

Country	Recent renewable energy development						Overall energy system targets		Power sector targets (1)						Transport		Industry/Buildings (12) (16)	
	TFEC		Power sector				RE share in energy consumption [%] (2)	Target Year	RE targets in total power system		RE targets by source (total cumulative RE deployment by source for the specified year)					RE share / Biofuel Mandate (3)	Other Transport Targets	Targets for RE share/generation or deployment of heating and cooking technologies
	RE share in 2010 [%]	RE share in 2013 [%]	RE power generation capacity in 2012 [GW]	RE electricity generation share 2012 [%]	RE power capacity in 2013 [GW]	RE electricity generation share 2013 [%]			Objectives in RE generation	Target Year	Hydro	Wind	Solar/CSP	Biomass	Other (Ocean, Geothermal)			
ARGENTINA	10% (6)	8.8% (6)	10.8	24%	10.9	24.4%			-8% RE generation by 2017 -20% RE generation by 2025 (46)	2017 and 2025						E5, B7 (2010)		
AUSTRALIA	5% 7% (6)	9.0% (6)	13.8	10%	15.3	12.6%			-33 TWh RE generation by 2020 and up to 2030 (47)	2020 - 2030 (47)						E4, B2 (New South Wales), E5 (Queensland)		12% homes with SWH in 2012
BELGIUM	16%	8.2% (6)	6.4	13%	7.1	14.1%	13% (14)	2020	20.9% (15)	2020	140 MW	4.3 GW	1.3 GW PV	2 GW solid 427 MW biogas	3.5 MW geothermal	10% (2020) (3)		11.9% RE in heating and cooling supply (2020); 5.7 ktoe geothermal heat, 199 ktoe solar thermal heat, 2 Mtoe biomass heat
BRAZIL	37% 45% (6)	41.7% (6)	96.8	82%	100.9	76.8%	(22)		(22)							Current: E27, B5; Expected: B6/B7 Current: E5, B2		
CANADA	20%	21.6% (6)	84.2	66%	85.4	62.8%	(18)											
CHINA	7% 13% (6)	16.2% (6)	339.5	20%	398.4	20.3%	11.4% (excl. Trad. Biomass) (4)	2015	15% (2020) and 20% (2030) of non-fossil primary energy consumption (8)	2020 and 2030	260 GW (2015) 350 GW (2020) (37)	100 GW onshore (2015) 200 GW onshore (2020) 5GW offshore (2015) 30GW offshore (2020) (38)	70 GW PV (2017) 100 GW PV (2020) 1 GW CSP (2015) 3 GW CSP (2020)	13 GW (2015) 30 GW (2020)	Bioethanol: 4 million tonnes (2015), 10 million tonnes (2020) Biodiesel: 1 million tonnes (2015), 2 million tonnes (2020)	-500,000 EVs and PHEVs by 2015 -5 million EVs and PHEVs by 2020	-280 GW _{th} SWH (400 million m ³) (2015); -50 million households with biogas use (2015) -2 million sets solar cookers (2015) -580 million m ² geothermal heat (2015); 1.2 million households with geothermal water heating (2015)	
COLOMBIA	26% (6)	26.2% (6)	10.0	80%	10.1	71.6%			3.5% (2015), 6.5% (2020) on-grid systems 20% (2015), 30% (2020) off-grid (36)	2015 and 2020						Current: B10, E8		
CYPRUS	6% (6)	10% (6)	0.17		0.19	7.6%	13% (2020) (14)	2020	16%	2020								
DENMARK	22%	27.5% (6)	6.1	48%	6.7	46.0%	30% (2020) (14) 100% (2050)	Various	50% (2020) (15), 100% (2035)	2020 and 2035	10 MW (2020)	4 GW (2020)	6 MW (2020)	2.8 GW (2020)		10% (2020) (3)		-RE in heating and cooling: 40% (2020), 100% (2050) -District Heat: 100% (2035)
DOMINICAN REPUBLIC	16% (6)	18% (6)	0.6	11%	0.7	14.3%			10% (2015) 25% (2025)	2015 and 2025								
ECUADOR	8% 12% (6)	11.4% (6)	2.3	55%	2.3	49.0%					60% of total power capacity (2017)					Current: B5 Expected: B10		
