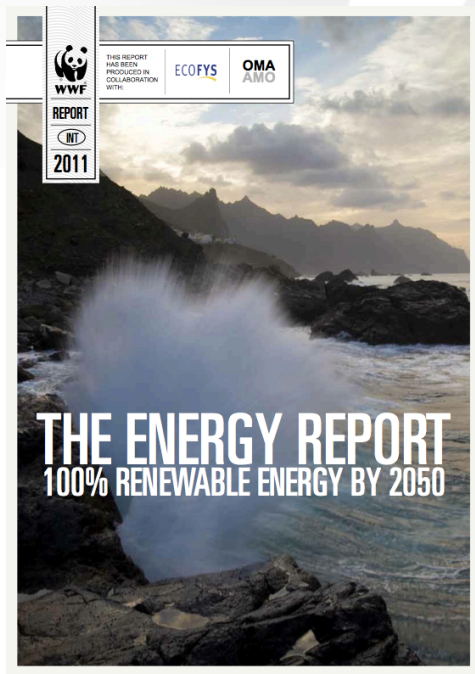
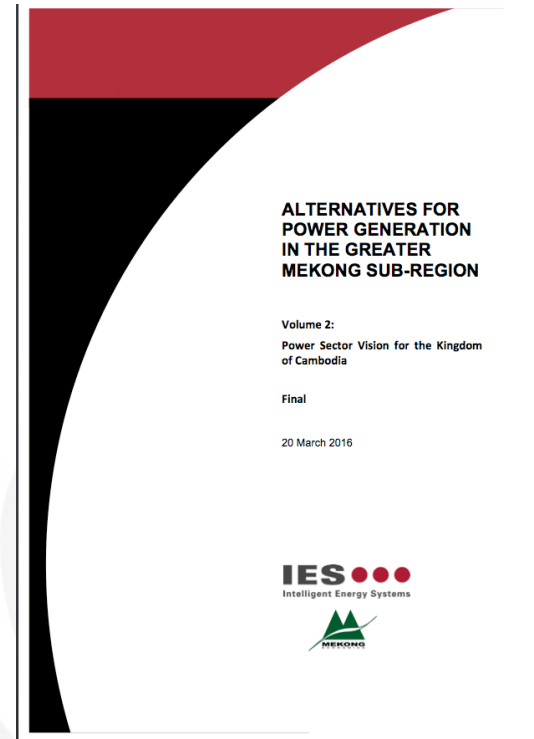
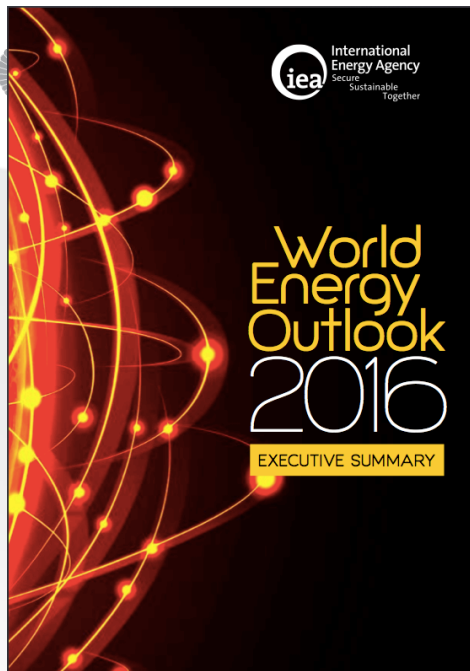
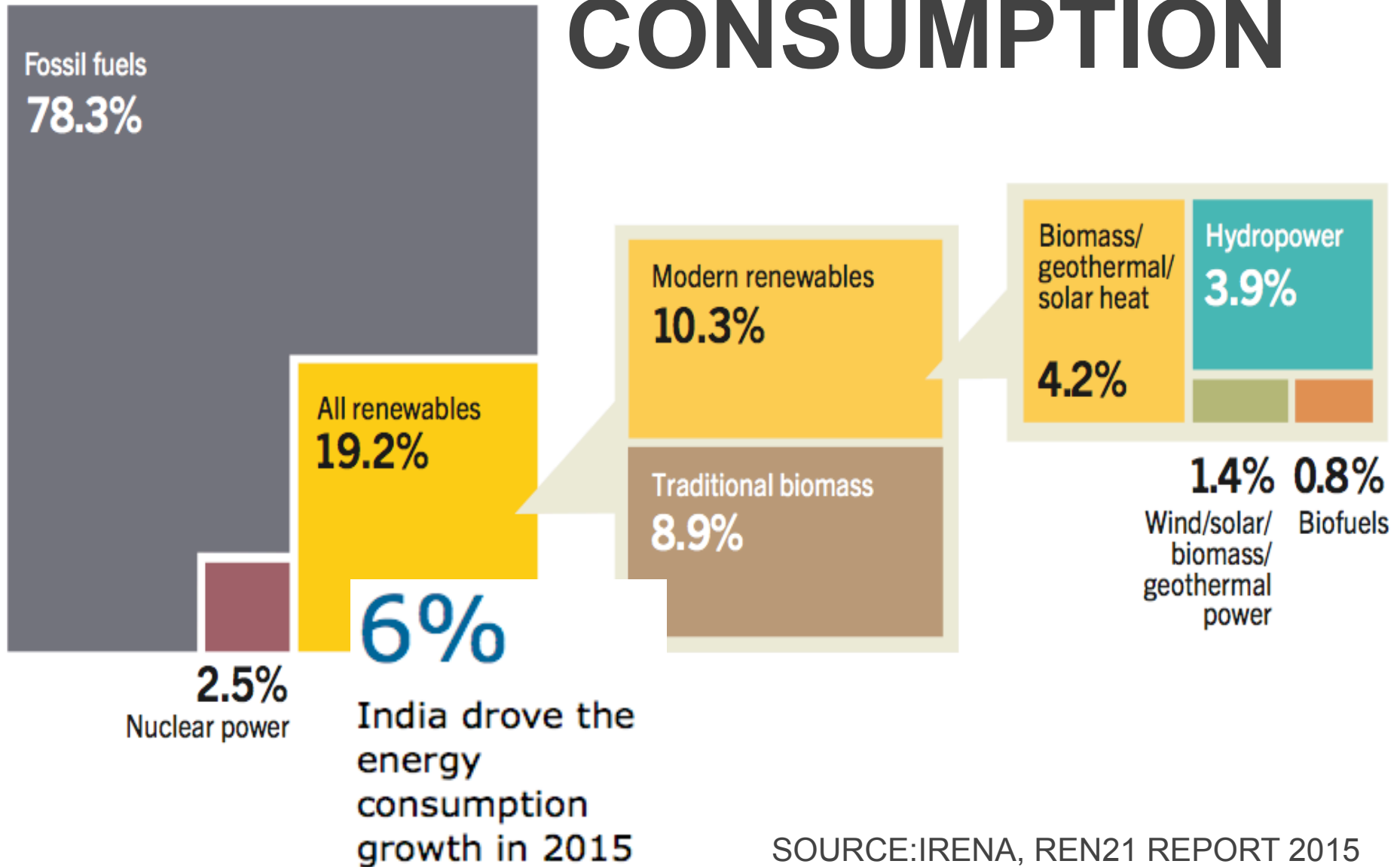


PART III -GLOBAL ENERGY OUTLOOK

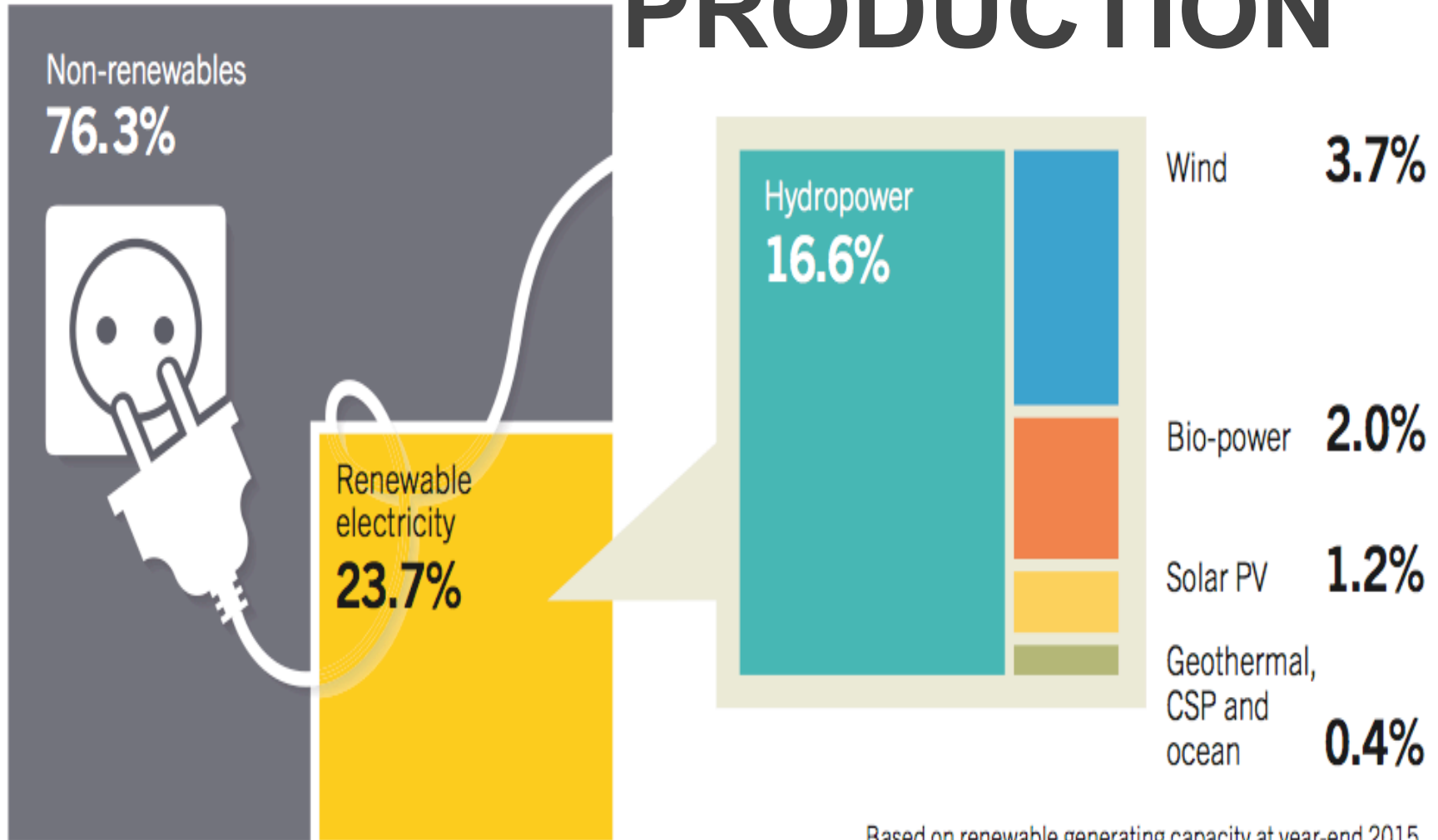


CURRENT SITUATION

GLOBAL FINAL ENERGY CONSUMPTION



TOTAL ELECTRICITY PRODUCTION

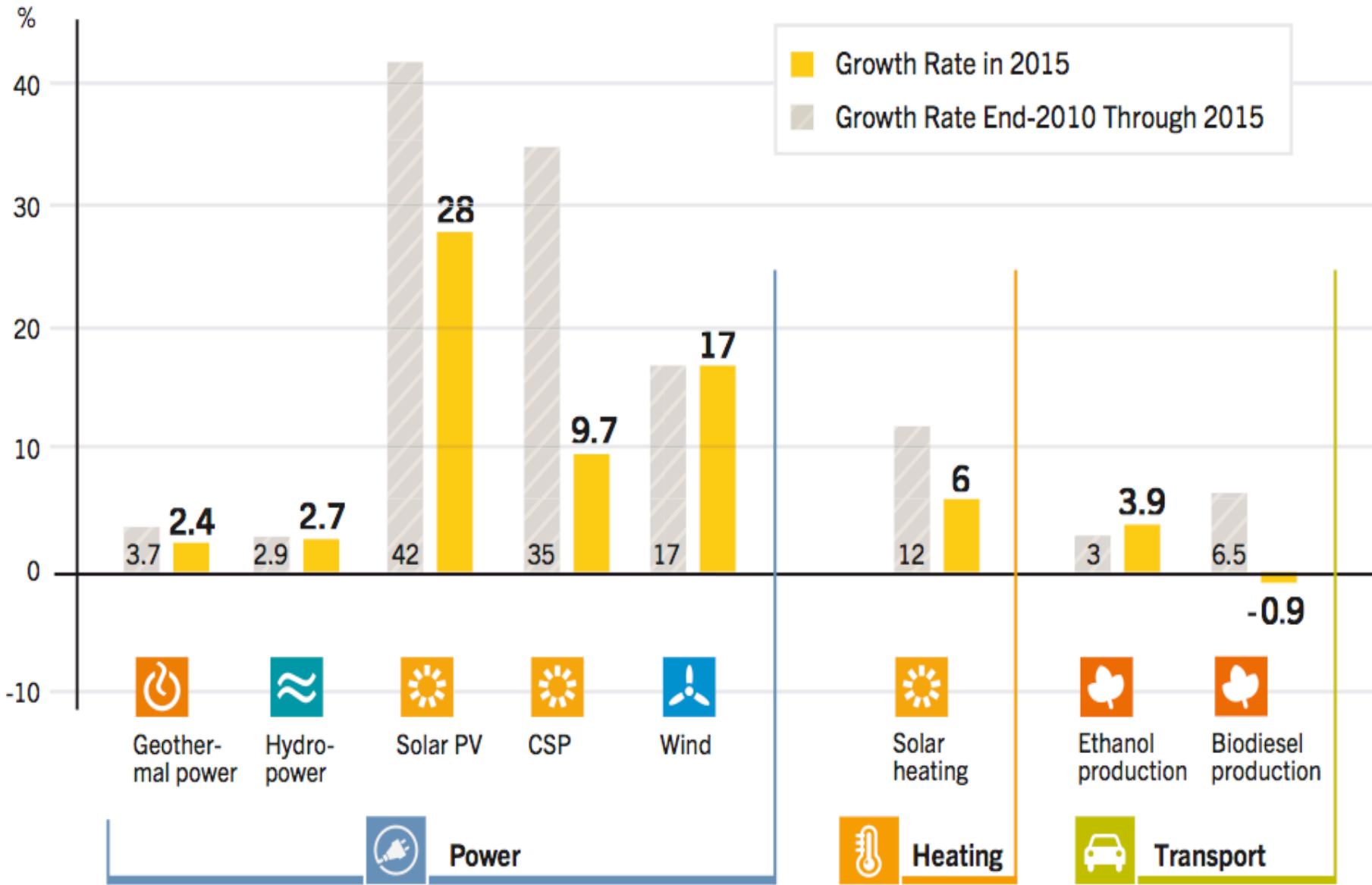


Based on renewable generating capacity at year-end 2015.

Percentages do not add up internally due to rounding.

SOURCE:IRENA, REN21 REPORT 2015

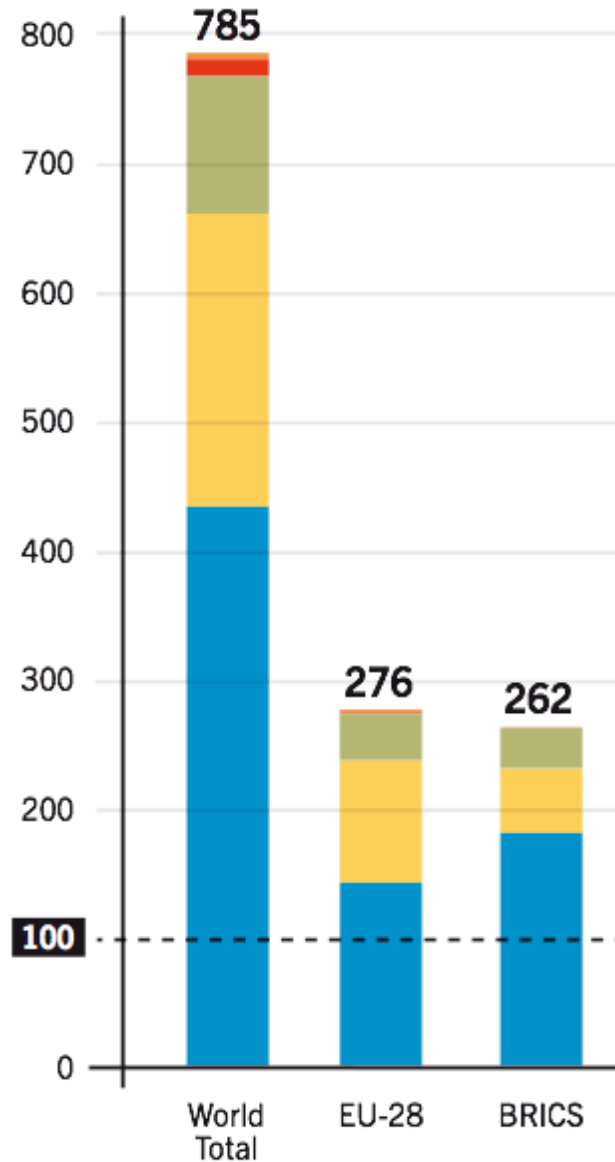
GROWTH RATES OF RE



SOURCE:IRENA, REN21 REPORT 2015

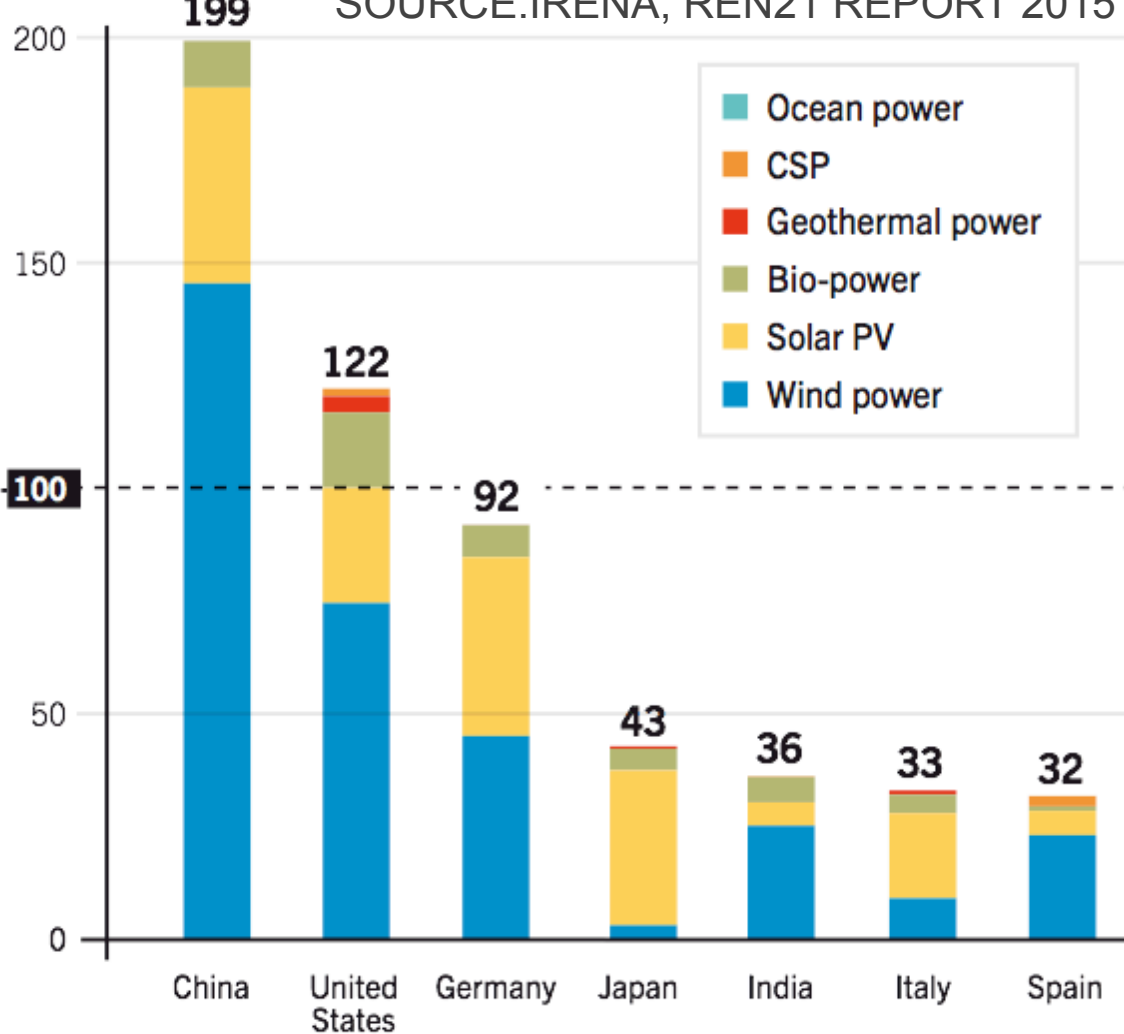
RE POWER CAPACITIES

Gigawatts



Gigawatts

SOURCE: IRENA, REN21 REPORT 2015



- Ocean power
- CSP
- Geothermal power
- Bio-power
- Solar PV
- Wind power

JOBS IN RE



Bioenergy
(biomass, biofuels,
biogas)



