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ADVANCE
**Advanced Model Development and Validation for Improved Analysis of
Costs and Impacts of Mitigation Policies**

FP7-Cooperation-ENV
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DELIVERABLE No 6.2
Report on existing and planned climate and energy policies for different world regions

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PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	



Report on existing and planned climate and energy policies for different world regions

Table D6.2 is a compilation of energy and climate policies across different world regions by describing their emissions reduction commitments, renewable energy targets, nuclear targets and fuel efficiency standards. We include details from the two most recent studies which have attempted to compile such policies. Most of the policies available are short or medium-term targets until 2020 or 2030. Longer term policy until 2050 and beyond is much less common. We include anything pledged prior to 2015 and therefore do not include any of the recent policies from the INDCs or potential outcomes of the Paris COP.

The report is based upon a combination of the Global Energy and Climate Outlook (GECO2015) report¹ from JRC in 2015 and the AMPERE database produced as part of the AMPERE project on "Assessment of Climate Change Mitigation Pathways and Evaluation of the Robustness of Mitigation Cost Estimates" which ran from 2011-2014.² Both sources are recent attempts to undertake a similar collection of different regional and national policies in the areas of energy and climate change. Both sources are also focussed on using the list of policies to implement them within modelling frameworks such as we are undertaking in ADVANCE.

It is difficult to capture a consistent across a constantly changing policy landscape for all countries. There is therefore some aggregation used. A useful new addition is the (GLOBE) climate legislation project at London School of Economics which covers 99 countries worldwide and can be used to update yearly any new legislation on climate policies.³ However, the GLOBE study will only capture updated climate policy which has been legislated and may therefore miss other types of energy-related policy.

From GECO2015 we use the aggregated regional emissions policies specified in Table 3 of the report. This is combined with similar regional policy data from AMPERE on technology specific targets. From AMPERE we use the moderate policy baseline and ignore the stringent policy baseline. These baselines differ due to some country's GHG and other energy targets being conditional on achievement of a global agreement. We therefore take the lower end of the proposed targets. For each region we provide 2020 emissions pledges, policies implemented in the GECO2015 study (often the same as the emissions pledges), whether the emissions constraint is binding i.e. part of national legislation (taken from GECO2015), renewable energy targets, nuclear targets and fuel standards.

¹ Labat, A., Kitous, A., Perry, M., Saveyn, B., Vandyck, T., and Vrontisi, Z. (2015). GECO2015. Global Energy and Climate Outlook. Road to Paris. JRC Scientific and Policy Reports, EUR 27239 EN.

² AMPERE Public database is held by IIASA and AMPERE details available at

³ GLOBE study and database available at www.lse.ac.uk/granthaminstitute/legislation

It is intended that the following Table D6.2 will be utilised to inform the various policies which will be included within a reference scenario for the remainder of the Task 6.2, 6.3 and 6.4 under Work Package 6 of ADVANCE.

Table D6.2

Region	Emissions 2020 pledge	Policies implemented	Binding Emissions constraint	Renewable Energy target	Nuclear target	Fuel standards
ARG	-15% (derived from halved MEX & BRA targets, Including LULUCF). Use own BAU projection.	15% reduction in GHG from 2005	No	8% in power generation by 2016, 5% total gasoline consumption from ethanol; 7% total diesel consumption from biodiesel by 2012	N/A	N/A
AUS	GHG 5%-25% below 2000	GHG 5% below 2000	Yes	10% share in electricity production by 2020 (AUS) (half of target)	N/A	N/A
NZL	10% to 20% below 2000 incl. land management	aggregated with AUS	Yes	N/A	N/A	N/A
BRA	GHG 36% - 39% below national BAU by 2020	GHG do not exceed 2000 MtCO _{2e} including Land Use, Land-use Change & Forestry (LULUCF)	No	1,805 MW of wind by 2012. Use only as calibration	N/A	N/A
CAN	GHG 17% below 2005, incl. 12% from domestic action; standards in transport	GHG at 2005 level	Yes	13% in electricity supply by 2020 (based on targets used for USA).	N/A	Fuel standard for new vehicles (44 mpg)
CHE	GHG 20%-30% below 1990	Joins the EU ETS	Yes	N/A	N/A	N/A