EGYPT	6% (6)	5.7% (6)	3.8	9%	3.4	8.6%	14% (Primary)	2020				2 GW (2017)	2 GW large PV (2017), 300 MW small PV					
ETHIOPIA	95% (6)	93.1% (6)	2.3	99%	2.1	99.9%			90% hydro, 6% geothermal, 4% wind	2030	22 GW (2030)	2 GW (2030)	-	103.5 (2030)	Geothermal: 1GW (2030)	B5 (2030) E5 (current), E15 (2030)	-13% HEVs & 2.2% EVs passenger (2030) -50% of dry and liquid freight cargo from road to electric rail (2030)	Industry: Substitution of 20% of thermal energy in cement industry with biomass Buildings: Efficient wood-fuel stoves 80% rural, 5% urban; biogas stoves 5% rural, 1% urban; electric stoves 5% rural, 1% urban
FRANCE	13%	13.5% (6)	38.5	15%	39.9	17.0%	-23% by 2020 (14) -32% by 2030	2020 and 2030	40% (15)	2030	2.3 GW small and 21 GW large (2020) (15)	19 GW onshore and 6 GW offshore (2020) (15)	4.8 GW PV and 540 MW CSP (2020) (15)	3 GW (2020) (15)	80 MW geothermal and 380 MW marine (2020) (15)	15% RE in Transport (2030) (3)		38% RE in heating and cooling (2030)
GERMANY	10%	11.7% (6)	83.2	23%	90.5	24.3%	18% (2020) 30% (2030) 45% (2040) 60% (2050)	Various	35% (2020) (28) 40-45% (2025) 55-60% (2035) 80% (2050)	Various	4.3 GW (2020) (27)	35.7 GW onshore (2020) (27) 10 GW offshore (2020) (27) (29)	51.7 GW (2020) (27) (30)	8.8 GW (2020) (27) (31)	298 MW (2020) (27)	10% (2020) (3)	1 million EVs (2020)	14% RE in heating and cooling supply (2020) (27)
INDIA	16% 39% (6)	36.4% (6)	66.2	16%	70	16.9%	6%	2022	175 GW of renewable power capacity (39)	2022	5 GW small off-grid (2022)	60 GW (2022)	100 GW PV (2022)	10 GW (2022) (40)		Expected: E20, B20 (2017)		-5.6 GWh of new solar thermal capacity (8 million m ³) (2012-2017); 20 million m ² solar thermal (2022) -8.5 million solar cookstoves, 3.5 million biomass cookstoves -20 million solar lighting systems for rural areas (2022)
INDONESIA	6% 29% (6)	37.1% (6)	6.7	11%	7.8	12.3%	-23% (Primary by 2025) -31% (Primary by 2050) (41)	2025 and 2050								B30 and E20 in transportation, industry, and electricity by 2025 (41)		
IRAN (Islamic Republic of)	0.4% (6)	1.0% (6)	9.9		10.4	5.7%			5 GW of capacity (other than hydro)	2022								
ITALY	11%	16.2% (6)	50.7	31%	53.4	38.9%	19-20% (14)(11)	2020	34-38% (50)	2020	17.8 GW (2020) (15)	12 GW onshore and 680 MW offshore (2020) (15)	8 GW PV (2020) 600 MW CSP (2020) (49)	3.8 GW (2020)	920 MW geothermal (2020) 3 MW marine (2020)	10% (2020) (3)		20% RE in final consumption in heating and cooling (2020) (11)
JAPAN (35)	4%	4.5% (6)	60.1	12%	69.7	13.0%	13-14% (Primary)	2030	22-24% of Generation	2030	48.5-49.3 GW (2030)	10 GW (2030)	64 GW (2030)	6.02-7.28 GW (2030)		500 ML of oil equivalent with biofuels (2017)	20% "next generation" cars by 2020 (10)	
KAZAKHSTAN	1.2% (6)	1.2% (6)	2.3	8%	2.6	8.1%			"Alternative sources": 1% (2014), 3% solar and wind (2020), 30% (2030), 50% (2050) (34)	Various								

Country	Recent renewable energy development						Overall energy system targets (1)		Power sector targets (1)						Transport		Industry/Buildings (1) (16)	
	TFEC		Power sector				RE share in energy consumption [%] (2)	Target Year	RE targets in total power system		RE targets by source (total cumulative RE deployment by source for the specified year)					RE share / Biofuel Mandate (3)	Other Transport Targets	Targets for RE share/generation or deployment of heating and cooking technologies
