

# The role of Renewable Energy in the Global Climate Change Agenda

---



**Mariano Gonzalez Serrano**  
World Bank

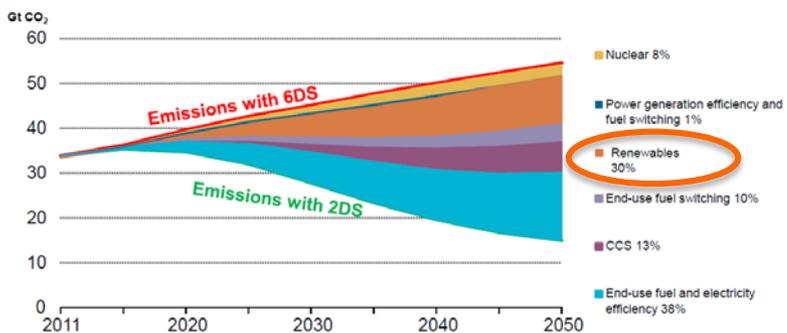
April 28, 2017

# RE is key to achieve global targets on GHG emission reduction

RE is key to achieve global targets on GHG emission reduction

And countries have shown commitment to support RE...

Portfolio of actions to reduce energy sector emissions, IEA



Energy Sector INDC Summary, WB



## But requires massive private sector investment

Figure 1.15 ▸ Growth in investment needs in low-carbon power generation technologies and energy efficiency in the 450 Scenario

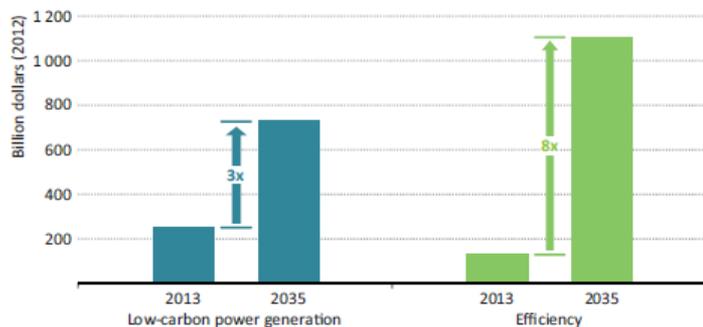
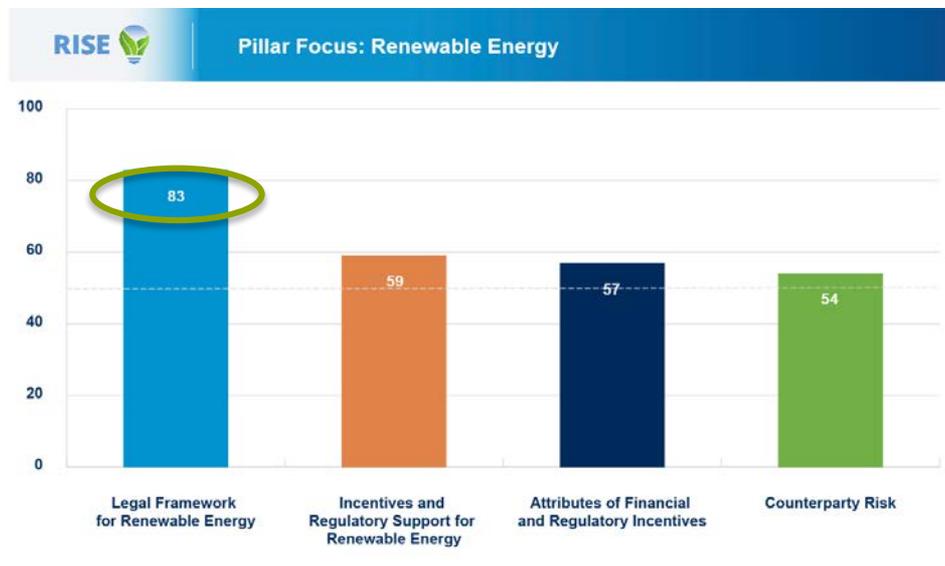


Table 1.6 ▸ Cumulative investment in energy supply and energy efficiency in the 450 Scenario, 2014-2035 (\$2012 billion)

	Oil	Gas	Coal	Power	Biofuels	Total supply	Efficiency
OECD	3 840	2 801	167	7 608	467	14 883	6 807
Americas	3 113	1 703	76	3 467	304	8 664	2 377
United States	1 903	1 261	65	2 968	270	6 468	1 930
Europe	581	716	18	2 838	137	4 291	3 325
Asia Oceania	146	382	72	1 303	26	1 928	1 105
Japan	29	39	2	749	7	827	692
Non-OECD	6 962	4 578	475	11 649	345	24 010	6 214
E. Europe/Eurasia	1 185	1 276	55	1 156	7	3 678	694
Russia	676	737	34	665	0	2 112	373
Asia	1 394	1 557	363	7 994	151	11 459	3 837
China	828	654	283	4 361	93	6 218	2 526
India	244	209	52	2 003	13	2 521	660
Southeast Asia	282	496	22	1 010	45	1 855	490
Middle East	1 523	548	1	690	0	2 762	365
Africa	1 151	763	33	901	5	2 853	481
Latin America	1 709	435	23	909	182	3 258	837
Brazil	1 108	128	1	521	161	1 919	457
Inter-regional transport	260	78	48	n.a.	109	495	510
World	11 062	7 457	690	19 258	920	39 387	13 531
European Union	358	453	16	2 566	136	3 528	2 998

# Global overlook of regulatory framework for RE



80% Defined market entry mechanism for Renewable Energy projects	66% Tariffs indexed to an international currency or to inflation	57% Development timelines or milestones for Renewable Energy projects	81% Utility measures reliability of its service	79% Operates an incidence outage system	70% Reliability monitoring data reported to regulator	59% Public financial statement for distribution utility	59% Independent auditing of transmission utility	57% Utility reliability monitoring data is publicly available
46% Competitive bidding provisions	44% Adjustment mechanism if guaranteed tariff	44% Tariff differentiation by project size	70% Publicly available electricity available for sale to end-users	70% Publicly available transmission loss rate	67% Publicly available distribution loss rate	57% Independent auditing of generation utility	55% Independent auditing of retail sales utility	55% Independent auditing of distribution utility
43% Renewable Energy incentive cost passed through to final consumer	15% Tradeable certificates if Renewable Energy mandate exists	65% Public financial statement for transmission utility	63% Public financial statement for generation utility	62% Public financial statement for retail sales utility	48% Publicly available bill collection rate	32% Mechanism to back utility payments		

# Global overlook of regulatory framework for RE

