

This Excel File relates to the Bruegel Blueprint Series Report
"Energy: Choices for Europe" (Röller, Delgado and Friederiszick, 2007).

It contains the complete dataset, used for the computation of the Energy Policy Index (EPI).
For a complete description of the methodology adopted, please refer to Annex I of the Bruegel Report.

INDEX

CRITERIUM	SHEET NAME	SHEET DESCRIPTION AND LINK
COMPETITIVENESS	C_Meth	Competitiveness: Methodology
	C_Data	Competitiveness: Data
	C_Index	Competitiveness: Index
SECURITY OF SUPPLY	SoS_Meth	Security of Supply: Methodology
	SoS_Data	Security of Supply: Data
	SoS_Index	Security of Supply: Index
ENVIRONMENTAL SUSTAINABILITY	ES_Meth	Environmental Sustainability: Methodology
	ES_Data	Environmental Sustainability: Data
	ES_Index	Environmental Sustainability: Index
	3 MAIN INDICES	Final Indices: Efficiency, Security of Supply, Environmental sustainability

COMPETITIVENESS: Methodology

		Weights by theme (b)	Weights by theme (b _j)	Weights by subtheme (sb _j)	Question weights (c _k)	Coding of data		
1st CRITERIUM	COMPETITIVENESS	1/2						
	ELECTRICITY	1/2	1/4					
	Vertical integration			1/2				
	What is the degree of vertical separation between the transmission and generation segments of the electricity industry?				1/2	Ownership separation 6	Legal/Accounting separation 3	Integrated 0
	What is the degree of vertical separation between the distribution segment and the other segments of the electricity industry?				1/2	Ownership separation 6	Legal/Accounting separation 3	Integrated 0
	Horizontal market structure			1/2				
	How many companies with market share over 5% in generation?				1/2	More than 5 6	Between 3 and 5 3	Less than 3 0
	How many companies with market share over 5% in supply?				1/2	6	3	0
	GAS	1/2	1/4					
	Vertical integration			1/2				
	What is the degree of vertical separation between the transportation and import/production segments of the electricity industry?				1/2	Ownership separation 6	Legal/Accounting separation 3	Integrated 0
	What is the degree of vertical separation between the distribution segment and the other segments of the electricity industry?				1/2	Ownership separation 6	Legal/Accounting separation 3	Integrated 0
	Horizontal market structure			1/2				
	How many companies with market share over 5% in production/import?				1/2	More than 5 6	Between 3 and 5 3	Less than 3 0
	How many companies with market share over 5% in supply?				1/2	6	3	0
	INTRA-EU TRADE	1/2	1/2					
	What is the share (e) of electricity trade over total electricity generation		1	1		Scaled on a 0-6 range, where 0 denotes very low intra-EU trade and 6 indicates wide openness, according to the following formula:		$6 * ((e - \min e) / \max e)$