	RE share in 2010 [%]	RE share in 2013 [%]	RE power generation capacity in 2012 [GW]	RE electricity generation share 2012 [%]	RE power capacity in 2013 [GW]	RE electricity generation share 2013 [%]			Objectives in RE generation	Target Year	Hydro	Wind	Solar/CSP	Biomass	Other (Ocean, Geothermal)			
KENYA	76% (6)	77.3% (6)	1.1	75%	1.2	69.3%				100 MW small (2023) 300 MW small (2030)	500 MW (2017) 1 GW (2022) 3 GW (2030)	100 MW (2017) 200 MW (2022) 500 MW (2030) (44)	-100% biodiesel in isolated power plants (2030) -1.2 GW of CHP biomass (2030) -300 MW urban waste (2030)	Geothermal: 1.887 GW (2016), 5.5 GW (2030)	E10 (2030) B5 for government vehicles (2030)		-SWH systems (units): 350,000 (2017); 450,000 (2022); 700,000 (2030) -Biogas (units): 5,000 (2017); 6,500 (2022); 10,000 (2030)	
KUWAIT	0%	0.0%	0.0	0.0%	0.0	0.0%		5% (2020) 15% (2050)	2020 and 2030		700 MW (2030)	4.6 GW PV and 5.7 GW CSP (2030)						
MALAYSIA	2% 6% (6)	6.5% (6)	4.1	7%	4.9	8.6%		9% (2020) 11% (2030) 15% (2050)	Various	490 MW Mini-hydro (2020)		PV on-grid: 854 MW (2030), 3.07 GW (2040), 8.87 GW (2050)	1.34 GW biomass, 410 MW biogas and 390 MW solid waste (2030); 430 MW solid waste (2050)		Current: B5; Expected: B15 (2020) in automotive sector			
MEXICO	4% 10% (6)	9.3% (6)	14.4	15%	14.9	13.3%		24.9% (2018) 35% "clean energy" (2024) (23)	2018 and 2024	13 GW (2018)	8.9 GW (2018)	627 MW (2018)	785 MW (2018)	1 GW geothermal (2018)				
MOROCCO	3% 20% (6)	12.6% (6)	2.1	9%	2.3	15.3%		35% "clean energy" by 2024	2020	2 GW	2 GW	2 GW PV & CSP				1.2 Gwth (2020) (equivalent to 1.7 million m ³)		
NIGERIA	9% 89% (6)	87.1% (6)	0.004	20%	2	18.4%		18% (2025) 20% (2030)	2025 and 2030	11.25 GW large (2030) 3.5 GW small (2030)	23 MW (2015) 40 MW (2020) 50 MW (2030)	4 GW PV (2020) 30 GW PV (2030) 2 GW CSP (2030) 18 GW CSP (2030)	100 MW (2030)	E10, B20	- 1 million improved wood stoves, 150,000 SWH 8000 Biogas digestors, 150,000 solar cookers and 6,000 solar driers and 10,000 solar pasteurizers (2030)			
POLAND	9.4% (6)	10.9% (6)	5.5	11%	6.5	10.4%	15% (14)	19.1% (15)	2020	1.152 MW (2020)	6.65 GW (2020)	3 MW PV (2020)	2.53 GW (2020); 1.55 GW solid, 980 MW biogas		11.36% (2020) (3)	17% RE in heating and cooling (2020) (51)		
RUSSIAN FEDERATION	4%	3.5% (6)	48.6	16%	50.3	17.2%		4.5% (24)	2020-2024	0.9 GW small hydro (2020) (24)	3.5 GW (2024) (24)	1.5 GW PV (2020) (24)						
SAUDIA ARABIA	0%	0% (6)	0.02	0.0%	0.025	0.0%		23-30% (21)	2040		9 GW (2040)	16 GW PV and 25 GW CSP (2040)	3 GW Waste-to-Energy (2040)	1 GW Geothermal (2040)				
SOUTH AFRICA	1% 10% (6)	15.8% (6)	2.6	1%	2.7	0.7%					9.2 GW (2030)	8.4 GW PV 1 GW CSP (2030)		E2, B5 (by October 2015)	5.6 million SWH installations by 2020			
REPUBLIC OF KOREA	3%	1.7% (6)	4.8	70%	9	1.6%	11% (Primary) (25)	13.4% (25)	2035	0.32% (Primary) (2035)	2.00% (Primary) (2035)	PV: 1.55% (Primary) (2035)	Bio and waste: 5.21% (Primary, also includes heat) (2035) 0.14% ocean geothermal (Primary, also includes heat) by 2035	82.5 (current), B3 expected for 2018	- Solar thermal: 0.87% (Primary, mainly heat) - Bio and waste: 5.21% (Primary, includes power and heat) - Geothermal: 0.94% (Primary, includes power and heat)			
