

FIDDLING THE NUMBERS: HOW THE EU COMMISSION SIDELINED AMBITIOUS 2030 ENERGY EFFICIENCY TARGETS

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New information from an Access to Documents request shows that the real costs of a 2030 efficiency target may be much lower than those published by the Commission.

The Commission developed three different ways of calculating costs: high, medium and low. The differences between the methods are striking:

- (i) A 30% efficiency target using the low costs method is €600bn cheaper than the same target using the high costs method.
- (ii) A 40% target using the medium costs method is the same price as a 28% target using the high costs approach.

But the Commission only published the most expensive method in its July proposal for a 30% by 2030 target. The other two methods were suppressed.

This risks dissuading member states from supporting an ambitious and binding energy efficiency target – and missing out on the multiple economic and other co-benefits. For example, under the Commission's January communication, gas imports are expected to fall by just 9%. But with the 30% efficiency proposal from July 2014, they fall by 22%. With a 40% efficiency target, they fall by 40%.

What follows is a step-by-step demonstration as to how the Commission censored analysis showing the lower costs of ambitious energy efficiency targets.

Step 1: The Commission used different methodologies to calculate energy system costs

The Commission used three different methodologies to calculate the system costs of the different energy efficiency scenarios [see p41 of 'PRIMES modelling for the impact assessment']:

- (i) The first methodology ('approach a') uses a high discount rate of 17.5% for households (where much of the EU's energy savings potential is concentrated).
- (ii) The second ('approach c') uses a social discount rate of 4%. This approach internalizes the monetary and social benefits of energy efficiency. It is therefore the most comprehensive approach that can be used. Its use in the Stern Review reflects this.
- (iii) The third methodology ('approach d') uses a decreasing discount rate, falling to 10% in 2030 [see table 26 p80, part 2 of the Impact Assessment: http://bit.ly/Final_IA_part2]. This takes into account the impact of policies to address barriers to energy efficiency.

Background explanation: PRIMES divides the economy into 5 main sectors: industry, households (also known as 'private individuals'), tertiary, public transport and power generation, and attributes a discount rate to each sector. See table 5 from the impact assessment of 2050 Energy Roadmap:

Table 5: Discount rates for the different actors¹¹⁹

Discount rates	
Industry	12%
Private individuals	17.5%
Tertiary	12%
Public transport	8%
Power generation sector	9%

A high efficiency scenario for 2030 places much more emphasis on the household sector than an ETS-first scenario (because the household sector has the highest potential for energy savings). Consequently, the costs of a high efficiency scenario are very sensitive to the discount rate selected for the household sector.

Step 2: Energy system costs vary hugely depending on the methodology used

The differences between the methods are striking. A 30% efficiency target using social discount rates is estimated to cost €1,888bn, compared to €2,481bn using the 17.5% discount rate. That is almost €600bn cheaper.

See table 18 p45 of 'PRIMES modelling for the impact assessment':

Table 18: System costs results by scenario for the EU28

M€'10	Cost reporting approach a			Cost reporting approach c			Cost reporting approach d		
	2020	2030	2050	2020	2030	2050	2020	2030	2050
Total system costs (excl. deductible auction payments) ¹⁷									
Reference plus	2111392	2336967	2701071	1716094	1847079	2100221	2042014	2251849	2596468
Reference plus LFR2.2	2110779	2340931	2701704	1715730	1850041	2097684	2041508	2255824	2597289
EE - 25	2107585	2383812	3104261	1710670	1863365	2353096	2037569	2291145	2981982
EE - 28	2108429	2416299	3154854	1709671	1864042	2340102	2037638	2282946	2966761
EE - 30	2106641	2481485	3327814	1706904	1888541	2413098	2035355	2318230	3048367
EE - 32	2106644	2526015	3355417	1706992	1908175	2428303	2035422	2352033	3068597
EE - 35	2105705	2662194	3593353	1705837	1971441	2543636	2034307	2449373	3227246
EE - 40	2106529	3032745	4006278	1706460	2167004	2760924	2034988	2728456	3517587

Note that these are total system costs: besides the efficiency target, they also include the costs of meeting a 40% GHG target and a 27% renewables target. It is also important to note that these are 'point in time' figures, which provide cost estimates for 2020, 2030 and 2050. In the draft and final versions of the impact assessment, the Commission presented costs in an 'average annual 2011-2030' format. The two formats are not directly comparable.

Step 3: The Commission used decreasing discount rates in a draft of the impact assessment

A draft of the impact assessment was leaked in June (see <http://bit.ly/draftIA>). It showed that the Commission was calculating costs using the 17.5% discount rate (see table 4). But it also calculated costs using a decreasing discount rate (see table 6).

Table 4: Energy system costs and its components^{36,37}

Indicator <i>(figures are presented in a 2030/2050 format)</i>	Ref	Ref plus	Decarbonisation Scenarios					
			GHG40	EE25	EE28	EE30	EE35	EE40
Total System Costs In bn €'10 <i>(average annual 2011-30 and 2031-2050)</i>	2067 / 2520	2066 / 2519	2069 / 2727	2069 / 2657	2076 / 2701	2091 / 2820	2126 / 3016	2183 / 3369

Table 6: System and Capital costs under alternative cost reporting

Indicator <i>(figures are presented in a 2030/2050 format)</i>	Ref	Ref plus	Decarbonisation Scenarios					
			GHG40	EE25	EE28	EE30	EE35	EE40
Total System Costs In bn €'10 <i>(average annual 2011-30 and 2031-2050)</i>	2011 / 2424	2009 / 2423	2008 / 2589	2008 / 2535	2007 / 2524	2012 / 2578	2033 / 2708	2075 / 2958

A comparison of the two tables shows that a 28% target using a high discount rate costs the same as a 40% target using a decreasing discount rate (average annual costs of €2076bn vs €2075bn).

Step 4: But the Commission only published the 17.5% discount rate method in the final version of the impact assessment

For its July proposal the Commission only published the most expensive cost reporting approach. This is confirmed in table 3 page 33 of the final version of the impact assessment:

of renewable energy		
Representation of active public policy in energy efficiency and other sectors	“Carbon values” ³⁵ , and, post-2030, “enabling settings” ³⁶ . In addition, tighter CO2 standards for cars after 2030. The 2030 IA also included some scenarios with modelling of additional energy efficiency measures ³⁷ .	As “2030”
Discount rates used to depict decision-making by economic actors	8-17.5%; some energy efficiency measures can lower discount rates	As “2030” ³⁹
System costs	Calculated using standard (un-lowered) private discount rates ⁴⁰	As “2030”

⁴⁰ Households, private cars 17.5%; industry, tertiary, trucks, inland navigation 12%; power generation 9%; public transport 8%.