Geothermal



Hydropower
(small-scale)ⁱ



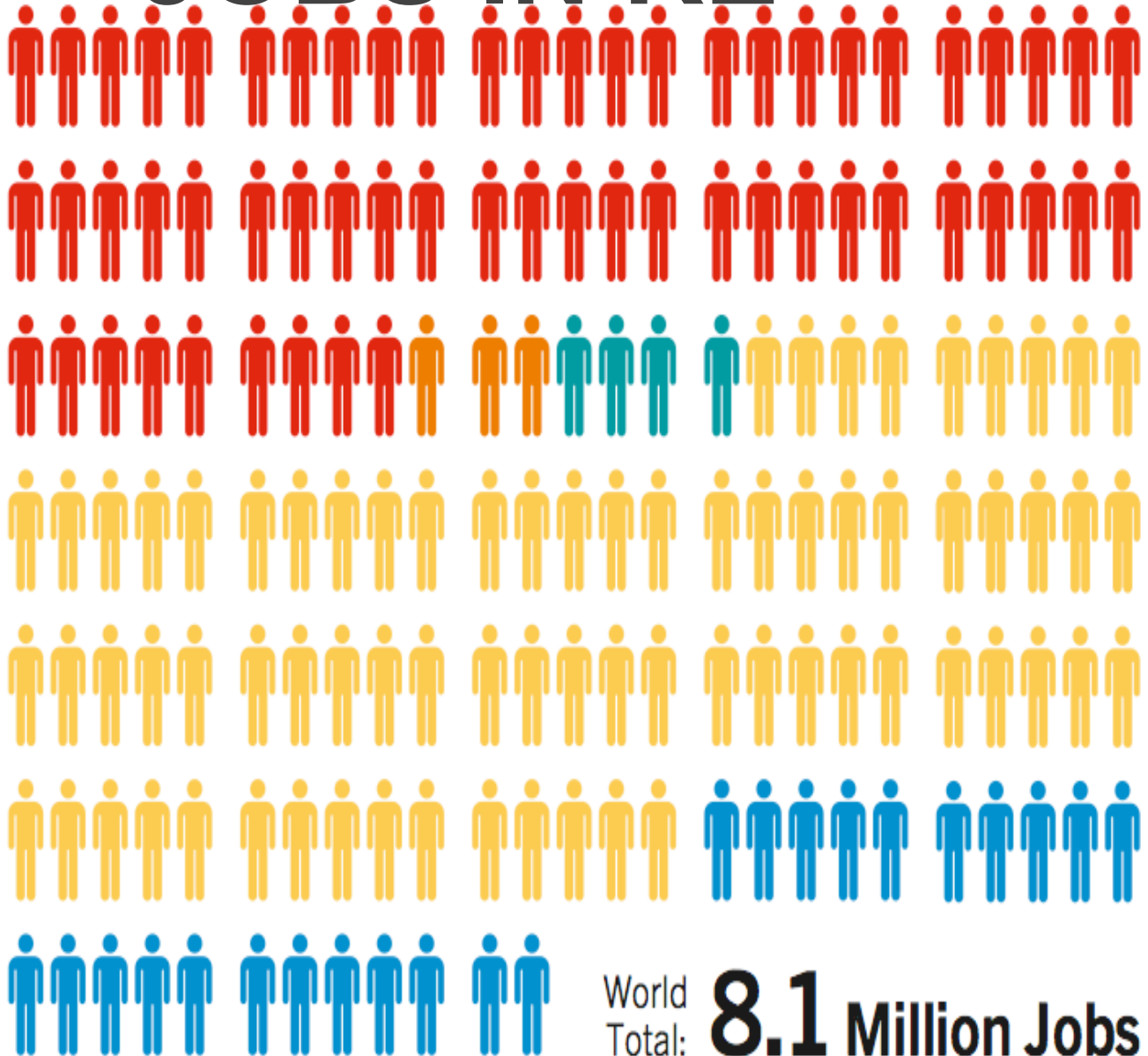
Solar Energy
(solar PV, CSP,
solar heating/cooling)



Wind Power



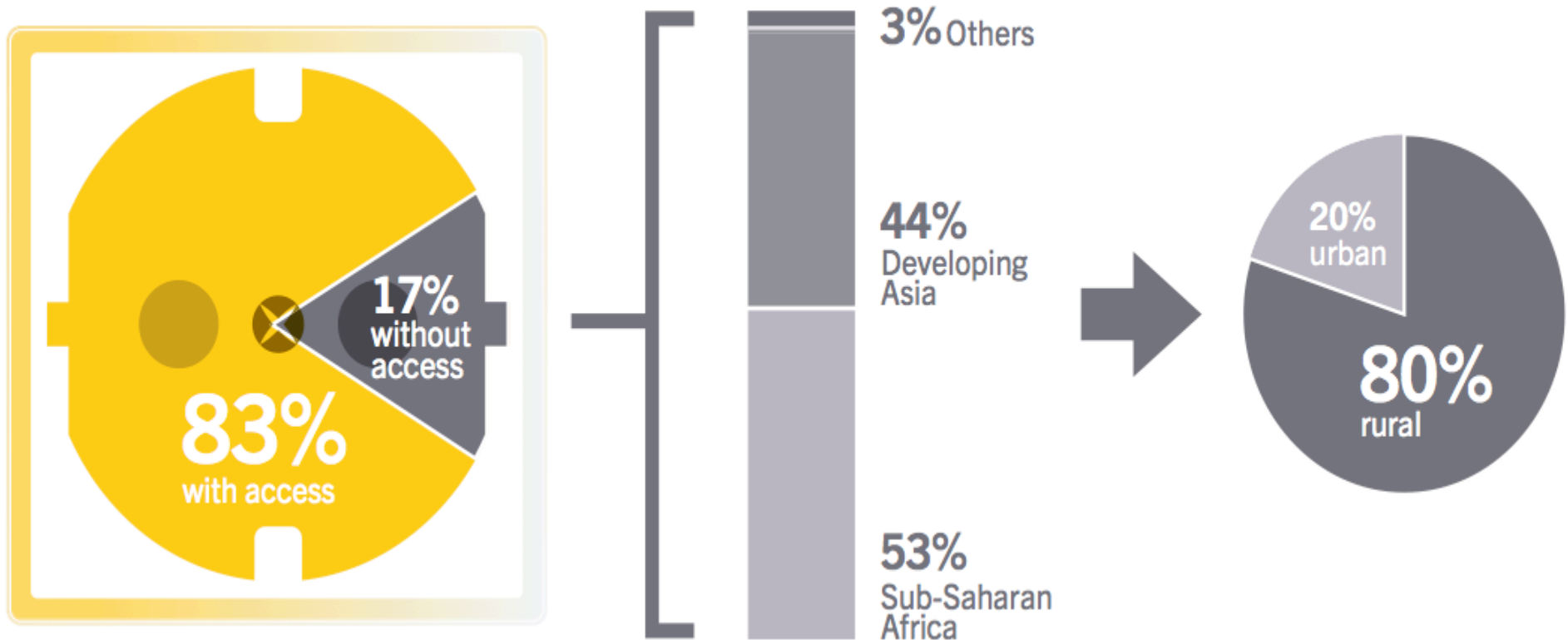
= 50,000 jobs



World
Total: **8.1 Million Jobs**

SOURCE:IRENA, REN21 REPORT 2015

WORLD ELECTRICITY ACCESS

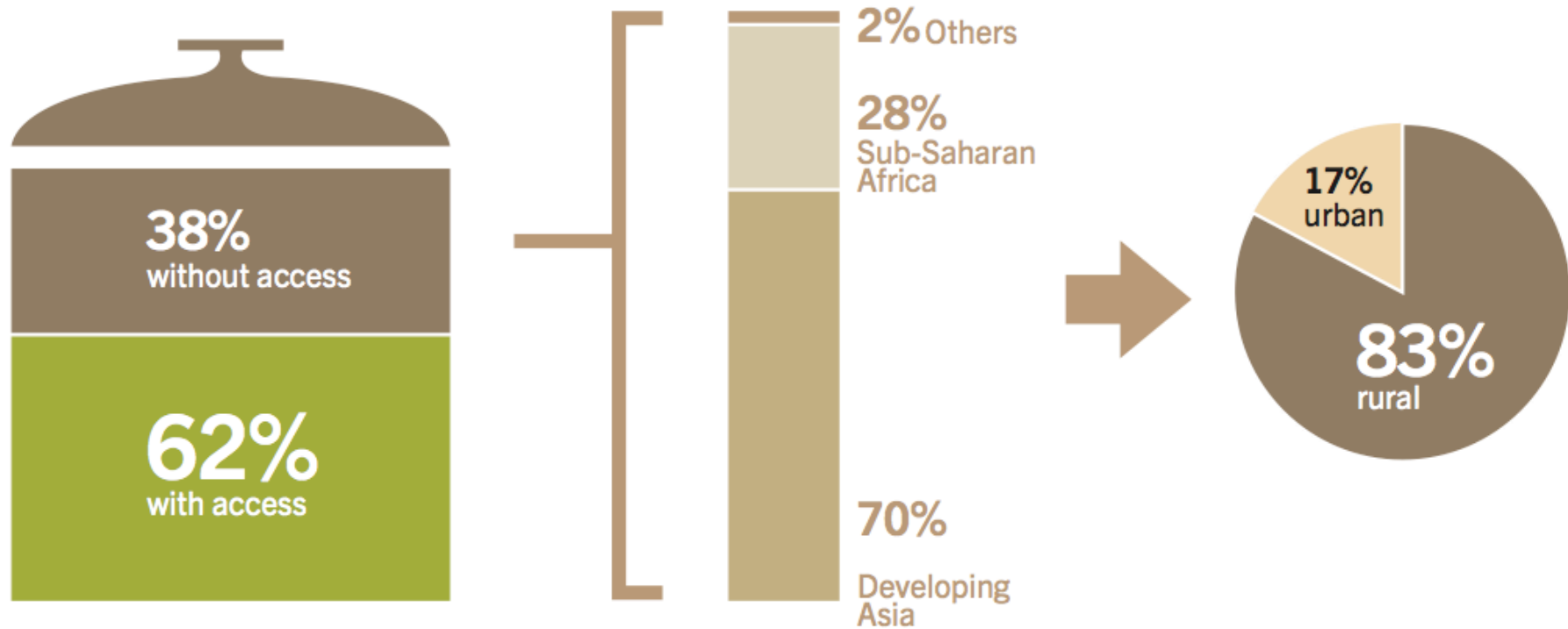


SOURCE:IRENA, REN21 REPORT 2015



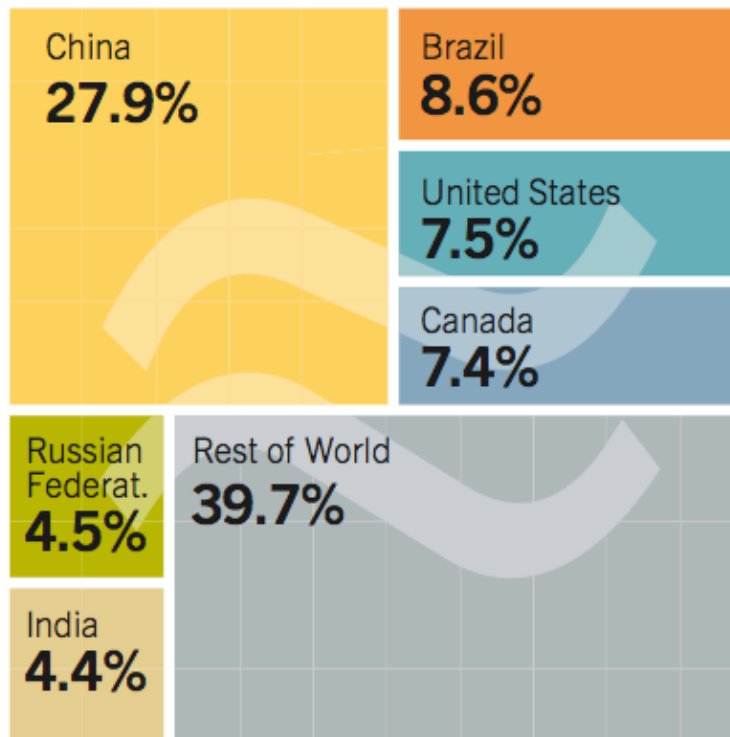
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WORLD CLEAN COOKING ACCESS



SOURCE:IRENA, REN21 REPORT 2015

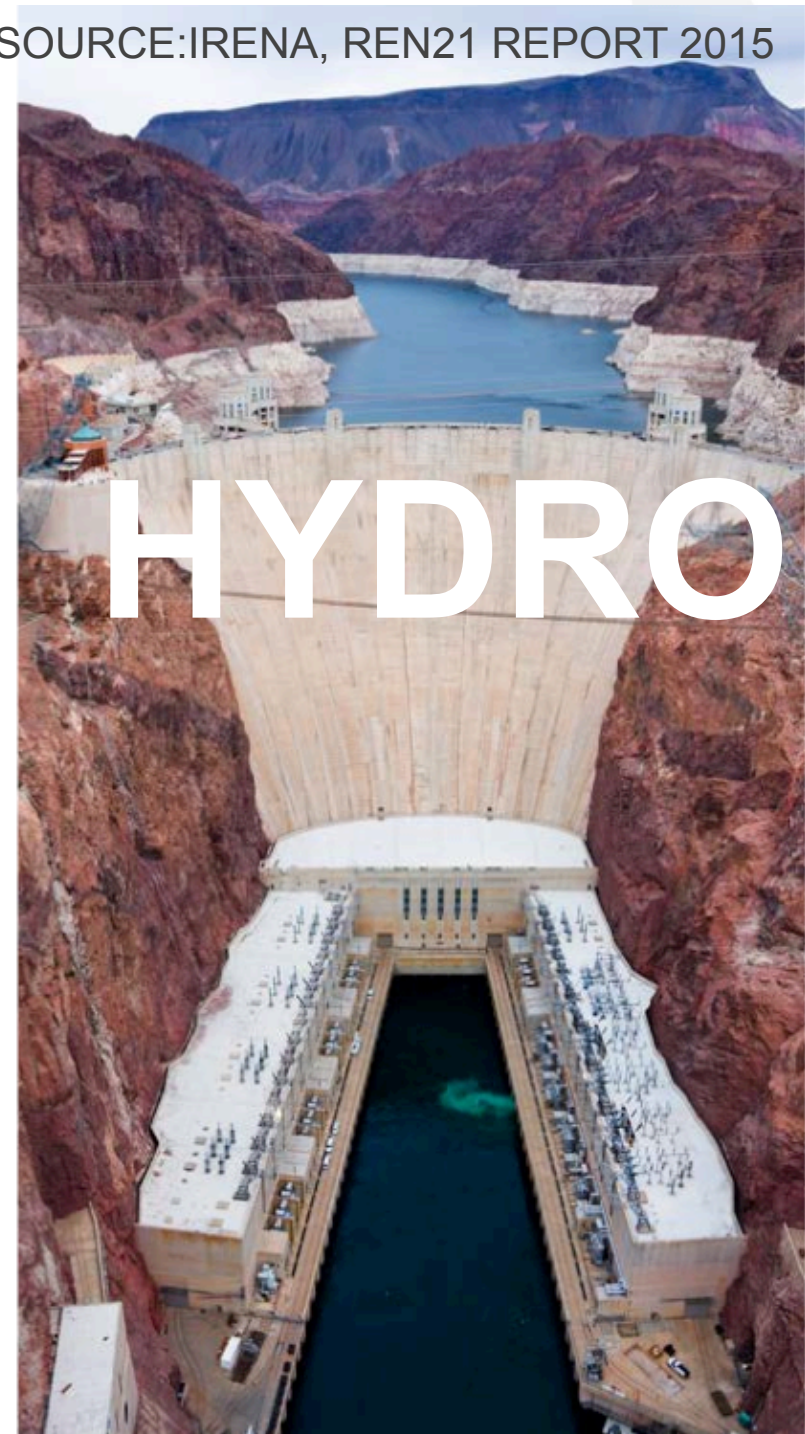
Figure 12. Hydropower Global Capacity, Shares of Top Six Countries and Rest of World, 2015



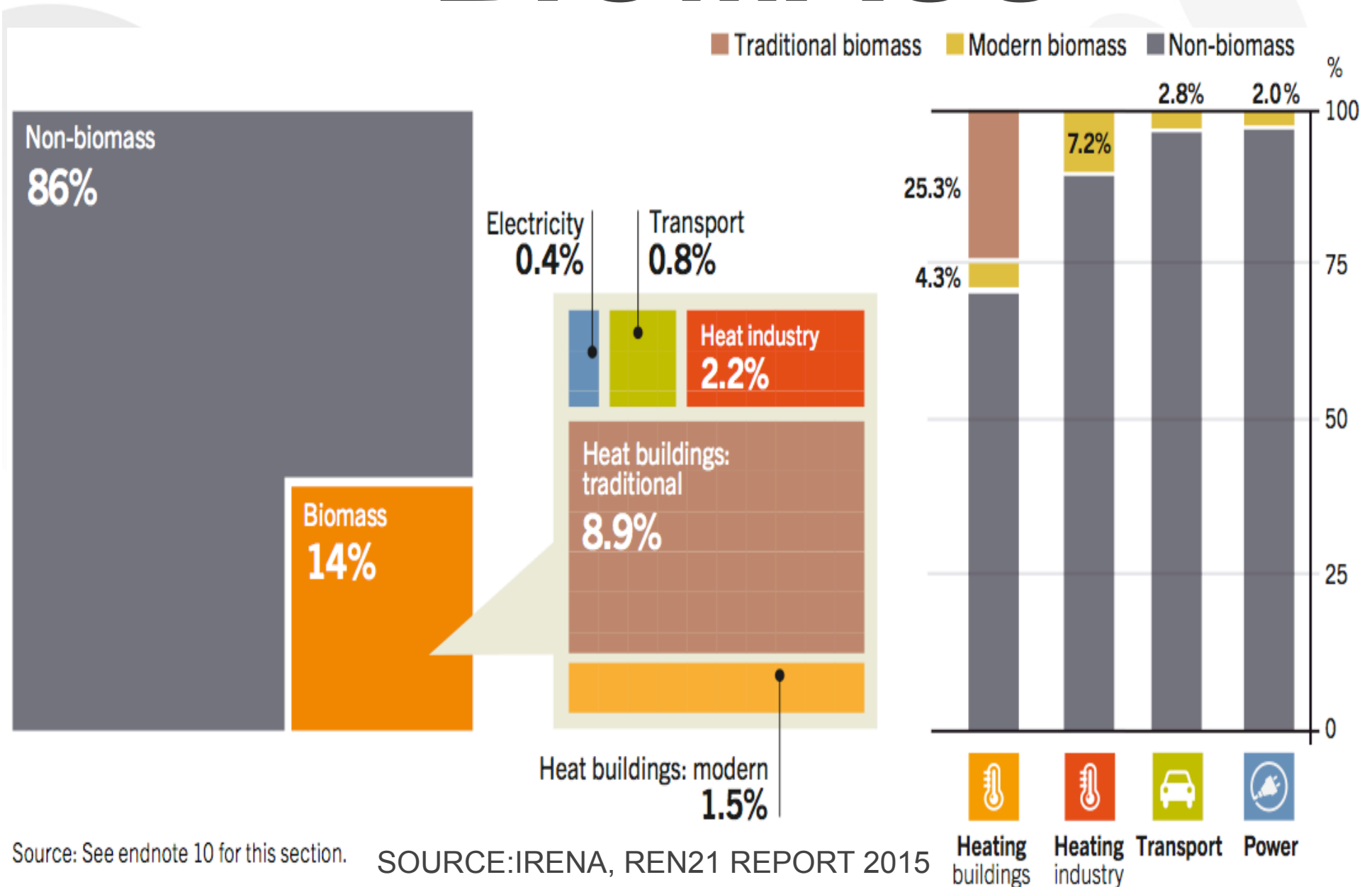
Source:
See endnote 2
for this section.