SWEDEN	59% (6)	47.8% (6)	24.2	59%	24.5	54.0%	50% (14)	62.9% (15)	2020	16.36 GW (2020)	4.3 GW onshore and 182 MW offshore (2020)	8 MW PV (2020)	2.9 GW (2020)		10% (2020) (3)	62.1% RE in heating and cooling supply (2020)		
TONGA			0.002		0.002			15%	2015									
TURKEY	14%	14.5% (6)	22.1	27%	25.5	28.8%	20% (32)	37.5%	2023	34 GW (2023)	20 GW onshore (2023)	5 GW PV (2023)	1 GW (2023)	1 GW (2023)	10% RE share in transport (2023)	14% RE in heating and cooling (2023)		
UKRAINE	3%	3.1% (6)	6.1	6%	6.6	7.8%	11% (14)	11%	2020	5.2 GW large, 55 MW micro and mini and 95 MW small (2020)	2.3 GW (2020)	2.3 GW (2020)	950 MW (2020)	20 MW geothermal (2020)	10% RE share in transport (2020) (3); E7 by 2017	12.4% RE in heating and cooling (2020)		
UNITED ARAB EMIRATES	0%	0.1% (6)	0.02	0.0%	0.135	0.0%		Abu Dhabi: 7% capacity (1.5 GW) (2020) Dubai: 5% (2020) and 15% (2030) (1 GW) capacity (35)	2020 and 2030							75% water heating by SWH and 50% swimming pool heating by SWH in Dubai		
UNITED KINGDOM	3%	5.3% (6)	18.3	11%	22.4	15.1%	15% (14)	31% (15)	2020	2.1 GW (2020)	28 GW (2020)	2.7 GW (2020)	26 GW (2020)	1.3 GW (2020)	10% (2020) (3)	12% RE in heating and cooling supply (2020)		
UNITED STATES	8%	8.5% (6)	183.8	12%	191.8	12.6%	(48)								36 billion gallons of biofuel annually (primary ethanol) (2022) 15 billion gallons bioethanol (2022) (43)	1 million EVs (2015)		
URUGUAY	49%	50.7% (6)	1.8	65%	1.86	80.9%	50%	>25% (excl. large hydro) >90% total (20)	2015	1.54 GW small hydro (2015)	1.2 GW (2015) (45)	200 MW (2015)	200 MW (2015)	-	Current: B2 (voluntary) Expected: E5, B5 (after 2015)	Law: (1) new health, sports and hotel buildings with above 20% of energy consumption for water heating should have at least 50% of energy generated for water heating from solar thermal applications (applicable after 2014); (2) 100% of energy for Climatized pools (applicable after 2012)		

Abbreviations:

B	biodiesel (when referring to biofuel mandates)	EV	electric vehicle	ktoe	thousand tonnes of oil equivalent	PV	photovoltaic
E	ethanol (when referring to biofuel mandates)	GW	gigawatt	Mtoe	million tonnes of oil equivalent	RE	renewable energy
CHP	combined heat and power	GWh	gigawatt-hour	MW	megawatt	SWH	solar water heater
CSP	concentrated solar power	H&C	heating and cooling	NREAP	National Renewable Energy Action Plan (in the EU)	TfEC	total final energy consumption
EU	European Union	HEV	hybrid electric vehicle	PHEV	plug-in hybrid electric vehicle	TWh	terawatt-hour

Notes:

- The renewable energy (RE) objectives/targets provided in the table are meant as a general guide into better understanding the assumptions and sources that are used to develop the Reference Case of REmap countries. Please note that the Reference Case can vary from the targets shown in the table when other official energy projections exist.
- Renewable Energy objectives/targets vary from one country to the other in the way they are adopted in legislative and policy frameworks. Values presented in this table are targets that have been announced by the countries, which are not legally binding in all cases.