COMPETITIVENESS: Data

	Austria AT	Belgium BE	Cyprus CY	Czech Republic CZ	Denmark DK	Estonia EE	Finland FI	France FR	Germany DE	Greece GR	Hungary HU	Ireland IE	Italy IT	Latvia LV	Lithuania LT	Luxembourg LU	Malta MT	Netherlands NL	Poland PL	Portugal PT	Slovak Republic SK	Slovenia SI	Spain ES	Sweden SE	United Kingdom UK	
Electricity																										
Vertical integration																										
What is the degree of vertical separation between the transmission and generation segments of the electricity industry?	2006	Ownership separation	Ownership separation	Ownership separation	yes and ownership: state overlap	yes and ownership: state overlap	Ownership separation	yes: state overlap	yes: state overlap	Ownership separation	yes: state overlap	yes: state overlap	yes: state overlap	yes and ownership	Ownership separation	yes: state overlap	Ownership separation	NA	yes and ownership	yes: state overlap	yes and ownership	yes: state overlap	yes: state overlap	yes and ownership	yes: state overlap	yes and ownership
What is the degree of vertical separation between the distribution segment and the other segments of the electricity industry?	2005	Integrated	Ownership separation	Integrated	Legal/Accounting separation	Ownership separation	Ownership separation	Integrated	Integrated	Legal/Accounting separation	Integrated	Integrated	Integrated	Ownership separation	Integrated	Integrated	Legal/Accounting separation	Integrated	Ownership separation	Integrated	Ownership separation	Integrated	Integrated	Ownership separation	Ownership separation	Ownership separation
Horizontal market structure																										
How many companies with market share over 5% in generation?	2004	5	2	NA	1	10	1	10	1	5	1	7	2	5	1	3	1	NA	4	7	3	1	3	3	10	8
How many companies with market share over 5% in supply?	2004	5	5	1	3	NA	1	5	1	4	1	7	3	6	1	3	4	1	3	6	2	1	6	5	3	6
Gas																										
Vertical integration																										
What is the degree of vertical separation between the transportation and import/production segments of the gas industry?	2006	Ownership separation	Ownership separation	NA	yes and ownership	yes and ownership	Integrated	Integrated	yes: state overlap	Ownership separation	NA	Ownership separation	Ownership separation	Ownership separation	Integrated	Integrated	Ownership separation	NA	yes and ownership	Ownership separation	NA	Ownership separation	Integrated	yes and ownership	yes and ownership	yes and ownership
What is the degree of vertical separation between the distribution segment and the other segments of the gas industry?	2006	Ownership separation	Ownership separation	NA	Ownership separation	Ownership separation	Integrated	Integrated	Integrated	Legal/Accounting separation	NA	Integrated	Integrated	Ownership separation	Integrated	Integrated	Legal/Accounting separation	NA	Ownership separation	Integrated	NA	Integrated	Integrated	Integrated	Integrated	yes and ownership
Horizontal market structure																										
How many companies with market share over 5% in production/import?	2004	2	2	NA	NA	2	1	NA	2	5	NA	2	5	3	1	4	1	NA	1	1	NA	1	1	4	1	7
How many companies with market share over 5% in supply?	2004	4	5	NA	7	3	1	NA	2	1	NA	7	3	5	1	2	4	NA	3	7	NA	1	6	5	1	6
INTRA-EU TRADE																										
What is the share of electricity trade (imports plus exports) over total electricity generation	2004	47.10%	24.90%	0.00%	41.80%	49.90%	24.10%	21.50%	13.10%	16.10%	11.60%	40.30%	6.20%	15.60%	81.90%	71.90%	233.00%	0.00%	26.40%	12.90%	23.80%	63.20%	87.80%	6.90%	22.00%	3.10%

COMPETITIVENESS: Index

COUNTRY	ISO	Electricity	Gas	Average (EI + Gas)	Intra-EU trade	Competitiveness Index
Austria	AT	3,75	3,75	3,8	2,8	3,3
Belgium	BE	3,75	3,75	3,8	4,3	4,0
Cyprus	CY	5,00	NA	5,0	6,0	5,5
Czech Republic	CZ	3,38	2,25	2,8	3,1	3,0
Denmark	DK	1,50	3,00	2,3	2,6	2,4
Estonia	EE	4,50	6,00	5,3	4,4	4,8
Finland	FI	3,00	6,00	4,5	4,5	4,5
France	FR	5,25	5,25	5,3	5,1	5,2
Germany	DE	3,00	3,75	3,4	4,9	4,1
Greece	GR	5,25	NA	5,3	5,2	5,2
Hungary	HU	2,25	3,75	3,0	3,2	3,1
Ireland	IE	4,50	3,75	4,1	5,6	4,9
Italy	IT	1,50	3,00	2,3	4,9	3,6
Latvia	LV	5,25	6,00	5,6	1,1	3,4
Lithuania	LT	3,75	5,25	4,5	0,4	2,5
Luxembourg	LU	4,13	4,13	4,1	0,0	2,1
Malta	MT	6,00	NA	6,0	6,0	6,0
Netherlands	NL	2,25	3,00	2,6	4,2	3,4
Poland	PL	1,50	3,75	2,6	5,1	3,9
Portugal	PT	3,00	NA	3,0	4,4	3,7
Slovak Republic	SK	5,25	5,25	5,3	1,7	3,5
Slovenia	SI	3,00	4,50	3,8	0,0	1,9
Spain	ES	2,25	3,00	2,6	5,5	4,1
Sweden	SE	2,25	3,75	3,0	4,5	3,7
United Kingdom	UK	0,75	0,00	0,4	5,8	3,1