**Global capacity reached
1,064 GW**

SOURCE:IRENA, REN21 REPORT 2015



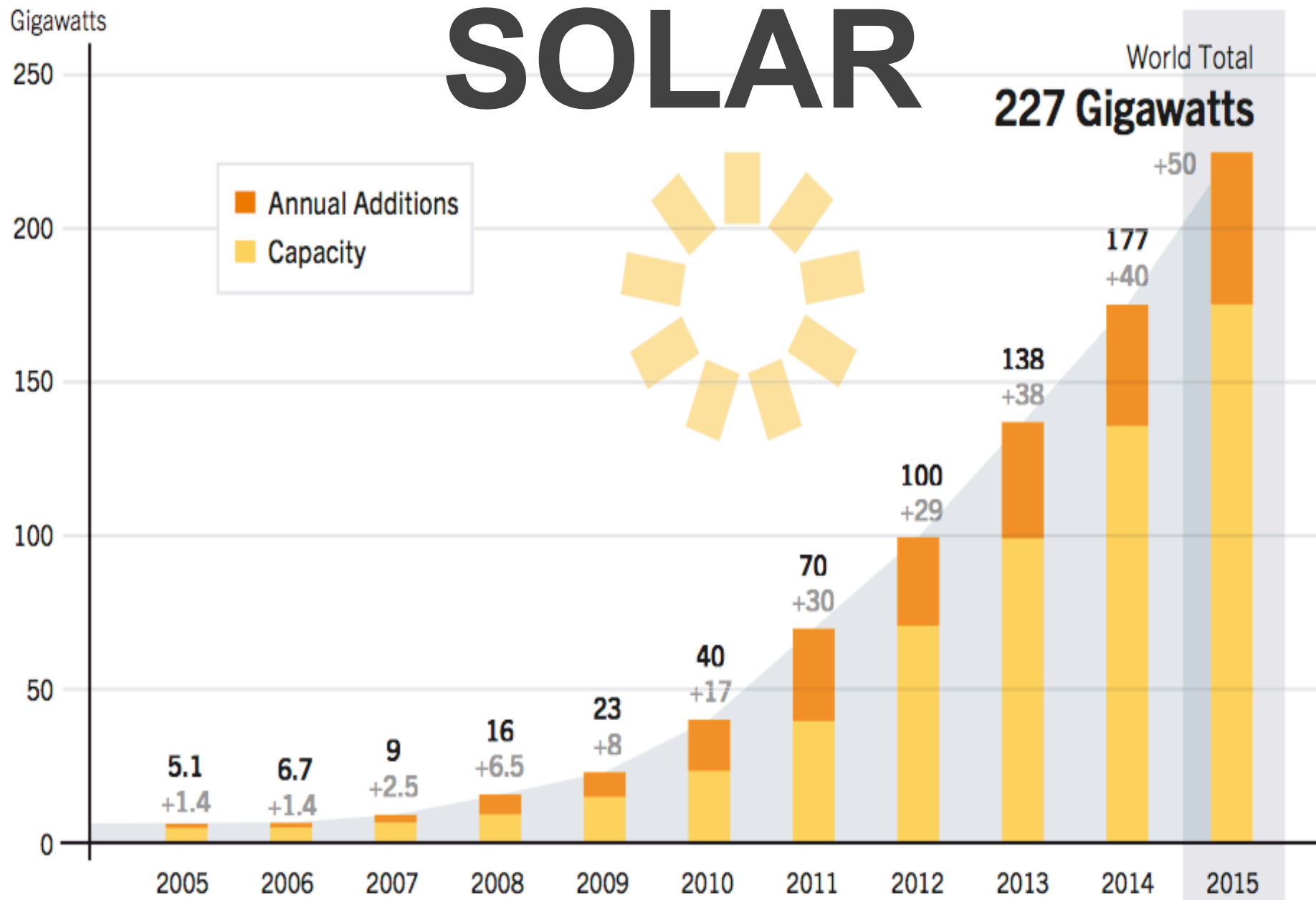
BIOMASS



Source: See endnote 10 for this section.

SOURCE: IRENA, REN21 REPORT 2015

SOLAR



SOURCE:IRENA, REN21 REPORT 2015

SOLAR

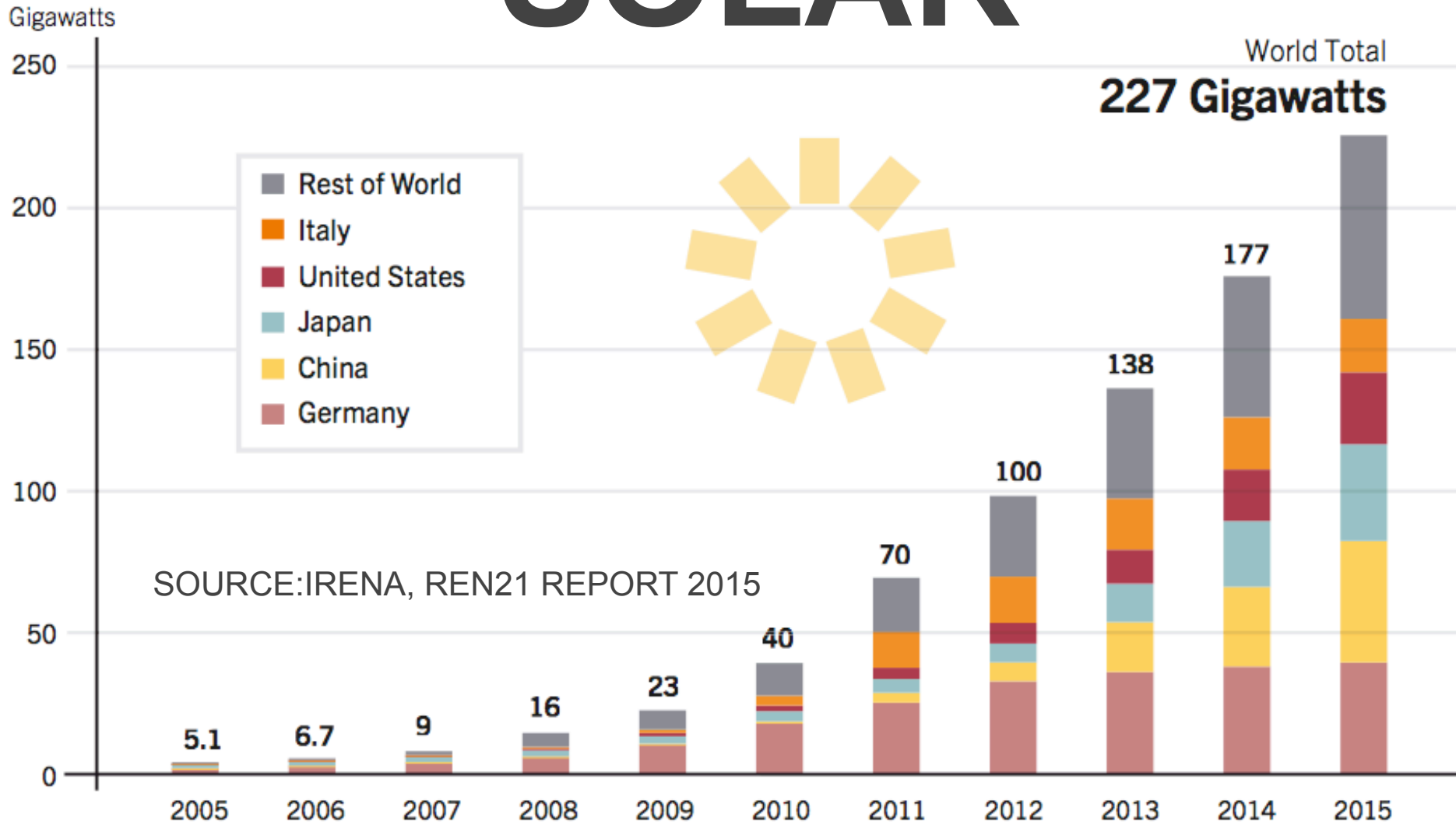
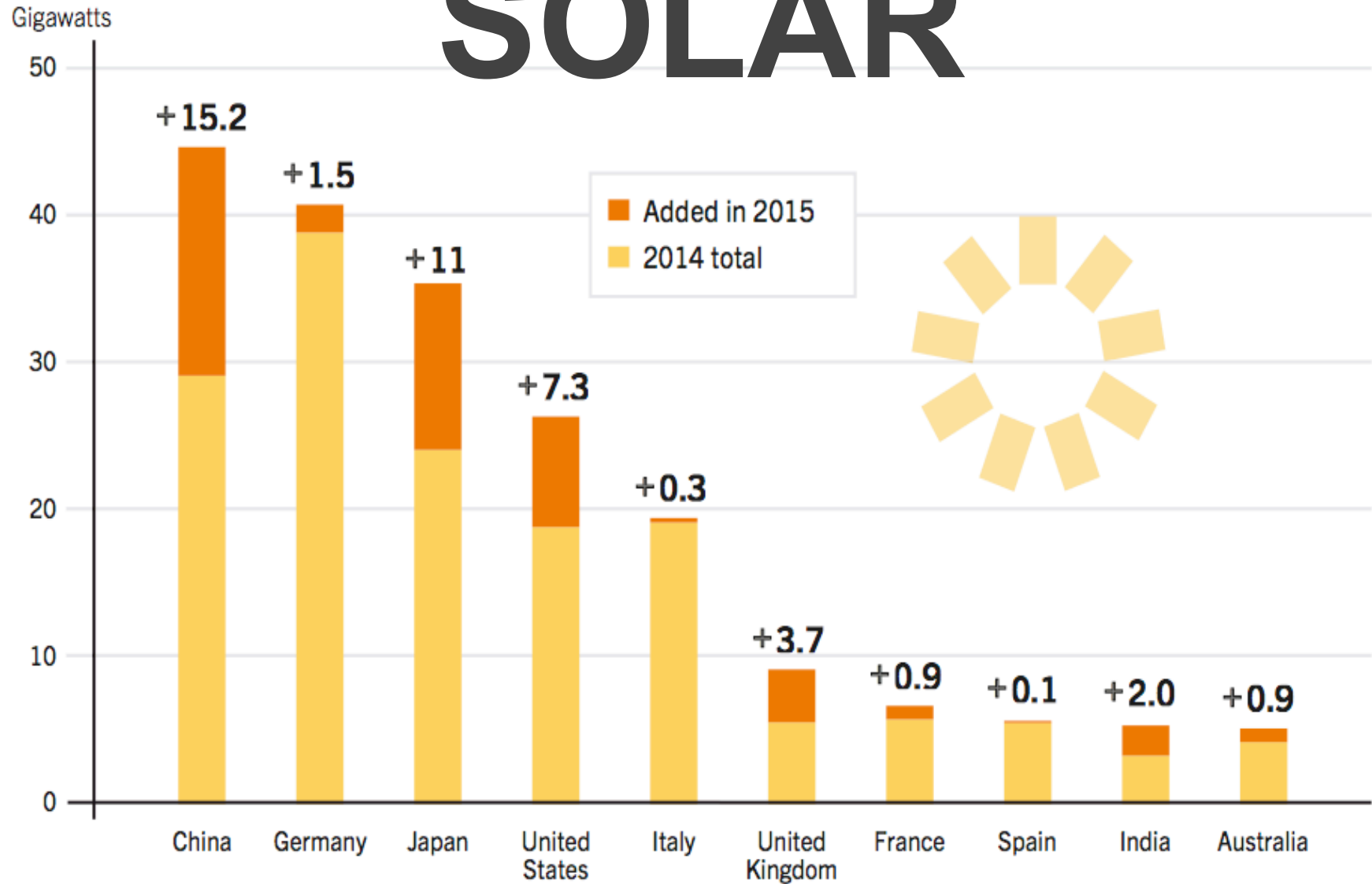


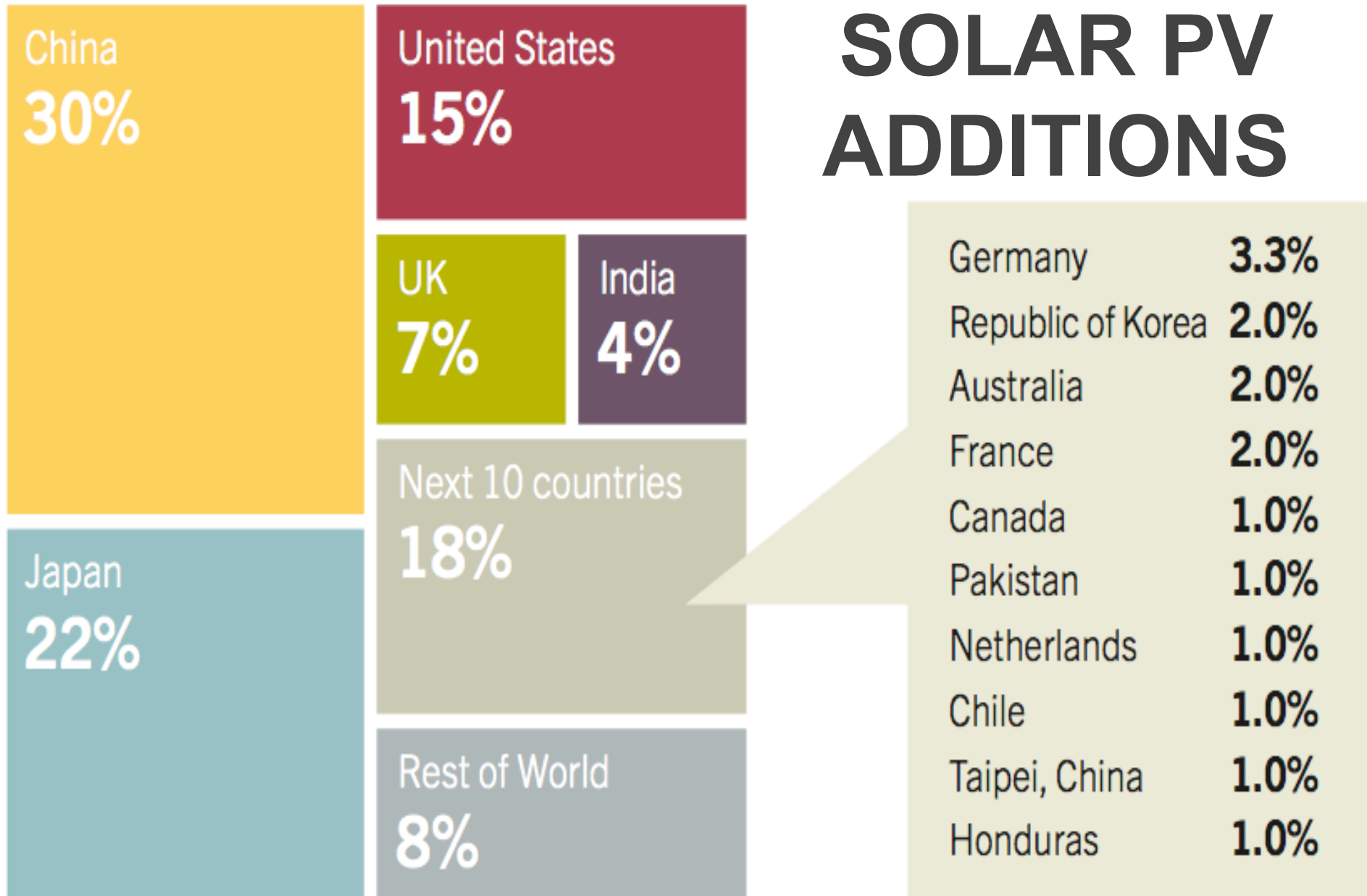
Figure 16. Solar PV Capacity and Additions, Top 10 Countries, 2015