- Policy objectives and targets shown have not yet considered INDCs (Intended Nationally Determined Contributions)

- Power Sector - The convention or reporting renewable energy targets for the power sector differ from country to country, depending on availability of information. They are mentioned either as installed capacity or generation.
- Overall energy system targets/objectives include power and end-use (industry, transport, buildings) sectors; targets refer to the share of final energy consumption unless otherwise specified
- Biofuel Mandates - There is no clear distinction for the biofuel mandates in whether they must be derived from 1st or 2nd generation biofuels. With the increased concern of the indirect land use changes of first generation biofuels, some governments are directing more support for the sourcing of second generation biofuels. The 10% renewable target for transport fuel set by the EU 2009 directive has been recently amended by the European Parliament so that only half of this could be met by first generation biofuel, while the other half must come from second generation biofuel.
- China and India have surpassed many of their renewable energy targets specified in the 5-year plans, so the current renewable levels may have already exceeded government targets.
- Various sources for renewable electricity targets in Brazil indicate lower shares than levels reported already in 2010, at 85%.
- Renewable energy share in TfEC including traditional uses of biomass (when applicable depending on the country, typically used in developing countries); all numbers without this note refer to modern biomass
- According to Japan's country write-up, reference case growth from the The Central Environment Council in the Ministry of the Environment (MoE) in RE in power is 10.4%, 13.3% and 22.4% for 2010, 2020 and 2030.
- Non-fossil fuels include RE and nuclear
- REN 21 Global Status Report indicates a total renewable capacity of 53 GW by 2017. However, the total capacity of the technologies according to the MNRE national plan from Feb 2011 provides a total of 41.4 GW of 1.5 GW comes from biomass, 3.2 GW from biomass cogeneration, 4 GW from solar, 27 GW from wind and 324 MW from waste-to-energy, and 5 GW from SHP.
- Japanese government has set a target of 20% "next generation" cars by 2020, including hybrids, plug-in hybrids, electric and fuel cell vehicles. (http://www.parliament.uk/documents/post/postnp365_electricvehicles.pdf)
- Italy has revised its national energy policy (in March 2013) and set the goal of RE share to 19-20% of gross final final consumption by 2020, above the EU target of 17% in the 20-20-20 package; the goal in the heating and cooling sector is to bring renewables production up to 20% of final consumption by 2020 (compared to the 20-20-20 target of 17%)
- Building sector targets pertain mainly to heating/cooling using renewable sources, which may also extend to the industry sectors. For non-OECD countries which utilize traditional biomass, countries may have targets to promote sustainable forms of cooking with modern cookstoves.