SECURITY OF SUPPLY: Methodology

		Weights by theme (b _j)	Weights by subtheme (sb _j)	Coding of data						
2nd CRITERIUM	SECURITY OF SUPPLY									
	ENERGY DEPENDENCE	1/2								
	Share of energy net imports on gross energy consumption		1	<15%	Between 15.01% and 30%	Between 30.01% and 45%	Between 45.01% and 60%	Between 60.01% and 75%	Between 75.01% and 90%	Above 90%
				6	5	4	3	2	1	0
	ADEQUACY MARGIN	1/2								
				< - 0.101	Between -0.10 and 0	Between 0.001 and 0.10	Between 0.101 and 0.15	Between 0.151 and 0.20	Between 0.201 and 0.25	Above 0.25
	System adequacy (a): Reliably available capacity over expected peak demand, 2006		1/3	0	1	2	3	4	5	6
	System adequacy (a): Reliably available capacity over expected peak demand, 2010		1/3	0	1	2	3	4	5	6
System adequacy (a): Reliably available capacity over expected peak demand, 2015		1/3	0	1	2	3	4	5	6	

SECURITY OF SUPPLY: Data

Year	Austria AT	Belgium BE	Cyprus CY	Czech Republic CZ	Denmark DK	Estonia EE	Finland FI	France FR	Germany DE	Greece GR	Hungary HU	Ireland IE	Italy IT	Latvia LV	Lithuania LT	Luxembourg LU	Malta MT	Netherlands NL	Poland PL	Portugal PT	Slovak Republic SK	Slovenia SI	Spain ES	Sweden SE	United Kingdom UK
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ENERGY DEPENDENCE

Share of energy net imports on gross energy consumption

2005	82,6	80,7	105,5	37,6	-58,8	33,9	69,3	54,5	65,1	70,8	65,3	90,2	86,8	94	63,1	99	NA	38,9	18,4	99,4	67,8	55,9	85,1	45	13
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ADEQUACY MARGIN

System adequacy (a): Reliably available capacity over expected peak demand, 2006

2006	38,6%	1,6%	NA	21,5%	2,2%	19,7%	2,2%	13,3%	10,8%	14,3%	2,8%	3,0%	13,1%	19,7%	19,7%	37,6%	NA	7,6%	27,5%	18,6%	20,7%	-39,9%	20,5%	2,2%	3,9%
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System adequacy (a): Reliably available capacity over expected peak demand, 2010

2010	36,7%	-5,6%	NA	16,0%	8,9%	20,0%	8,9%	9,2%	10,5%	16,1%	1,8%	-1,4%	15,1%	20,0%	20,0%	48,6%	NA	3,8%	35,8%	18,1%	-10,8%	-2,0%	15,1%	8,9%	3,7%
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System adequacy (a): Reliably available capacity over expected peak demand, 2015

2015	30,1%	-16,1%	NA	11,5%	4,3%	-5,5%	4,3%	3,8%	5,2%	18,8%	8,0%	-18,6%	7,7%	-5,5%	-5,5%	43,8%	NA	-2,2%	29,0%	2,2%	-30,0%	-9,2%	5,1%	4,3%	-0,8%
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SECURITY OF SUPPLY: Index