SOLAR



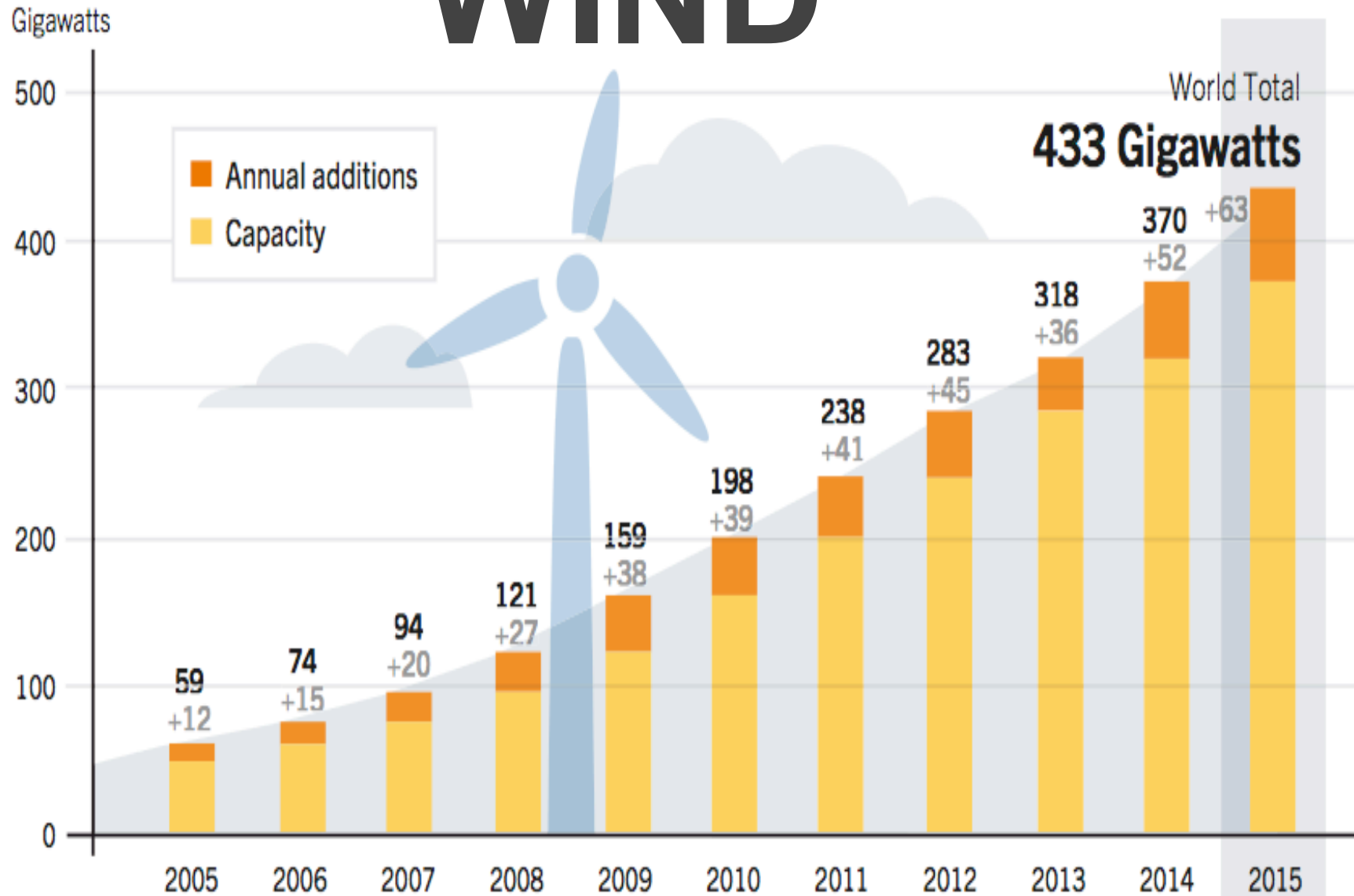
SOURCE:IRENA, REN21 REPORT 2015

SOLAR PV ADDITIONS



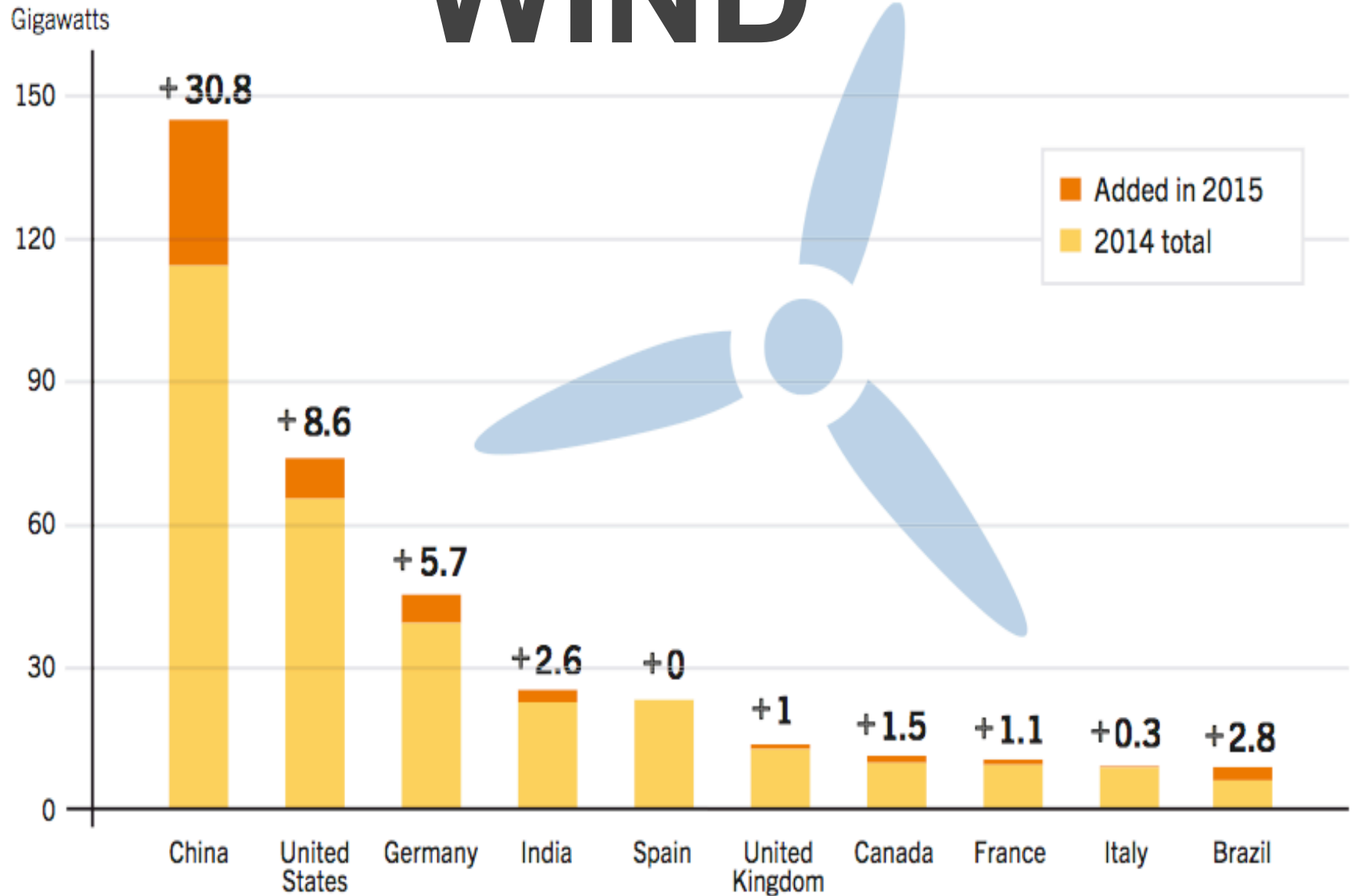
SOURCE:IRENA, REN21 REPORT 2015

WIND



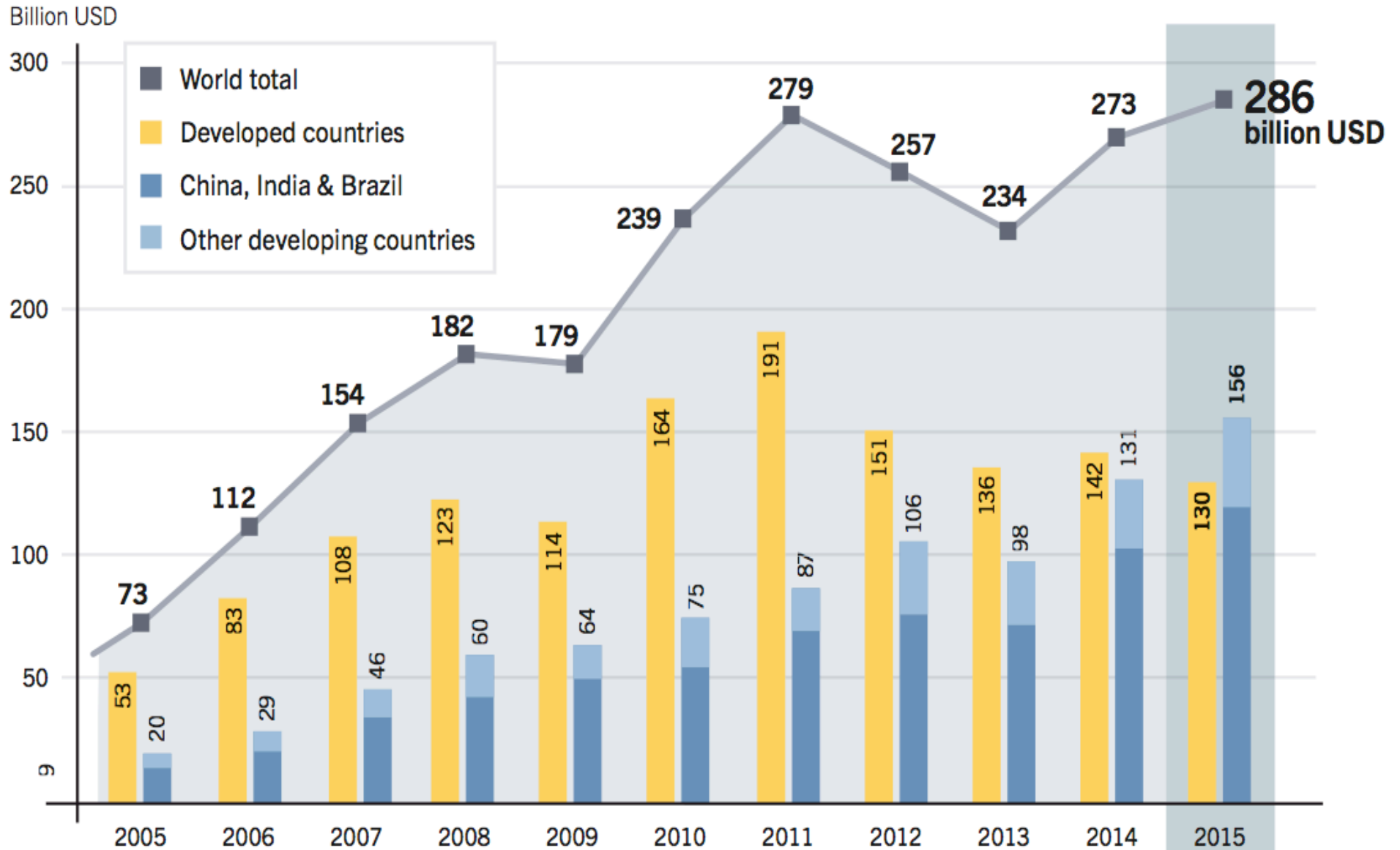
SOURCE:IRENA, REN21 REPORT 2015

WIND



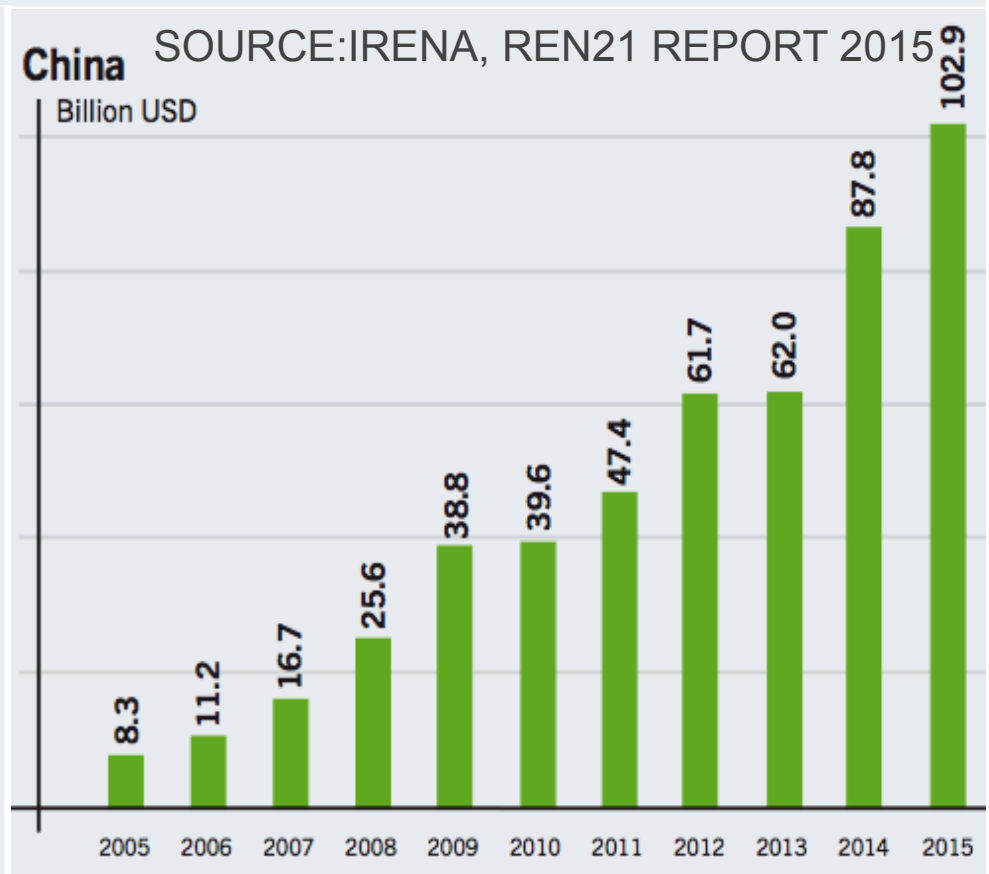
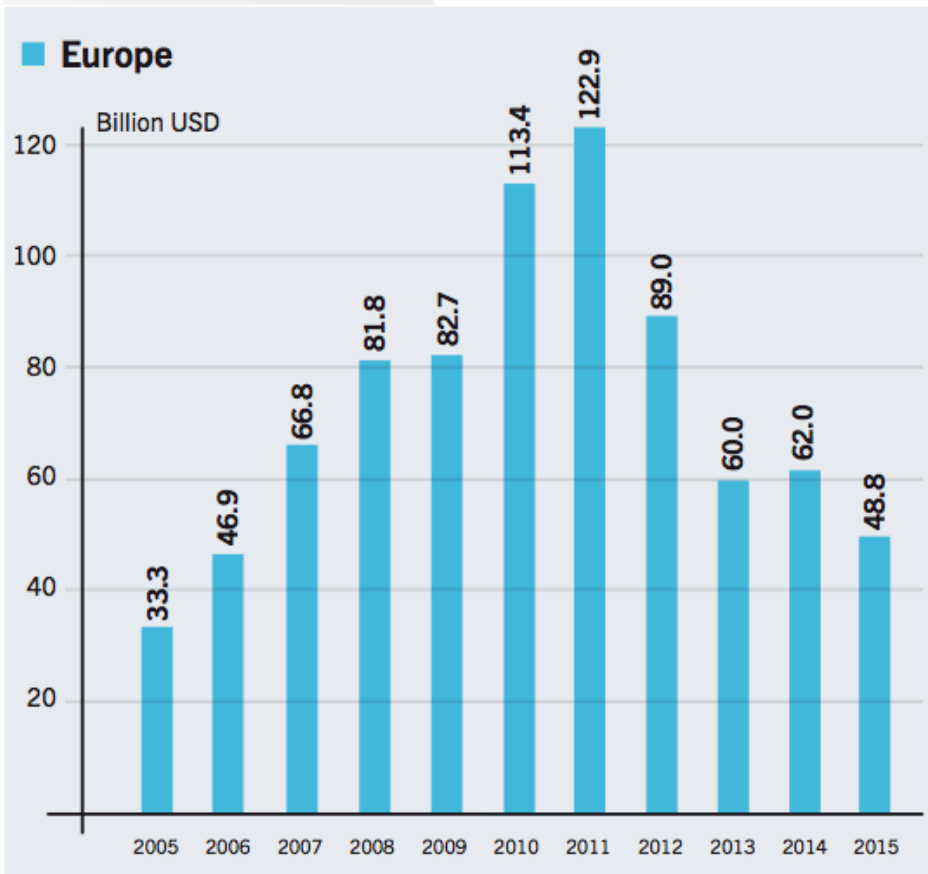
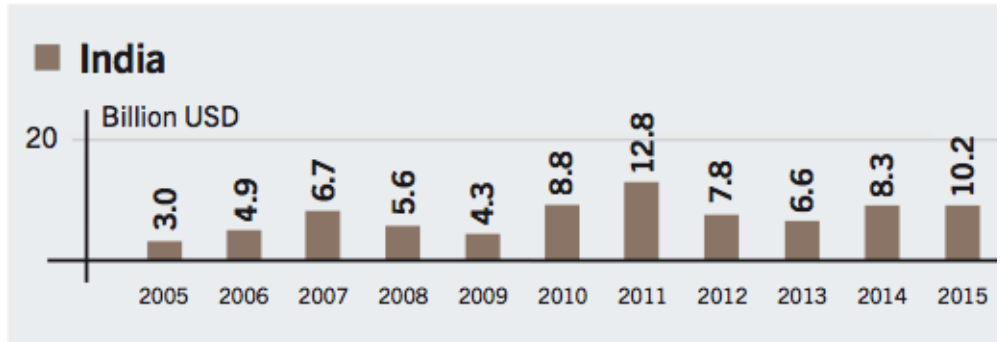
SOURCE:IRENA, REN21 REPORT 2015