Region	Emissions 2020 pledge	Policies implemented	Binding Emissions constraint	Renewable Energy target	Nuclear target	Fuel standards
CHN	CO2 emission/GDP -40–45% vs. 2005; increased forest coverage/stock volume	CO2 emission/GDP -40% vs. 2005 levels	Yes	15% (of Primary Energy , by 2020), Wind: 100 GW capacity (grid connected, 5GW off shore), Solar PV: 10GW, Hydro: 270 GW, all by 2015	41 GW by 2020 (installed capacity plus plants under construction)	N/A
EU28	GHG 20% below 1990, 30% conditional; standards in transport	GHG 20% below 1990	Yes	'20% (of Final Energy, by 2020)	N/A	Fuel standard for new vehicles (95 gCO2/km)
IDN	GHG 26% below national BAU by 2020	GHG 78% above 2010 (68% excl. LULUCF)	No	7.5% in electricity production by 2025	N/A	N/A
IND	GHG/GDP (except agriculture) -20–25% vs. 2005	GHG (except agriculture) per unit of GDP -20% vs. 2005 levels	No	10 GW solar, 20 GW wind, 3.25 GW small hydro, 3.75 GW biopower corresponding to 2.5% in electricity by 2022 (half of target)	20 GW by 2020 (installed capacity plus plants under construction)	N/A
JPN	GHG 3.8% below 2005;	GHG 3.8% below 2005 levels	No	RES targets 2022: Wind (38 GW), Solar (20 GW) Solar thermal capacity (14 GW)	N/A	N/A
KOR	GHG 30% below national BAU by 2020;	GHG 3% above 2010 level	Yes	6% share RES in primary energy Cumulative wind capacity of 8 GW by 2022 (half of target)	N/A	N/A
MEA	-10% (ISR) (half of target) Use own BAU projection	N/A	No	15% in primary energy and 5% in electricity by 2020 (Use substitution method as	N/A	N/A

Region	Emissions 2020 pledge	Policies implemented	Binding Emissions constraint	Renewable Energy target	Nuclear target	Fuel standards
				accounting method)		
MEX	GHG 30% below national BAU; non-CO2 electricity share 35% in 2024	halfway: GHG 24% above 2010 level	No	17% (half target) share in electricity production by 2024	N/A	N/A
NAF	N/A	N/A	No	20% in electricity production by 2020	N/A	N/A
NOR	GHG 30%-40% below 1990 (2/3 domestic)	Joins the EU ETS	Yes	N/A	N/A	N/A
PAK	N/A	N/A	No	10% share in electricity by 2012. Use only as calibration.	N/A	N/A
RUS	GHG 15-25% below 1990;	GHG 25% below 1990 levels	No	RES target (5% share of electricity in 2020)	34 GW by 2030 (installed capacity plus plants under construction)	N/A
SAS	N/A	N/A	No	10% share of electricity production by 2020	N/A	N/A
SEA	N/A	N/A	No	15% in electricity production by 2020	N/A	N/A
SSA	N/A	N/A	No	Primary energy target: 20% by 2020; electricity target: 2.5% by 2020 (Use substitution method as accounting method)	N/A	N/A
SUI	-20% (lower end SUI target)	20% GHG reduction from 1990		24% share in primary energy by 2020 (Use substitution method as accounting method)	N/A	N/A
TUR	N/A	N/A	No	20,000 MW wind by 2023, 600 MW geothermal and 600 MW solar by 2013.	N/A	N/A

Region	Emissions 2020 pledge	Policies implemented	Binding Emissions constraint	Renewable Energy target	Nuclear target	Fuel standards
USA	GHG 17% below 2005;	GHG 12% below 2005 levels	Yes	share RES of electricity 14% in 2020)		Fuel standard for new vehicles (44 mpg)
ZAF	GHG 34% to 42% below national BAU by 2020	GHG 17% below national BAU by 2020 (half of target)	No	RES capacity target (25 GW 2030)	N/A	N/A