- Renewable Energy share in TfEC in end-use sectors (industry, buildings and transport), including electricity and district heat
- RE share in final energy consumption for EU National Renewable Energy Action Plans (NREAPs) is calculated by the Gross Final Consumption (not the Total Final Energy Consumption) in accordance to the EU Directive 2009/28/EC Article 5.
- There is no renewable energy share for power sector as such, nor capacity targets by technology for 2020 (for any of the EU Member States) according to the NREAPs, but rather projections of expected paths and capacity by sector and by technology to comply the national renewable energy targets share in gross final consumption
- Heat pump applications which contribute to renewable heating and cooling for EU Member States (including Ukraine) is calculated according to EU Directive 2009/28/EC.
- If Energy policy "Vision 25/25" draft is passed, the target share would be 25%
- Canada is expected to promulgate new energy policy by end 2015; so far there are only numerous local and state level renewable energy policies, however all cannot be shown here
- All generation targets are annual
- 15% of "non-traditional RE" includes: wind, biomass residues, micro hydro
- Not binding target of Saudi Arabia's Renewable Strategy, KACARE; targets have been delayed to 2040, from 2032
- Brazil has set a target of decreasing its GHG emissions by 2020 and its energy strategy is adjusted to achieve this goal but no specific targets for energy consumption or power generation have been set
- RE target for "clean technologies", includes nuclear and CCS
- RE target as share of generation, equivalent to 6 GW of capacity for small hydro, PV and wind (combined)
- RE share in primary energy demand, which includes fuel cells, IGCC, and by-product gases;
- The breakdown for capacity in the energy sector is not provided, but primary energy by source is stated in the 3rd Basic Plan for NRE at http://www.kemco.or.kr/new_eng/pg02/pg02040500.asp
- Indicative total cumulative installed capacity according to projections in Germany's NREAP
- This share is set according to the energy transition targets (does not correspond to projections of RE share in power sector in the national NREAP)
- According to the "Law for the expansion of renewable energy, 2014", the next additions for wind are aimed: yearly additions of around 2.5 GW onshore (2015-2030); offshore additions of 6.5 GW (2015-2020) and 15 GW (2015-2030)
- According to the "Law for the expansion of renewable energy, 2014", the next additions for solar are aimed: yearly additions of around 2.5 GW (2015-2030)
- According to the "Law for the expansion of renewable energy, 2014", biomass yearly additions up to 100 MW (2015-2030)
- RE target in gross final energy consumption as in EU NREAPs
- Excluding pumped hydro
- Energy from "alternative sources" includes nuclear power
- Targets for Dubai updated in January 2015; it also has the objective of having 5 GW of PV by 2030
- Energy shares for non-conventional technologies exclude large hydro
- Excluding 30 GW and 70 GW of pumped hydro in 2015 and 2020 respectively
- This capacity is referred to on-grid installations
- Hydro >25 MW is not considered RE, thus excluded from targets
- Additions to sum up the total capacity between 2011-2017 are as follows: Biogas 500 MW; CHP bagasse 1.6 GW; urban waste 240 MW
- Legislation update to be fully approved
- Target already overpassed, so indicative share to be reached by 2016 is 23%
- Different standards for ethanol and diesel per State
- This capacity shares exclude rooftop solar
- This target was updated in 2012 from original plan
- Targets established by Law 27.191, on 15 October 2015; generation targets exclude large hydro (> 50MW)
- Renewable energy targets (RET) exclude existing renewable generation; RET was revised in mid 2015, reducing the binding RET for large-scale generation from 41 TWh to 33 TWh; targets by 2020 to be maintained to 2030
- The United States has numerous local and state level targets and policies relating to renewable energy however all cannot be shown here
- PV target: Italy National Energy Strategy 2013 states 30TWh of PV, about 25GW according to capacity factor as assumed in NREAP
- According to National Energy Strategy (of March 2013) share of renewables energy in electricity will be around 35%-38% (this is not a binding target)
- District and non-district systems