NEW INVESTMENTS IN RE

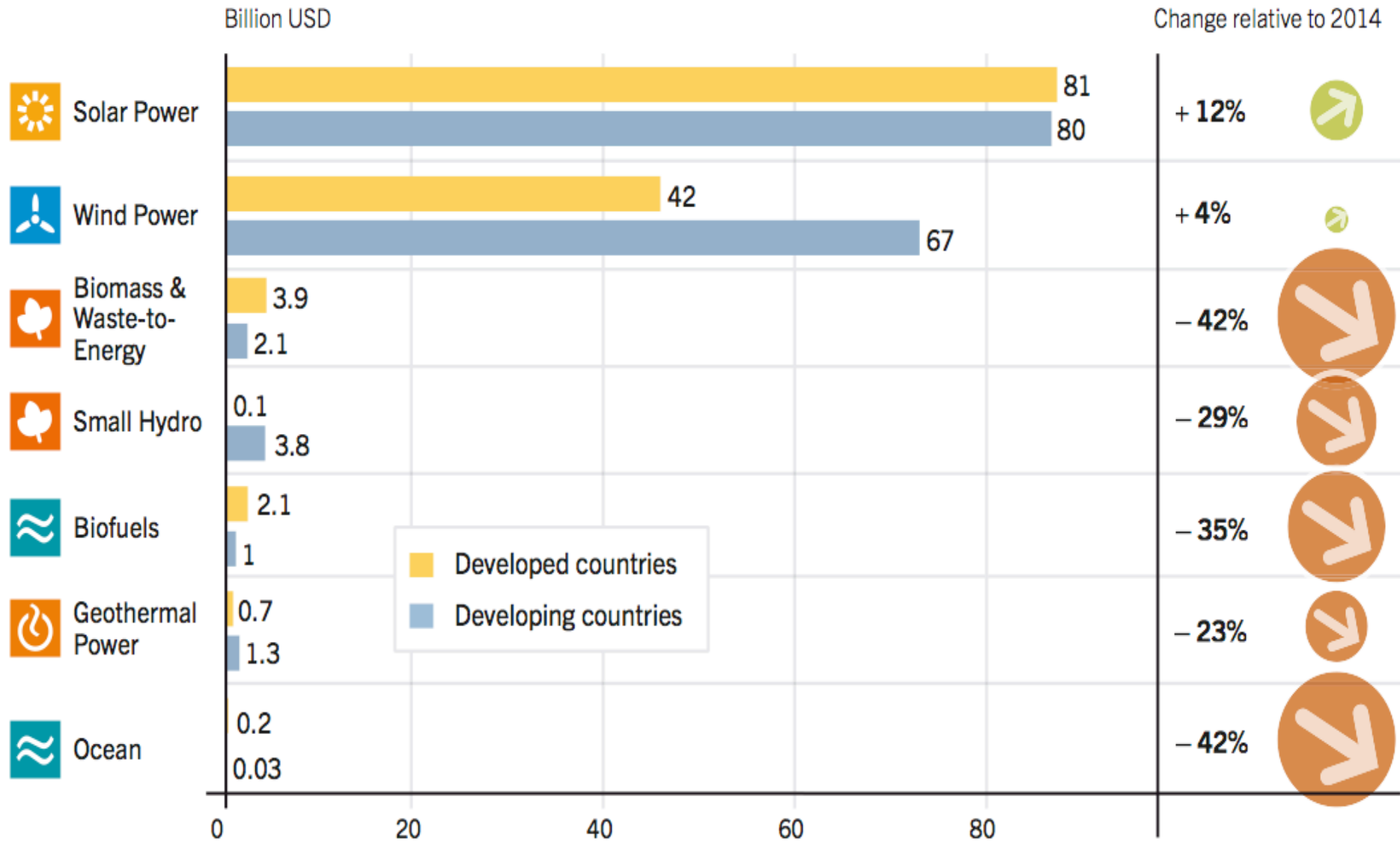


SOURCE:IRENA, REN21 REPORT 2015

INVESTMENTS IN RE



NEW INVESTMENTS IN RE

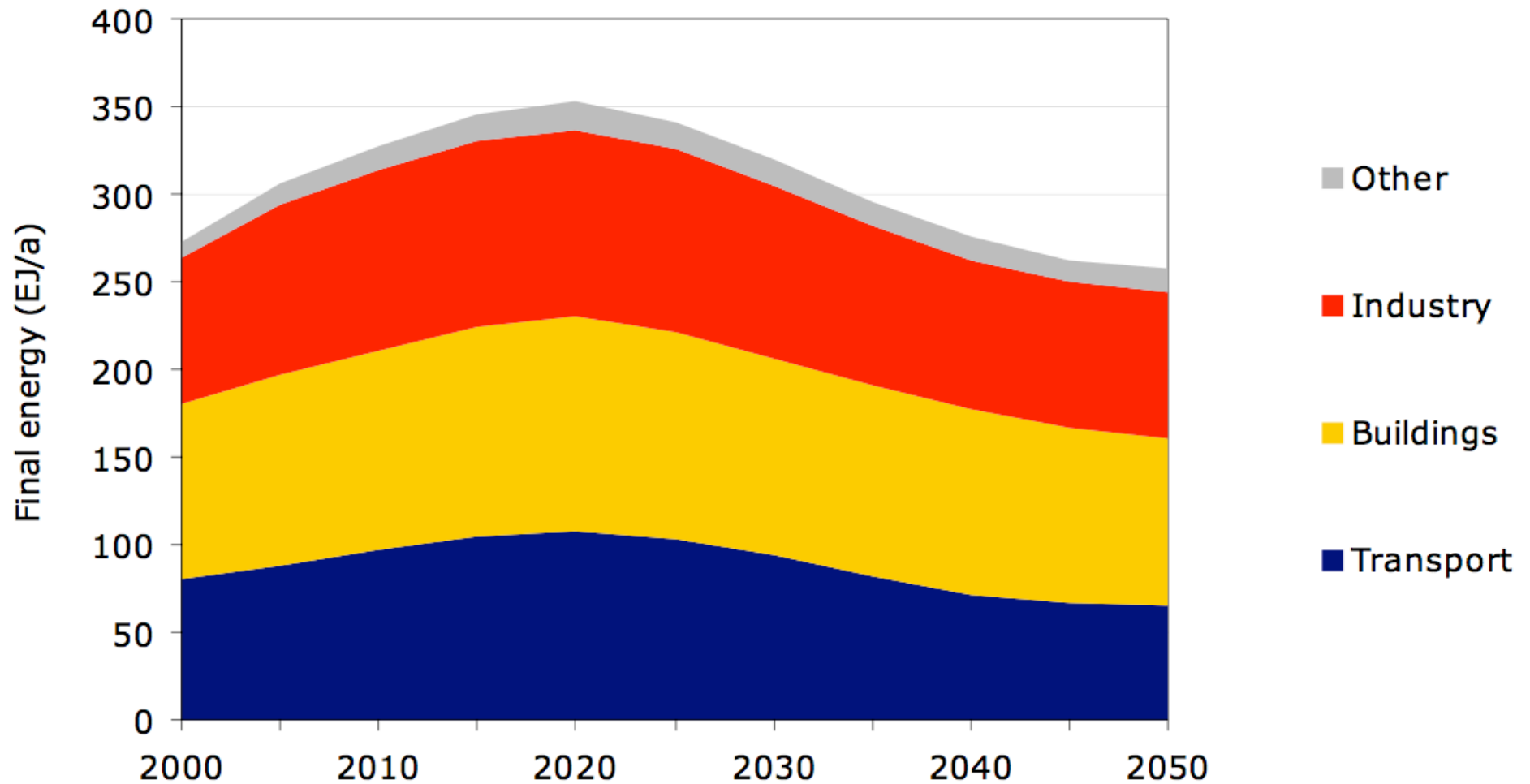


SOURCE:IRENA, REN21 REPORT 2015

FUTURE GLOBAL ENERGY OUTLOOK

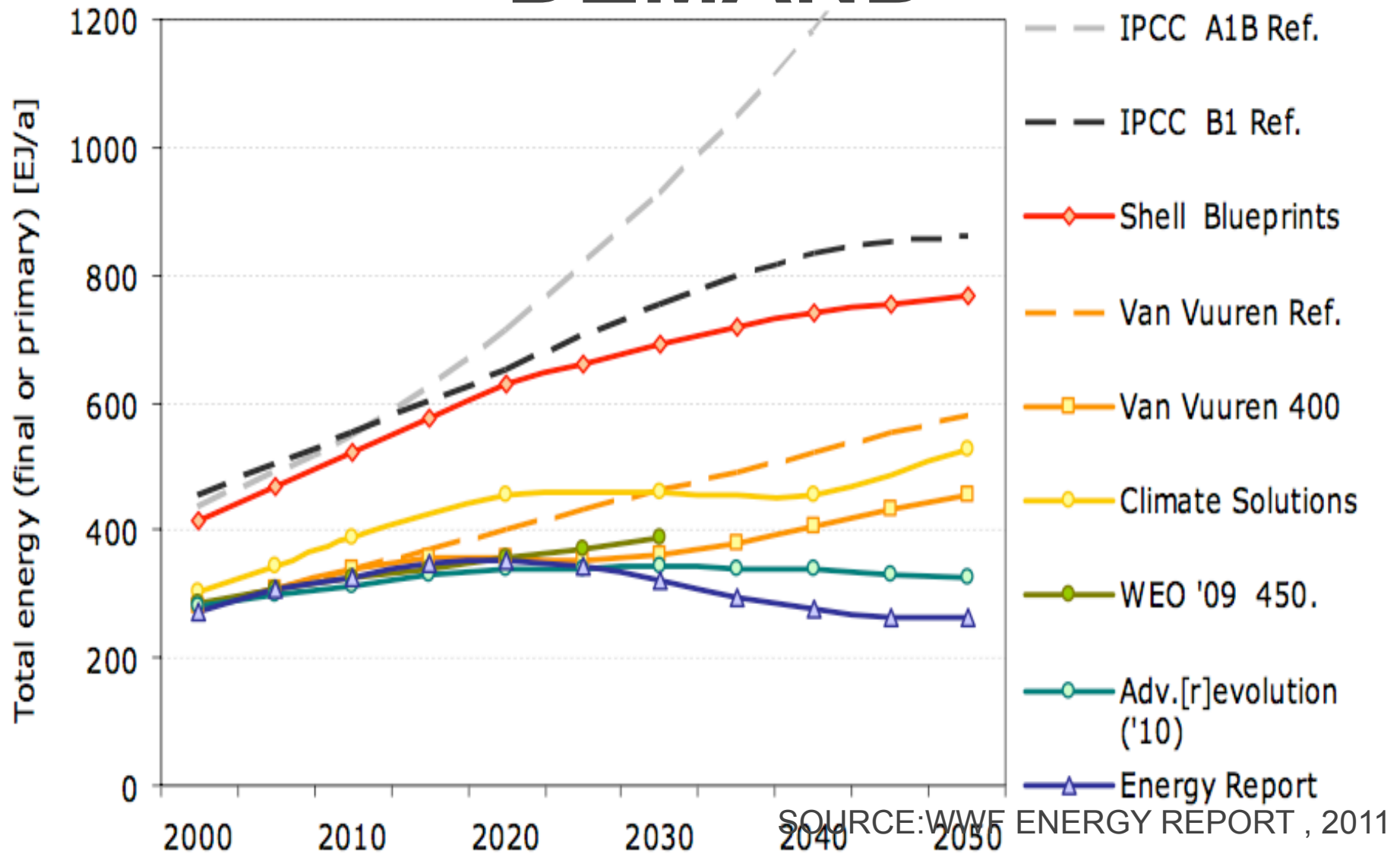
https://www.youtube.com/watch?v=WCL3_OvcYSk

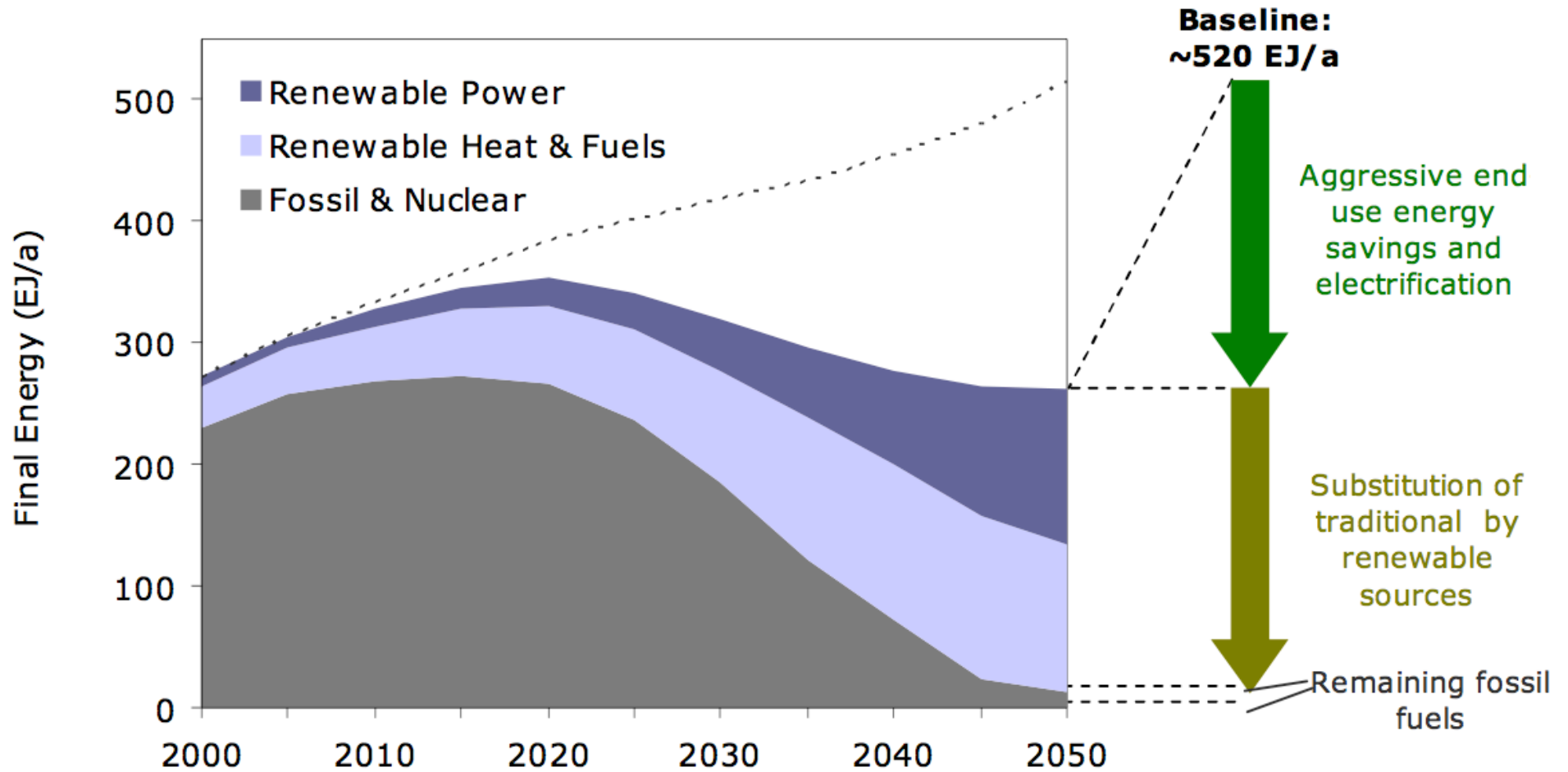
GLOBAL ENERGY DEMAND

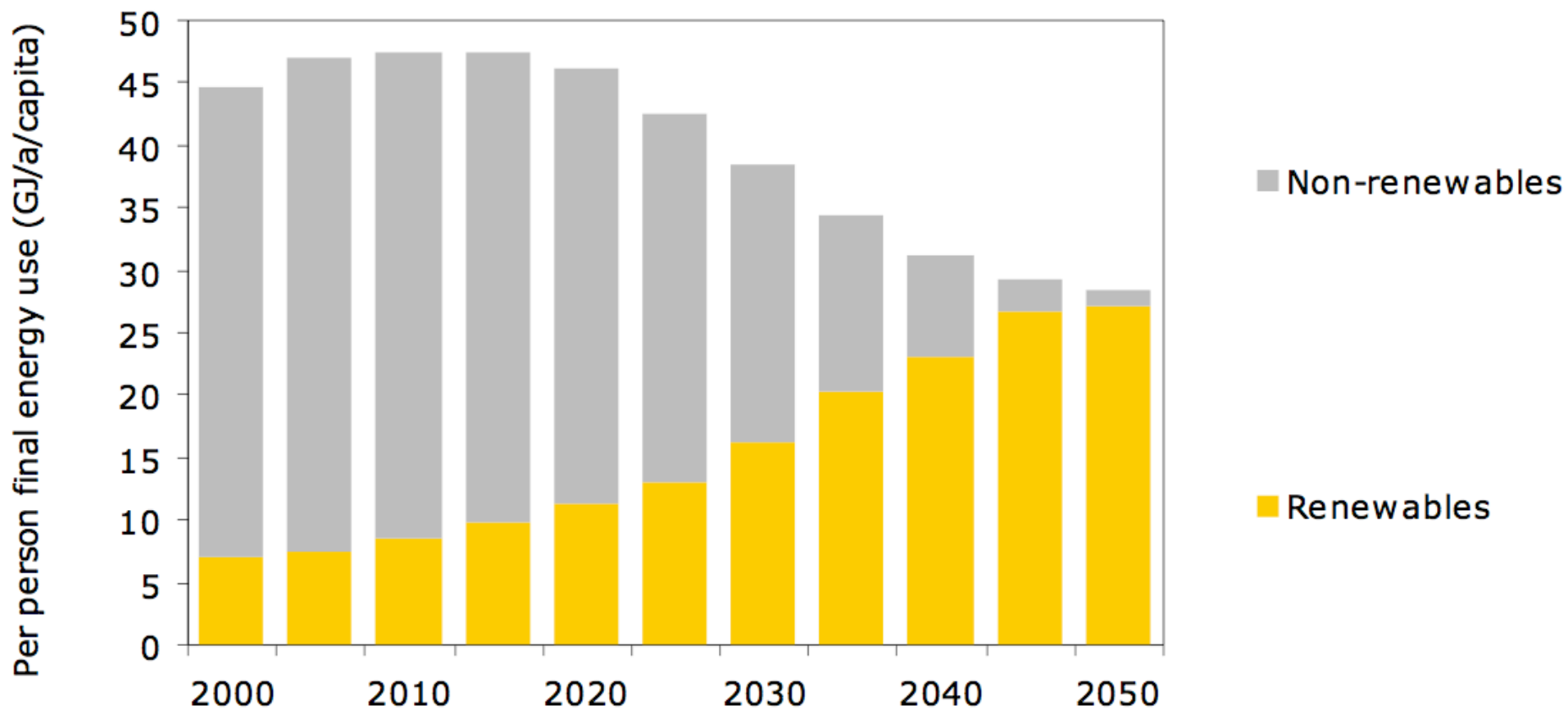


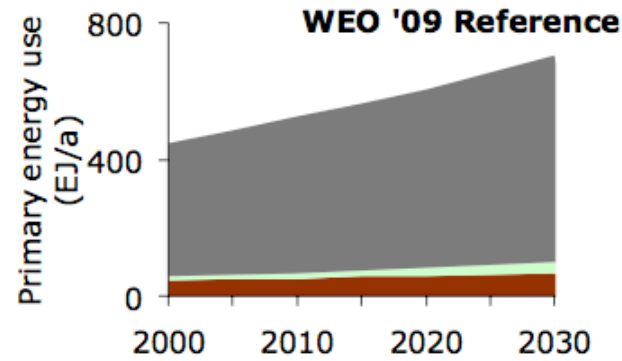
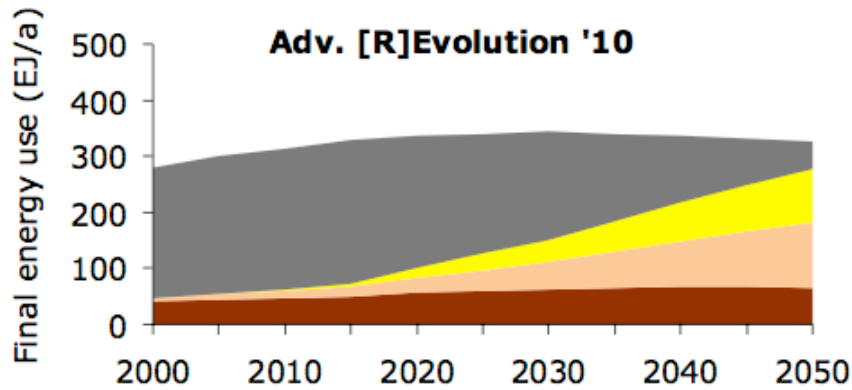
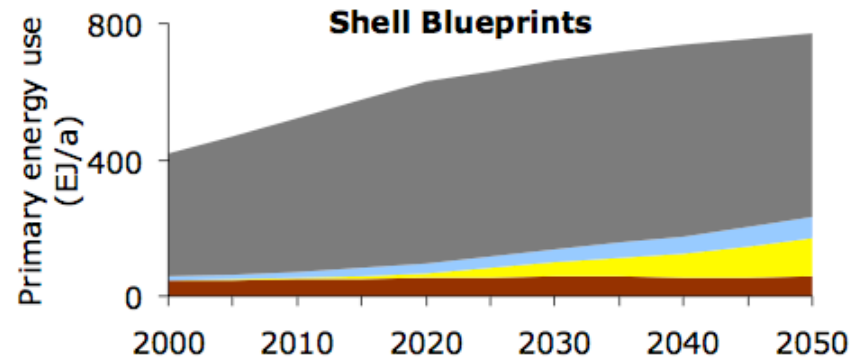
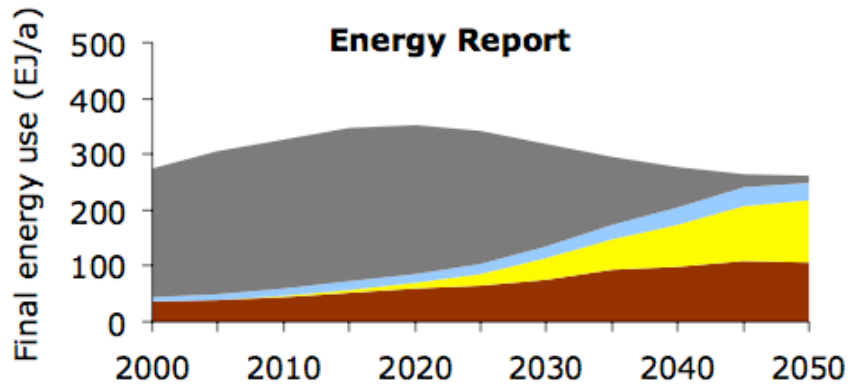
SOURCE:WWF ENERGY REPORT , 2011