		Adequacy Margins 2006-2015						
		Energy Dependence	AM 2006	AM 2010	AM 2015	Adequacy Margin Average	Security of Supply Index	
Austria	AT	1,30	6	6	6	6,00	5,06	
Belgium	BE	1,41	2	1	0	1,00	1,08	
Cyprus	CY	0,00	NA	NA	NA	NA	0,00	
Czech Republic	CZ	3,86	5	4	3	4,00	3,97	
Denmark	DK	6,00	3	3	2	2,67	3,33	
Estonia	EE	4,07	4	4	1	3,00	3,21	
Finland	FI	2,06	2	2	2	2,00	2,01	
France	FR	2,90	3	2	2	2,33	2,45	
Germany	DE	2,30	3	3	2	2,67	2,59	
Greece	GR	1,97	3	4	4	3,67	3,33	
Hungary	HU	2,29	2	2	2	2,00	2,06	
Ireland	IE	0,87	1	1	0	0,67	0,71	
Italy	IT	1,06	3	4	2	3,00	2,61	
Latvia	LV	0,65	2	2	2	2,00	1,73	
Lithuania	LT	2,41	2	2	2	2,00	2,08	
Luxembourg	LU	0,37	6	6	6	6,00	4,87	
Malta	MT	0,00	NA	NA	NA	NA	0,00	
Netherlands	NL	3,79	2	2	1	1,67	2,09	
Poland	PL	4,95	6	6	6	6,00	5,79	
Portugal	PT	0,35	4	4	2	3,33	2,74	
Slovak Republic	SK	2,14	5	0	0	1,67	1,76	
Slovenia	SI	2,82	1	1	1	1,00	1,36	
Spain	ES	1,16	5	4	2	3,67	3,17	
Sweden	SE	3,44	2	2	2	2,00	2,29	
United Kingdom	UK	5,26	2	2	1	1,67	2,39	

ENVIRONMENTAL SUSTAINABILITY: Methodology

		Weights by theme (b)	Weights by subtheme (sb)	Coding of data						
3rd CRITERIUM	ENVIRONMENTAL SUSTAINABILITY									
	Renewables	1/3								
	Weight of renewables plus hydro in energy mix		1	>23%	Between 17% and 22.99%	Between 12% and 16.99%	Between 9% and 11.99	Between 6% and 8.99%	Between 3% and 5.99%	Below 3%
				0	1	2	3	4	5	6
	CO2 emissions	1/3								
	CO2 emissions: Kg CO2 over 2000 US\$ PPP GDP		1/2	Below 0.29	Between 0.3 and 0.39	Between 0.4 and 0.49	Between 0.5 and 0.59	Between 0.6 and 0.69	Between 0.7 and 0.81	Above 0.81
				0	1	2	3	4	5	6
	Evolution of CO2 emissions: Percentage reduction in greenhouse gas emissions with respect to GDP at PPP values, from 1995 to 2004		1/2	Above 52%	Between 42% and 51%	Between 32% and 41%	Between 22% and 31%	Between 12% and 21%	Between 1% and 11%	No reduction
				0	1	2	3	4	5	6
	Planned Measures and Progress Towards Target	1/3								
	Existing policies and measures		1/8	yes				no		
				0				6		
	Additional policies and measures		1/8	yes				no		
				0				6		
	Use of Kyoto mechanisms		1/8	yes				no		
			0				6			
Net removal of carbon sinks		1/8	yes				no			
			0				6			
Kyoto Target projected to be reached		1/2	yes				no			
			0				6			

ENVIRONMENTAL SUSTAINABILITY: Data

	Austria AT	Belgium BE	Cyprus CY	Czech Republic CZ	Denmark DK	Estonia EE	Finland FI	France FR	Germany DE	Greece GR	Hungary HU	Ireland IE	Italy IT	Latvia LV	Lithuania LT	Luxembourg LU	Malta MT	Netherlands NL	Poland PL	Portugal PT	Slovak Republic SK	Slovenia SI	Spain ES	Sweden SE	United Kingdom UK
Renewables Weight of renewables plus hydro in energy mix																									
Year																									
2004	21,5	2,3	7,4	3,5	14,4	11,4	24,1	6,2	4,3	5,3	3,8	2,2	8,0	37,3	9,1	1,6	0,0	2,9	5,2	15,0	4,2	11,5	6,3	27,0	1,6
CO2 emissions CO2 emissions: Kg CO2 over 2000 US\$ FPP GDP																									
2004	0,31	0,4	0,4	0,71	0,32	0,92	0,47	0,23	0,39	0,44	0,39	0,31	0,31	0,29	0,31	0,47	0,36	0,4	0,66	0,33	0,54	0,41	0,34	0,2	0,32
Evolution of CO2 emissions: Percentage reduction in greenhouse gas emissions: with respect to GDP at FPP values, from 1995 to 2004																									
1995-2004	6,0	20,0	8,0	22,0	25,0	44,0	18,0	18,0	18,0	14,0	31,0	42,0	4,0	50,0	62,0	16,0	-8,0	24,0	37,0	6,0	33,0	23,0	3,0	26,0	28,0
Planned Measures and Progress Towards Target Existing policies and measures																									
2006	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	yes	yes	yes
Additional policies and measures																									
2006	yes	yes	no	yes	no	yes	yes	yes	yes	yes	yes	no	yes	yes	no	no	no	yes	no	yes	yes	yes	no	no	yes
Use of Kyoto mechanisms																									
2006	yes	yes	no	no	yes	no	yes	no	no	no	no	yes	yes	no	no	yes	no	yes	no	yes	no	no	yes	no	no
Net removal of carbon sinks																									
2006	yes	no	no	yes	yes	no	no	yes	no	no	no	yes	yes	no	no	no	no	yes	no	yes	no	yes	yes	yes	yes
Kyoto Target projected to be reached																									
2006	no	no	na	yes	no	yes	yes	yes	yes	yes	yes	no	no	yes	yes	yes	na	yes	yes	no	yes	yes	no	yes	yes