GLOBAL ENERGY DEMAND







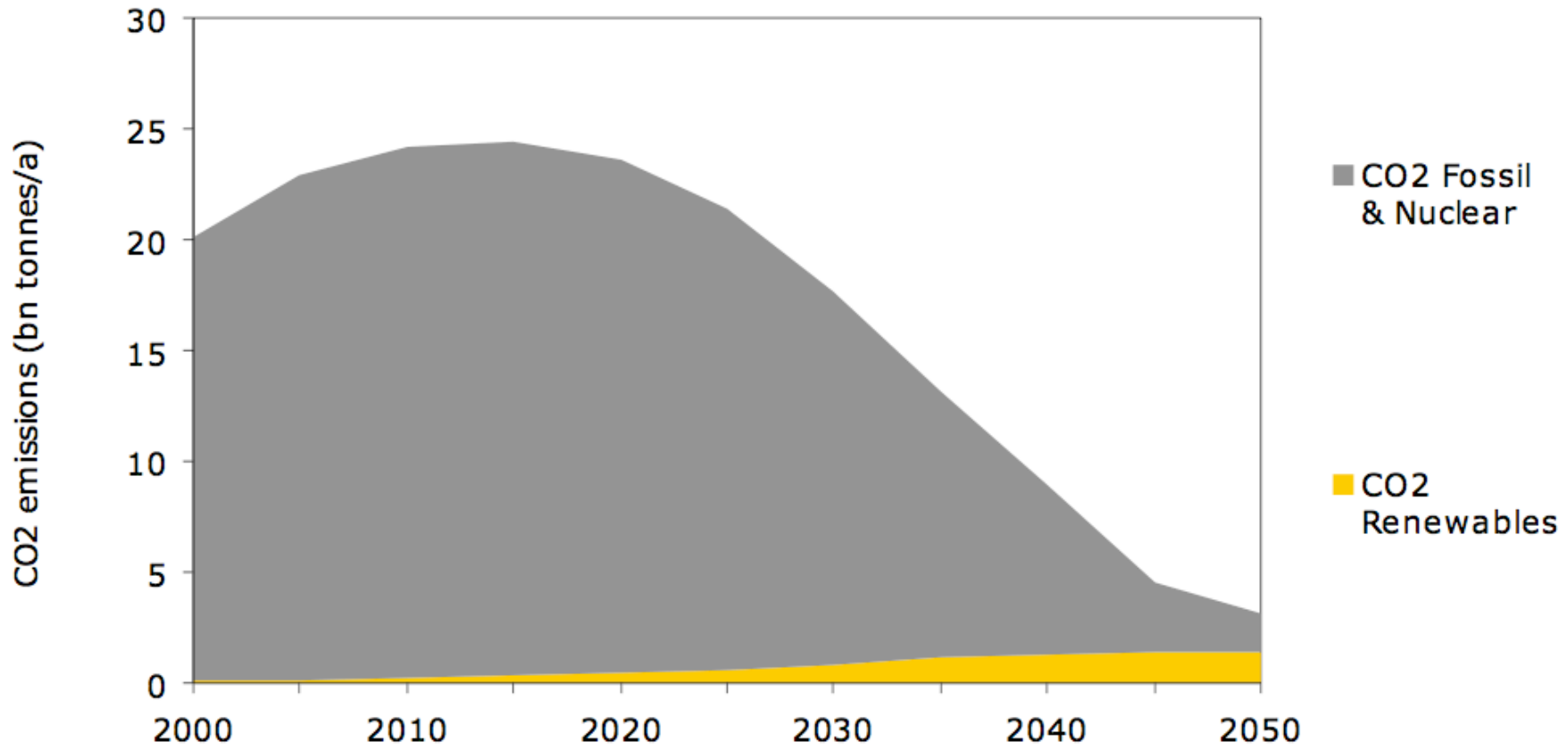


- Non-RES
- Other RES
- Solar and Wind
- Unspecified RES
- All RES including Solar and Wind
- Biomass

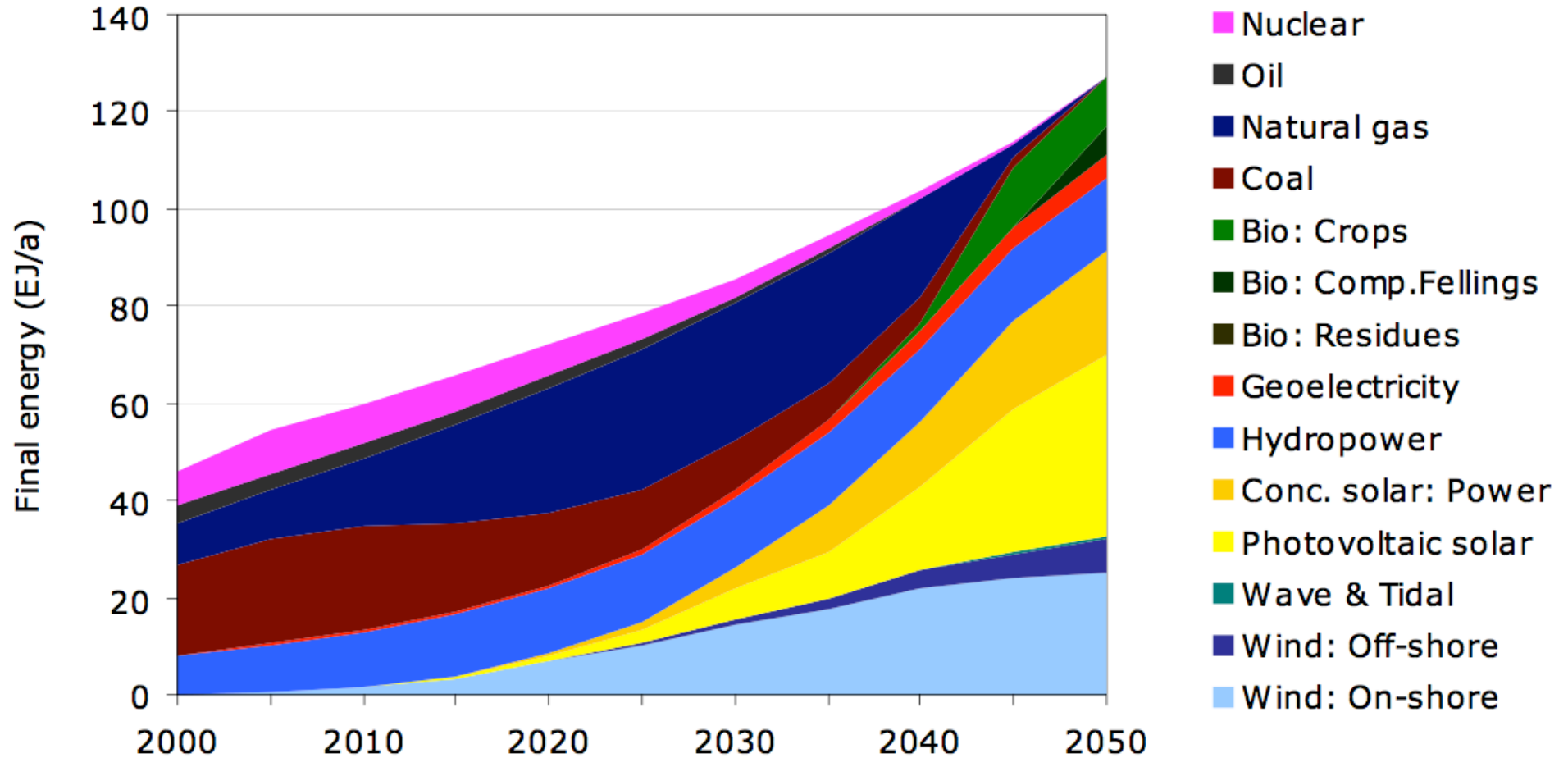


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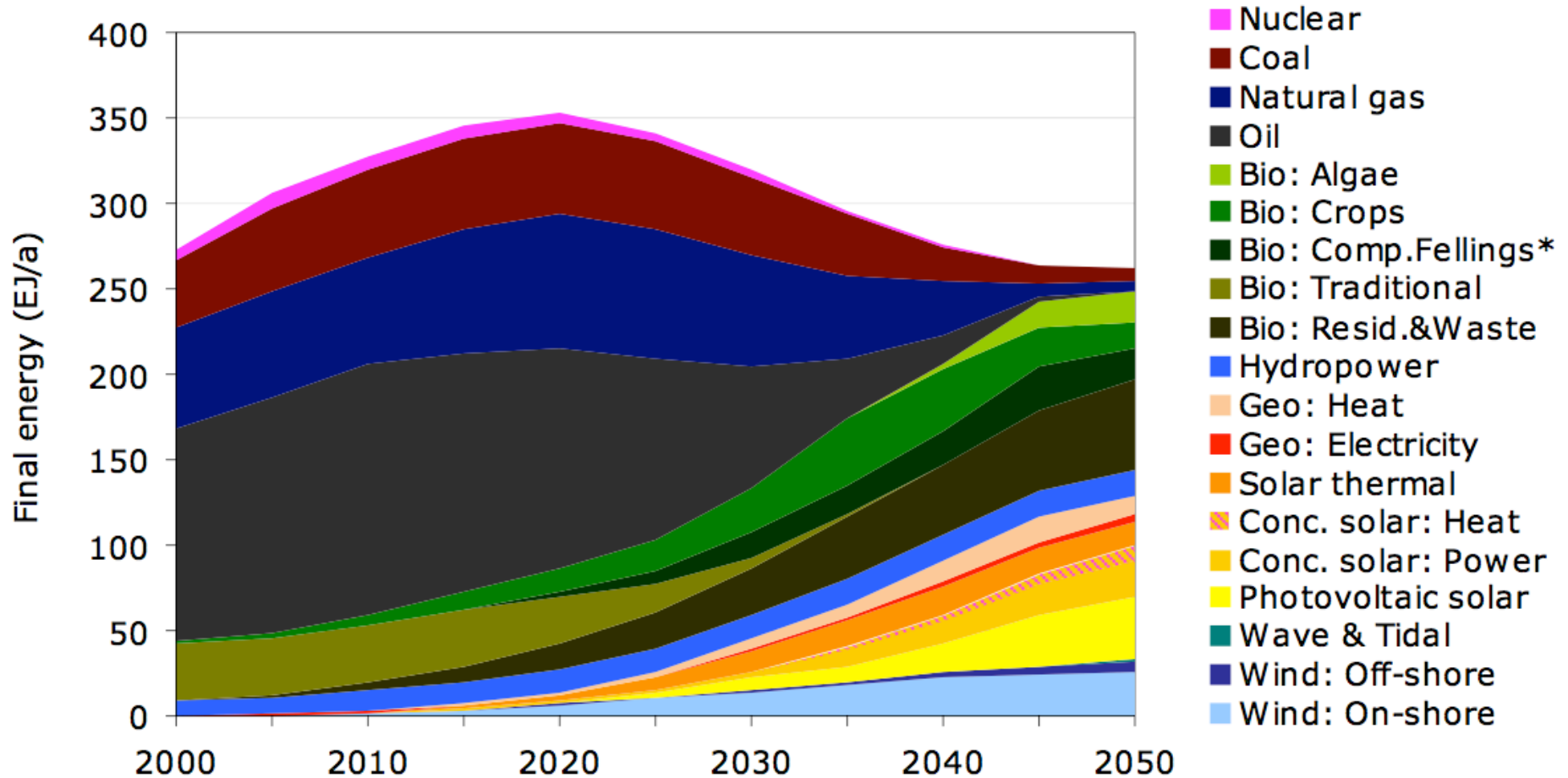
SOURCE: WWF ENERGY REPORT, 2011



ELECTRICITY



ELECTRICITY



POTENTIAL

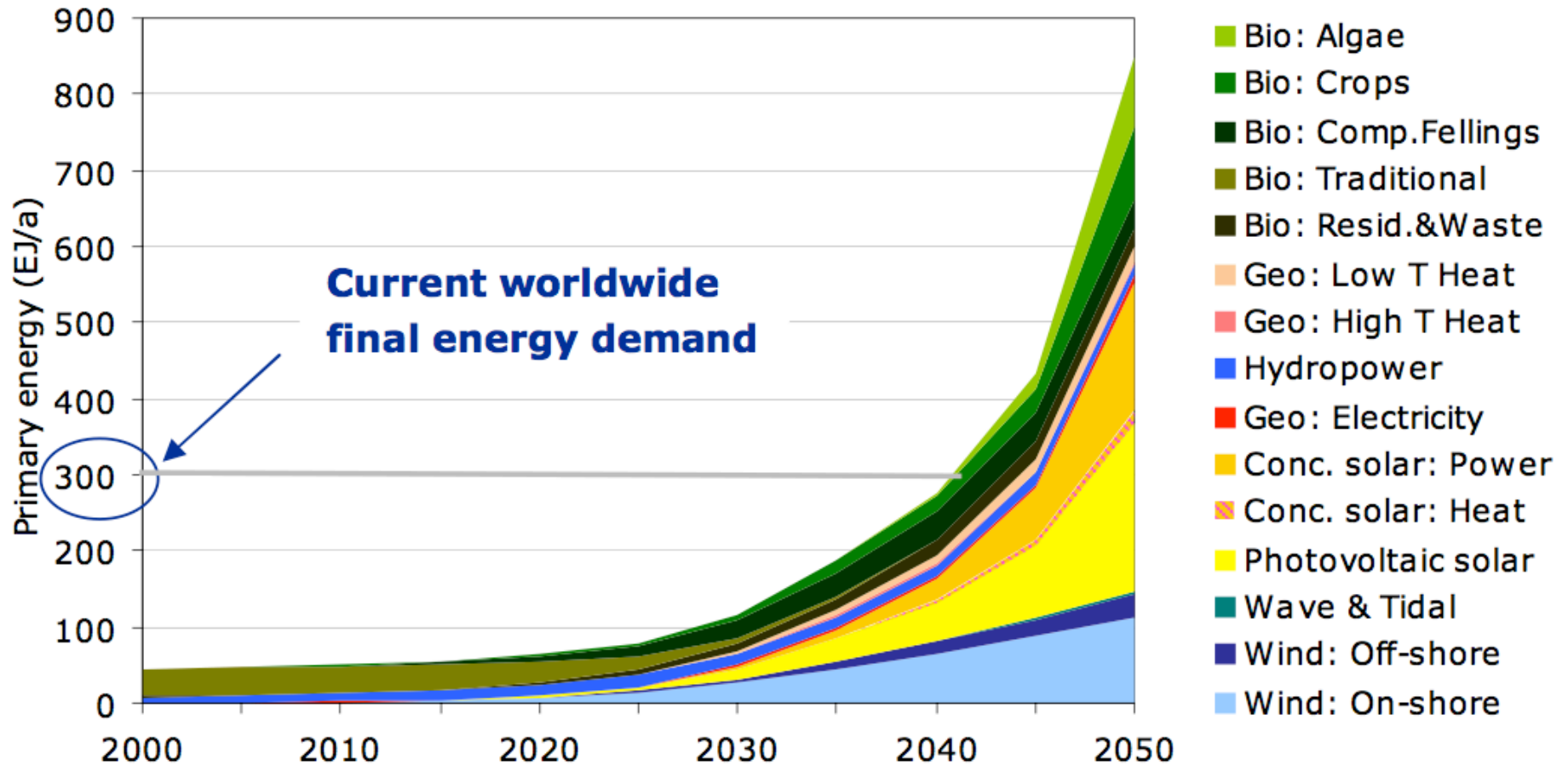
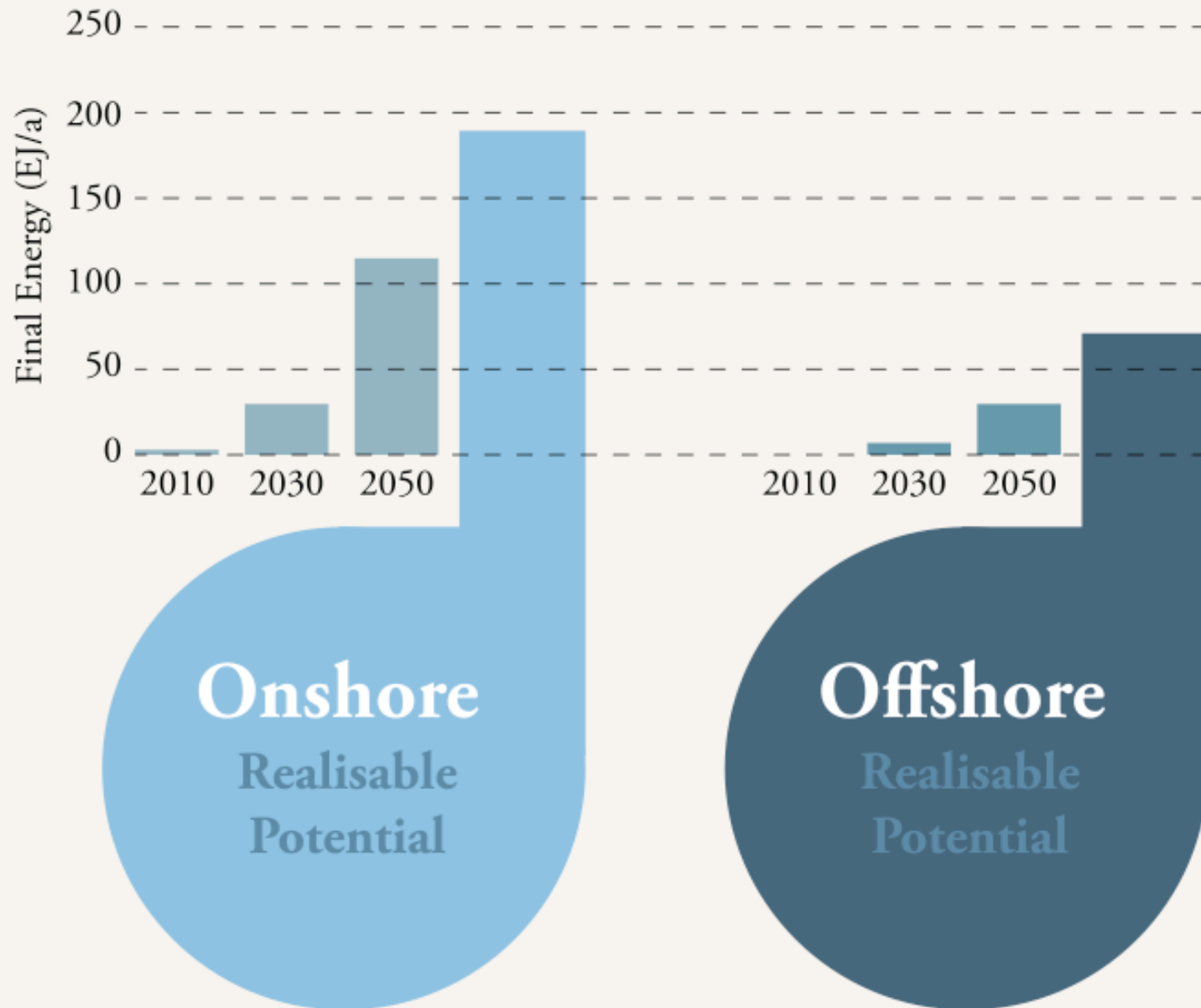


Figure 1 - 1 Global deployment potential of various renewable energy sources.

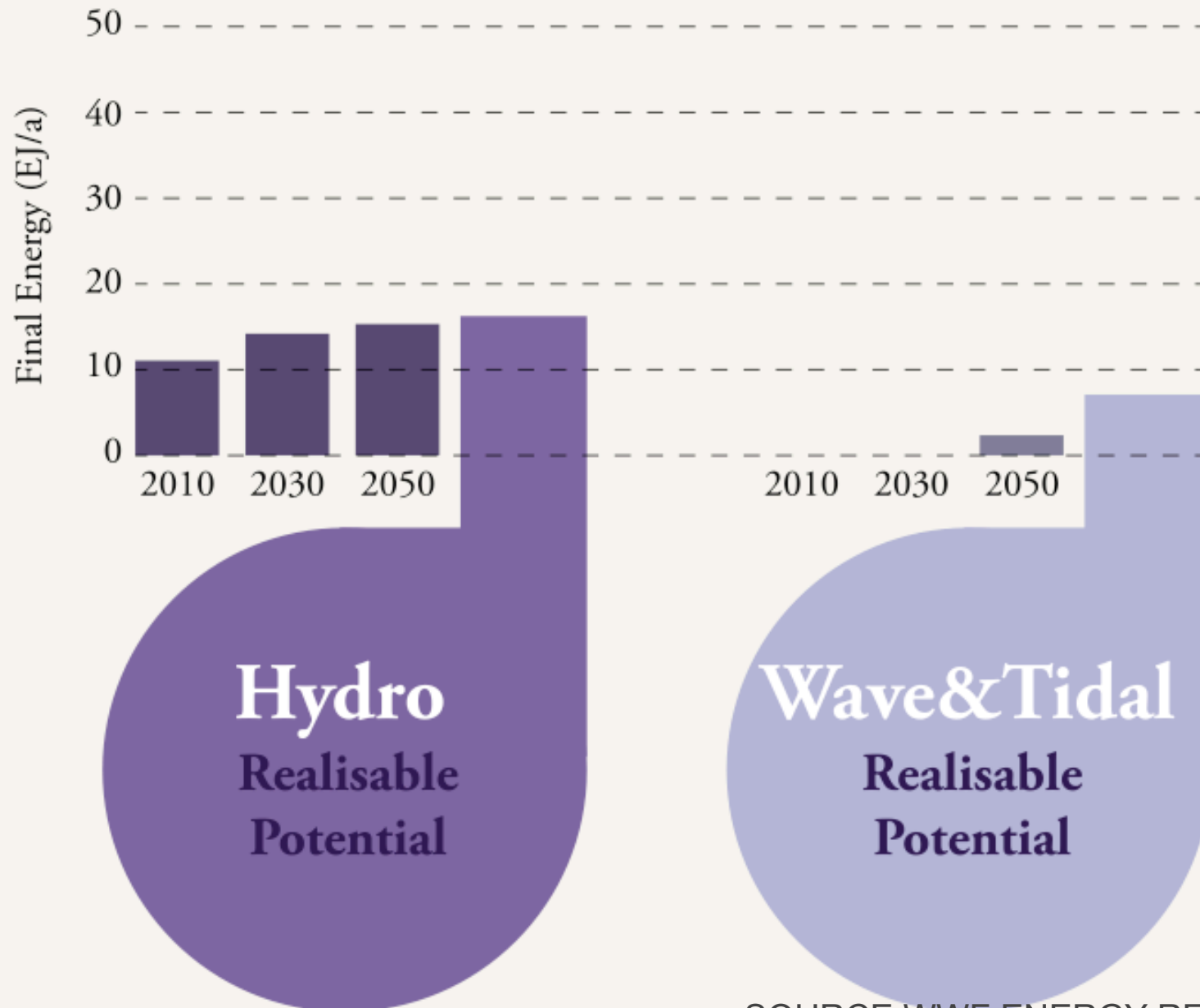


Global potential of wind power



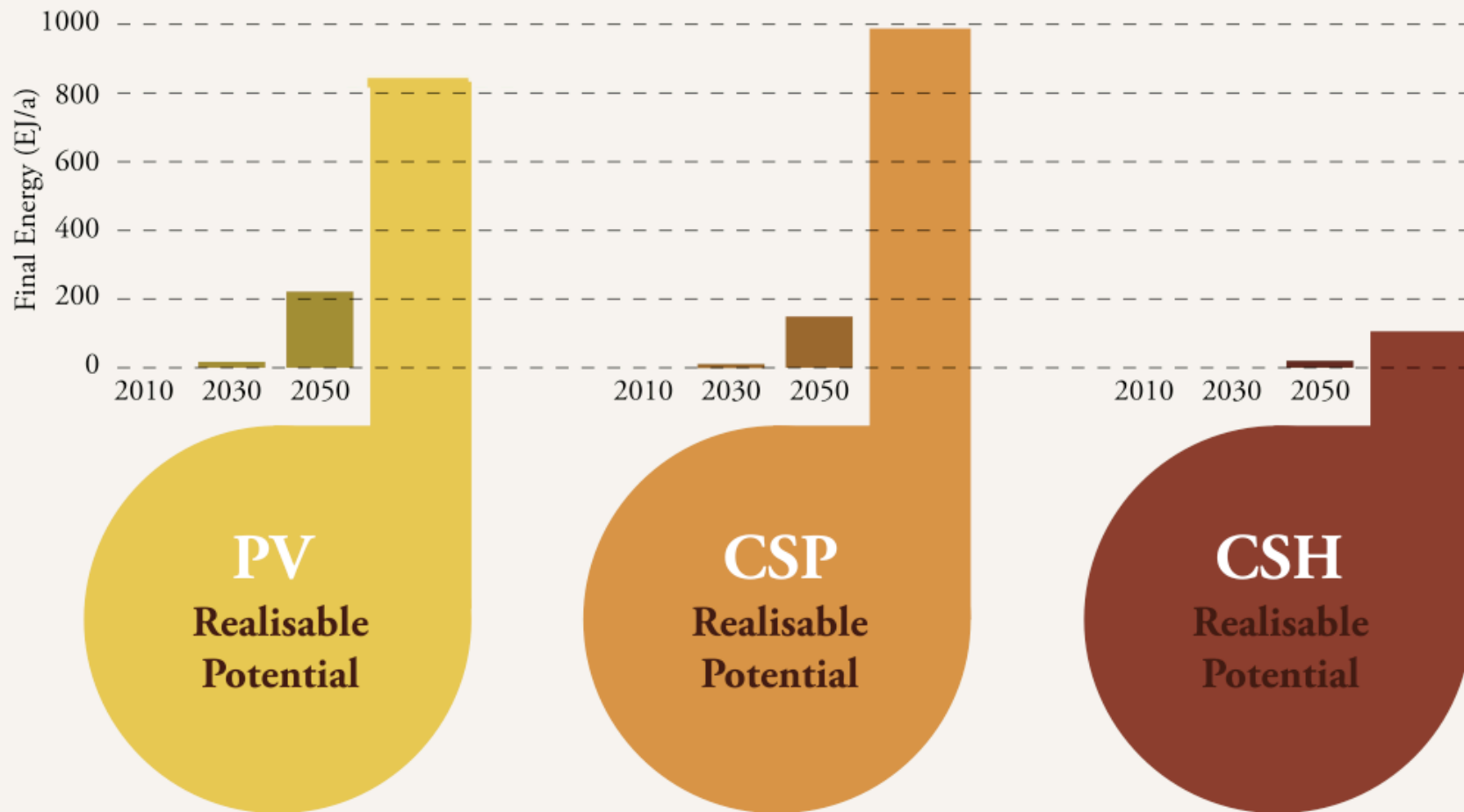
SOURCE:WWF ENERGY REPORT , 2011

Global potential of water power

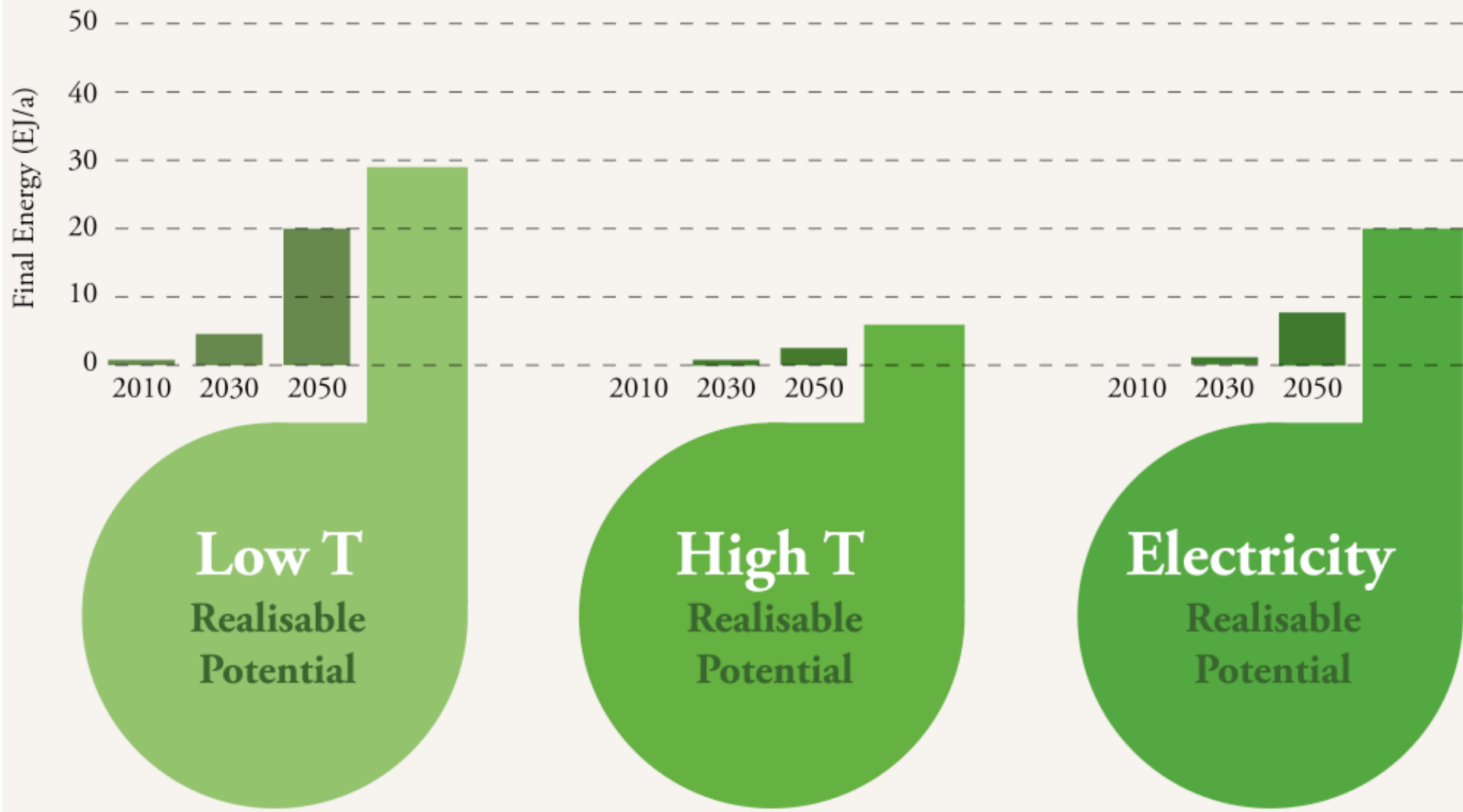


SOURCE:WWF ENERGY REPORT , 2011

Global potential of solar power and heat

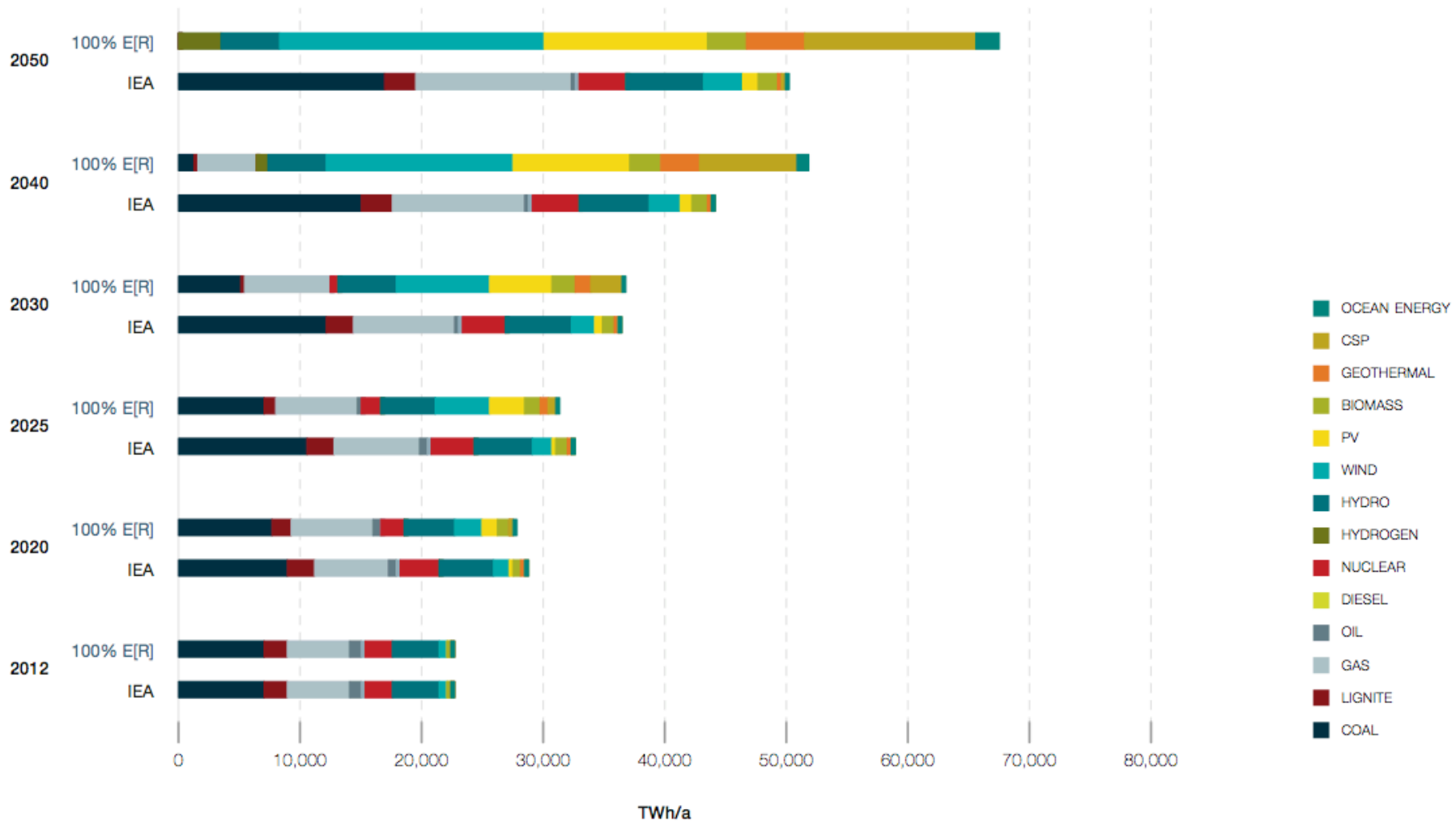


Global potential of geothermal energy



SOURCE:WWF ENERGY REPORT , 2011

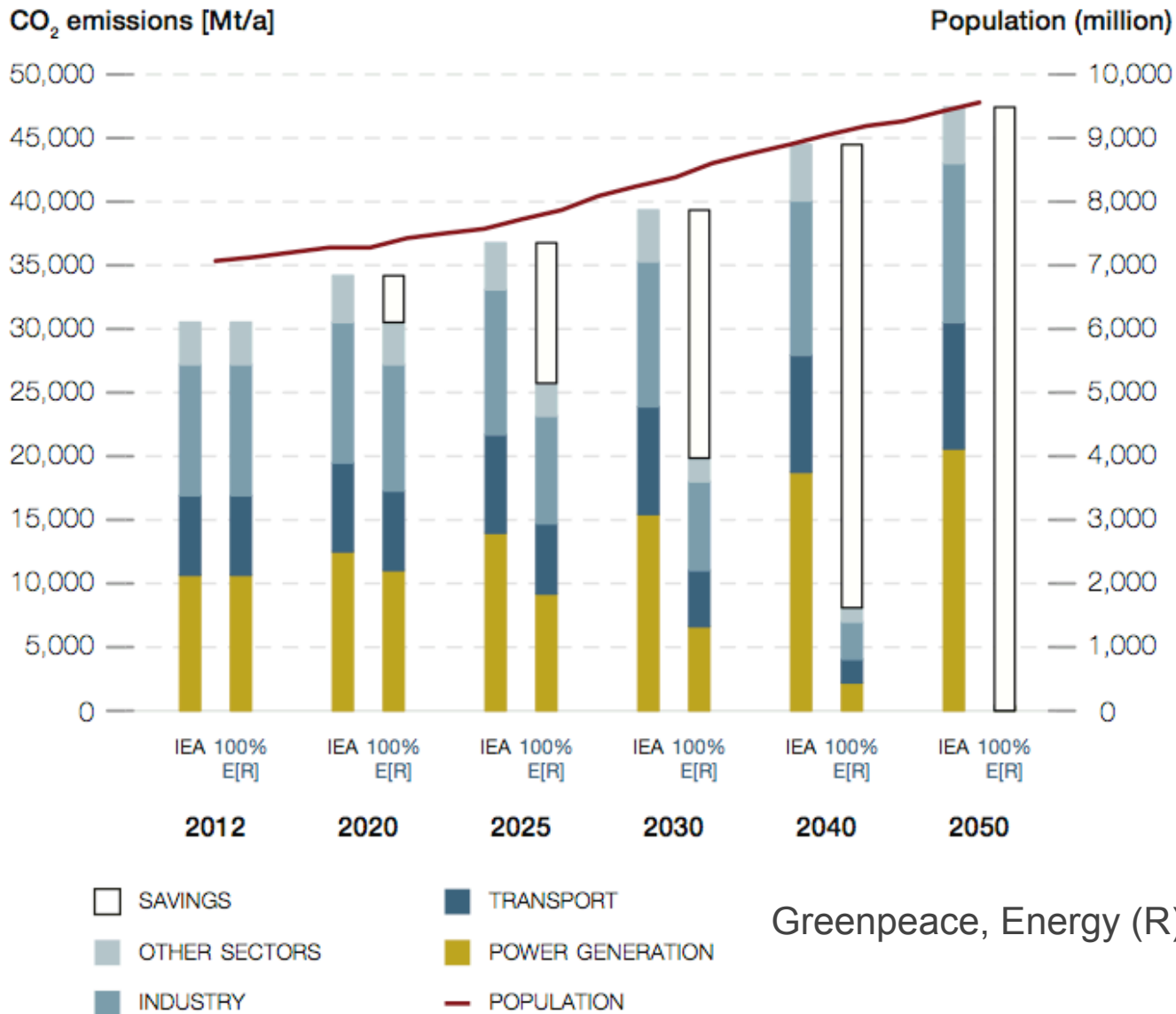
FIGURE 5 | WORLD DEVELOPMENT OF ELECTRICITY GENERATION UNDER THE IEA “CURRENT POLICIES” AND THE ENERGY [R]EVOLUTION CASE