ENVIRONMENTAL SUSTAINABILITY: Index

COUNTRY	ISO	Renewables	CO2 emissions	CO2 emission change	Planned Measures and Progress Towards Target	Kyoto target	Environmental Sustainability Index
Austria	AT	1	1	5	0	6	2,3
Belgium	BE	6	2	4	1,5	6	4,3
Cyprus	CY	4	2	5	6	3	4,0
Czech Republic	CZ	5	5	3	1,5	0	3,3
Denmark	DK	2	1	3	1,5	6	2,6
Estonia	EE	3	6	1	3	0	2,7
Finland	FI	0	2	4	1,5	0	1,3
France	FR	4	0	4	1,5	0	2,3
Germany	DE	5	1	4	3	0	3,0
Greece	GR	5	2	4	3	0	3,2
Hungary	HU	5	1	3	3	0	2,8
Ireland	IE	6	1	1	1,5	6	3,6
Italy	IT	4	1	5	0	6	3,3
Latvia	LV	0	0	1	3	0	0,7
Lithuania	LT	3	1	0	4,5	0	1,9
Luxembourg	LU	6	2	4	3	0	3,5
Malta	MT	6	1	6	6	3	4,7
Netherlands	NL	6	2	3	0	0	2,8
Poland	PL	5	4	2	4,5	0	3,4
Portugal	PT	2	1	5	0	6	2,7
Slovak Republic	SK	5	3	2	3	0	3,0
Slovenia	SI	3	2	3	1,5	0	2,1
Spain	ES	4	1	5	1,5	6	3,6
Sweden	SE	0	0	3	3	0	1,0
United Kingdom	UK	6	1	3	1,5	0	2,9

3 MAIN INDICES

COUNTRY	ISO	Competitiveness	Security of Supply	Environmental Sustainability
Austria	AT	3,3	1,8	2,3
Belgium	BE	4,0	5,7	4,3
Cyprus	CY	5,5	6,0	4,0
Czech Republic	CZ	3,0	3,4	3,3
Denmark	DK	2,4	4,4	2,6
Estonia	EE	4,8	4,5	2,7
Finland	FI	4,5	5,1	1,3
France	FR	5,2	4,4	2,3
Germany	DE	4,1	4,6	3,0
Greece	GR	5,2	3,8	3,2
Hungary	HU	3,1	5,1	2,8
Ireland	IE	4,9	5,8	3,6
Italy	IT	3,6	4,5	3,3
Latvia	LV	3,4	5,2	0,7
Lithuania	LT	2,5	4,9	1,9
Luxembourg	LU	2,1	1,2	3,5
Malta	MT	6,0	6,0	4,7
Netherlands	NL	3,4	4,8	2,8
Poland	PL	3,9	1,6	3,4
Portugal	PT	3,7	4,5	2,7
Slovak Republic	SK	3,5	4,7	3,0
Slovenia	SI	1,9	5,4	2,1
Spain	ES	4,1	4,2	3,6
Sweden	SE	3,7	4,9	1,0
United Kingdom	UK	3,1	4,8	2,9