Greenpeace, Energy (R)evolution

FIGURE 4 | DEVELOPMENT OF CO₂ EMISSIONS BY SECTOR UNDER THE 100% ENERGY [R]EVOLUTION

'SAVINGS' = REDUCTION COMPARED TO IEA CURRENT POLICIES



Greenpeace, Energy (R)evolution

FIGURE 3 | CO₂ EMISSION DEVELOPMENT UNDER THE 100% ENERGY [R]EVOLUTION BY REGION, 2012 TO 2050

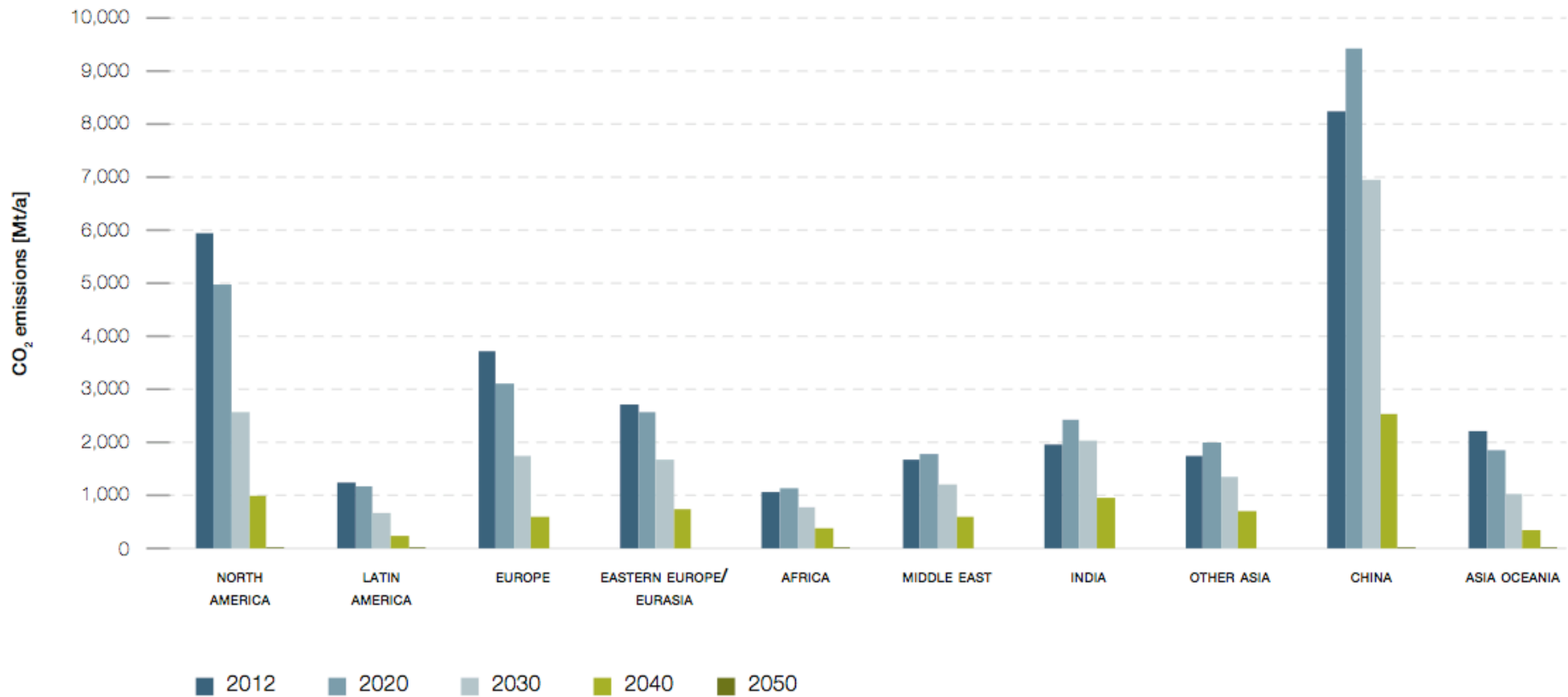




FIGURE 6.1.1 | GLOBAL: FINAL ENERGY INTENSITY UNDER THE REFERENCE AND BOTH ENERGY [R]EVOLUTION SCENARIOS

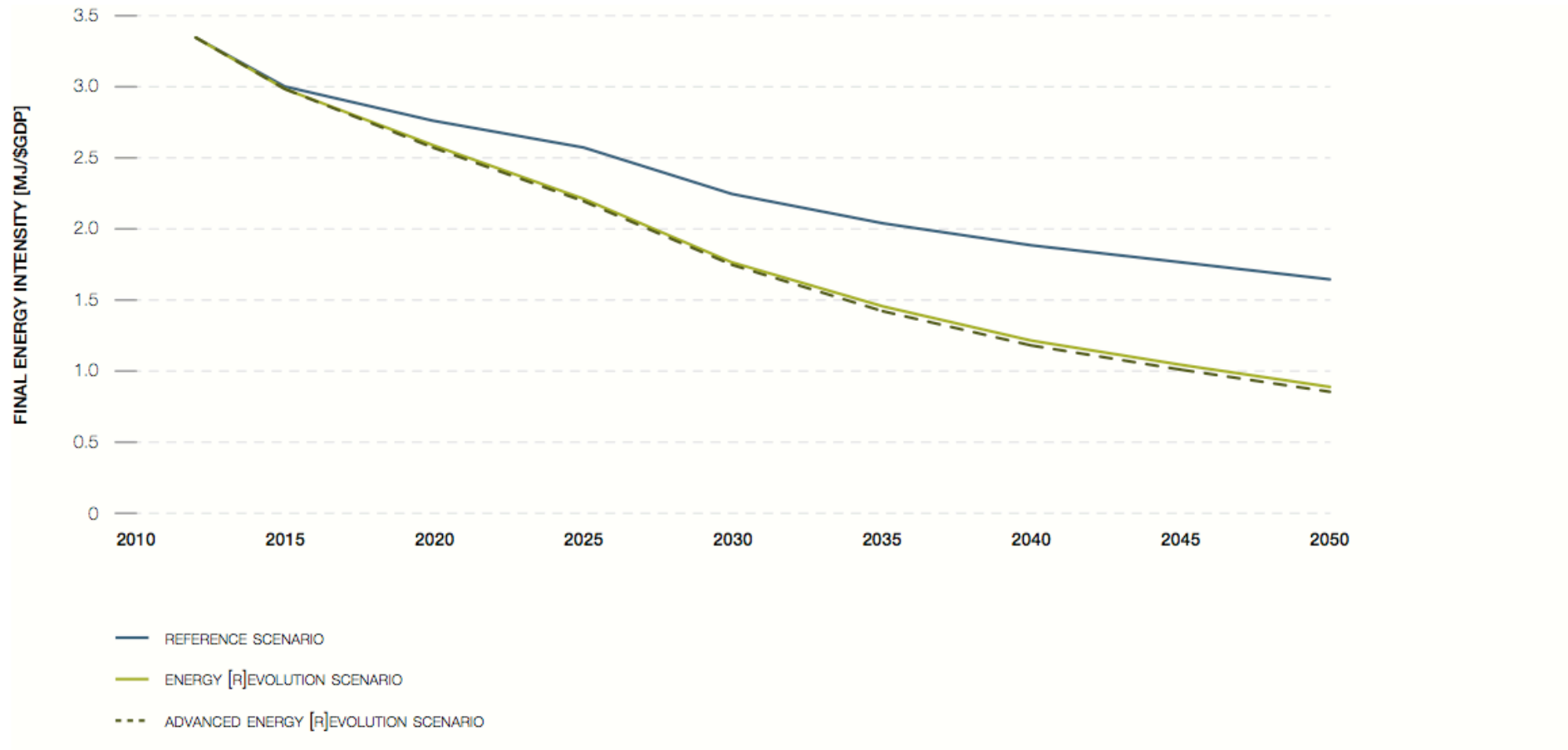




FIGURE 6.1.2 | GLOBAL: PROJECTION OF TOTAL FINAL ENERGY DEMAND BY SECTOR – REFERENCE, ENERGY [R]EVOLUTION, ADVANCED ENERGY [R]EVOLUTION SCENARIOS WITHOUT NON-ENERGY USE AND HEAT FROM CHP AUTOPRODUCERS

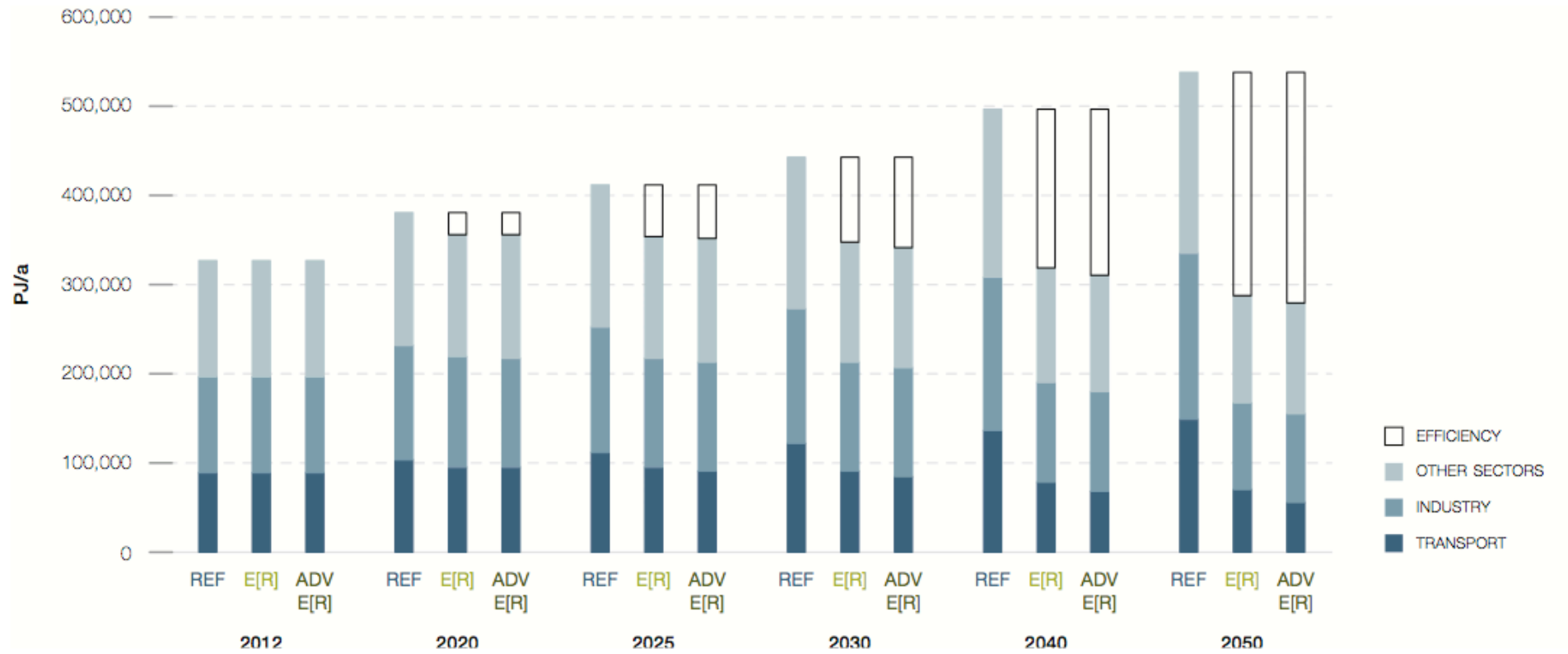


FIGURE 6.1.3 | GLOBAL: DEVELOPMENT OF ELECTRICITY DEMAND BY SECTOR IN THE ENERGY [R]EVOLUTION SCENARIOS



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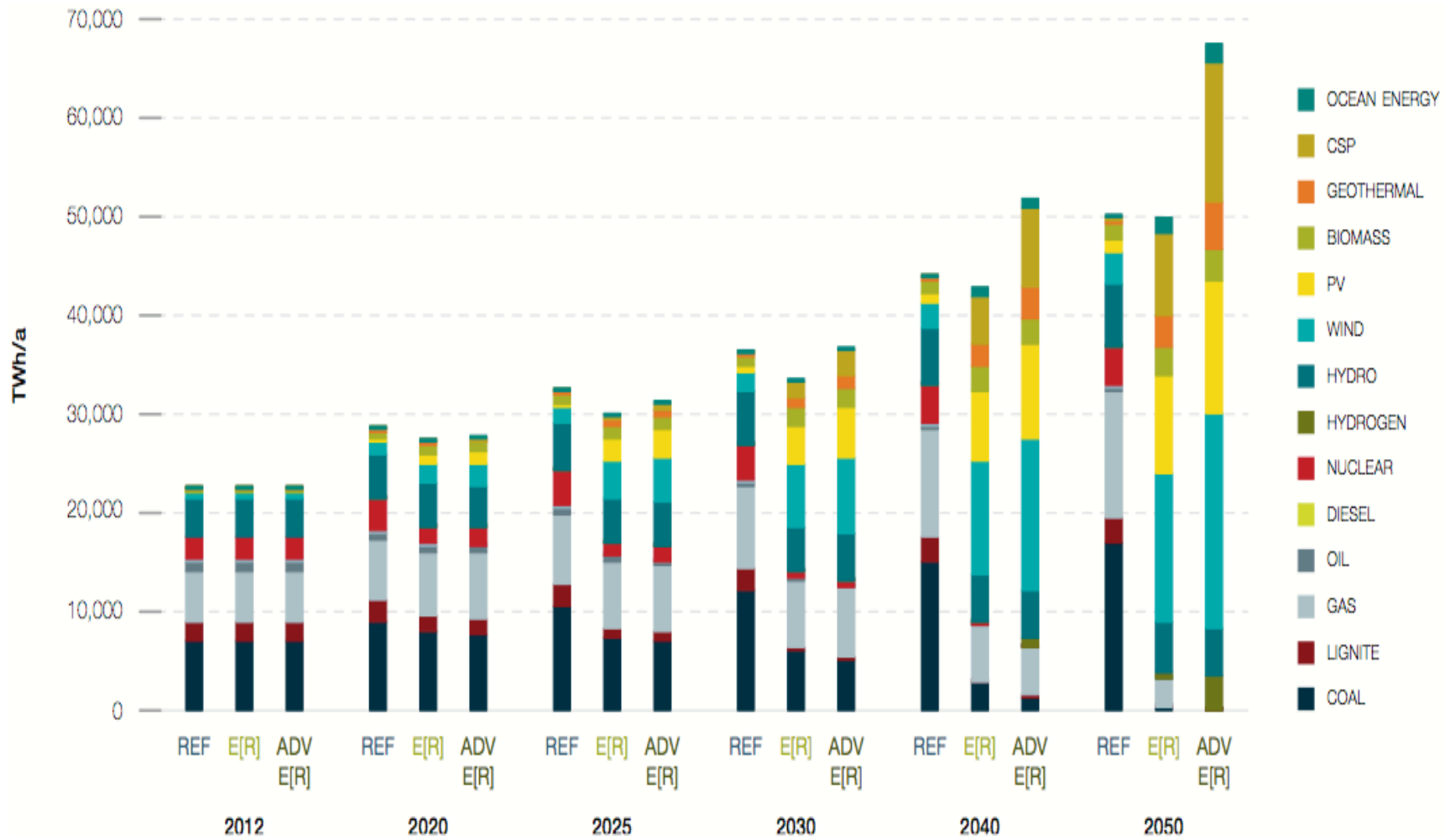
TABLE 6.1.1 | GLOBAL: PROJECTION OF RENEWABLE ELECTRICITY GENERATION CAPACITY UNDER THE REFERENCE AND THE ENERGY [R]EVOLUTION SCENARIOS

IN GW

		2012	2020	2030	2040	2050
HYDRO	REF	1,099	1,331	1,544	1,715	1,878
	E[R]	1,099	1,316	1,397	1,445	1,503
	ADV	1,099	1,316	1,402	1,457	1,536
BIOMASS	REF	87	150	199	243	293
	E[R]	87	194	392	558	746
	ADV	87	200	405	579	742
WIND	REF	277	554	807	998	1,217
	E[R]	277	820	2,510	4,316	5,575
	ADV	277	904	3,064	5,892	8,040
GEOTHERMAL	REF	11	17	28	42	62
	E[R]	11	28	137	325	485
	ADV	11	31	171	452	708
PV	REF	97	332	494	635	803
	E[R]	97	732	2,839	4,988	6,745
	ADV	97	844	3,725	6,678	9,295
CSP	REF	3	11	26	49	74
	E[R]	3	31	405	984	1,473
	ADV	3	42	635	1,616	2,555
OCEAN	REF	0	1	4	15	28
	E[R]	0	11	95	318	552
	ADV	0	11	131	432	738
TOTAL	REF	1,575	2,396	3,101	3,696	4,355
	E[R]	1,575	3,132	7,774	12,934	17,079
	ADV	1,575	3,348	9,532	17,105	23,614

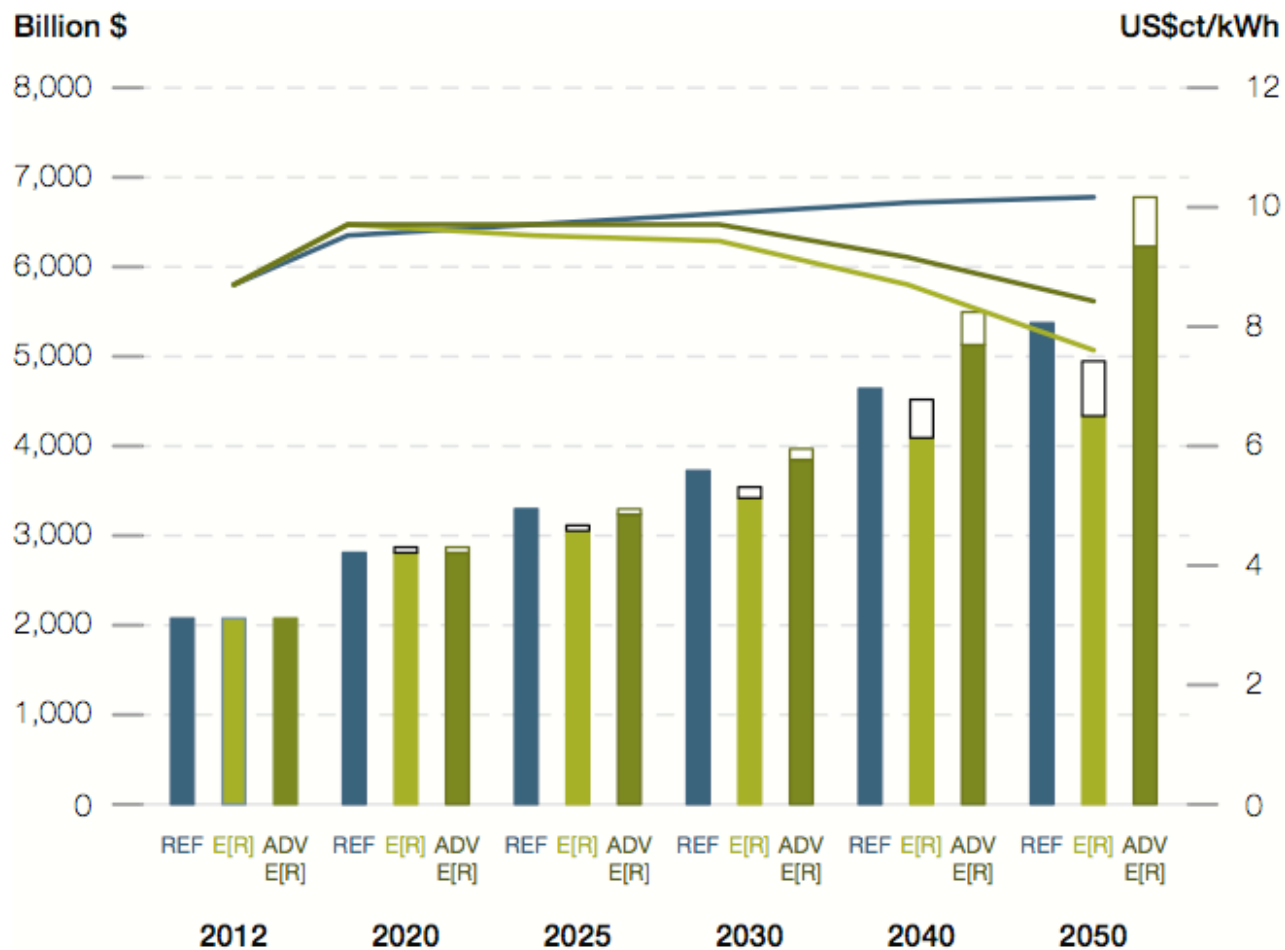


FIGURE 6.1.6 | GLOBAL: DEVELOPMENT OF ELECTRICITY GENERATION STRUCTURE – REFERENCE, ENERGY [R]EVOLUTION, ADVANCED ENERGY [R]EVOLUTION SCENARIOS



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FIGURE 6.1.7 | GLOBAL: DEVELOPMENT OF TOTAL ELECTRICITY SUPPLY COSTS & OF SPECIFIC ELECTRICITY GENERATION COSTS IN THE SCENARIOS



- EFFICIENCY MEASURES E[R]
- EFFICIENCY MEASURES ADV E[R]
- ENERGY [R]EVOLUTION
- ADVANCED ENERGY [R]EVOLUTION
- REFERENCE SCENARIO
- SPECIFIC ELECTRICITY GENERATION COSTS REF
- SPECIFIC ELECTRICITY GENERATION COSTS E[R]
- SPECIFIC ELECTRICITY GENERATION COSTS ADV E[R]

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FIGURE 6.1.8 | GLOBAL: INVESTMENT SHARES - REFERENCE VERSUS ENERGY [R]EVOLUTION SCENARIOS

