

Trust or Tribalism?

Finding One Voice for the 27

William C. Ramsay
Senior Advisor to Ifri

One Among Many



No Convergence Here



1.4 – Comparison within EU-15

Large disparities exist among EU 15 Member States as regard electricity prices for households.

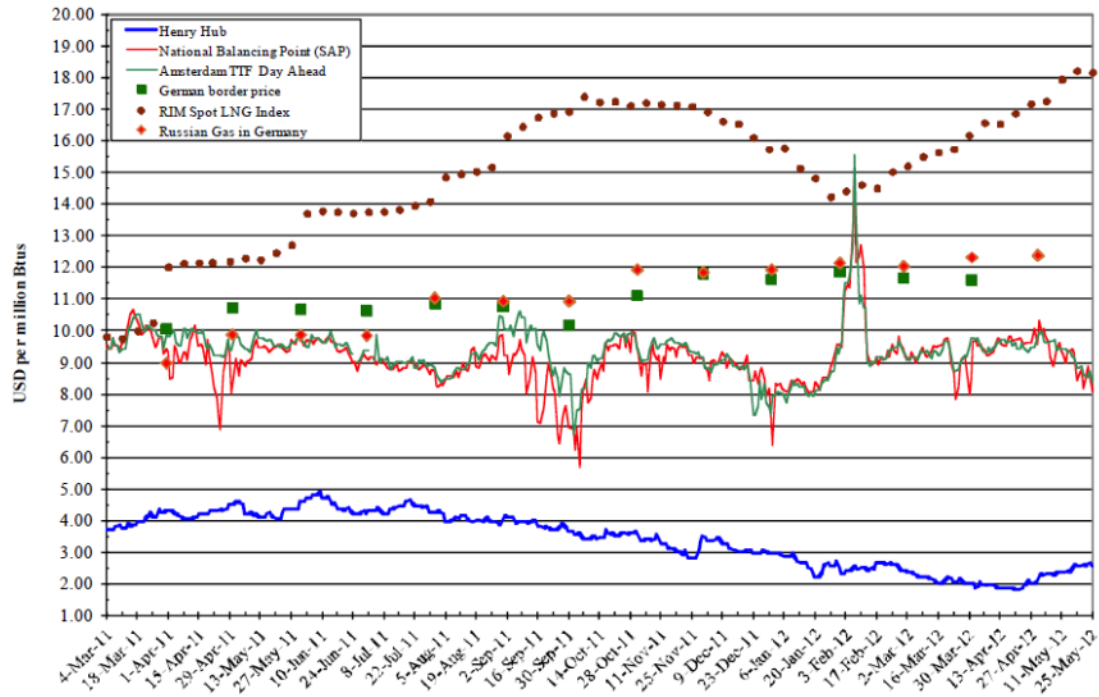
Prices All Taxes Included ct. €/kWh 2010 - Semester 2	
Denmark	27,08
Germany	24,38
Belgium	19,74
Sweden	19,58
Austria	19,3
Italy	19,19
Ireland	18,75
Spain	18,51
Luxembourg	17,47
Netherlands	16,96
Portugal	16,66
United Kingdom	14,49
Finland	13,7
France	12,89
Greece	12,11

Prices All Taxes Included PPP per kWh 2010 - Semester 2	
Germany	23,11
Portugal	20,27
Spain	19,86
Denmark	19,55
Italy	18,24
Belgium	17,58
Austria	17,45
Ireland	16,73
Netherlands	15,61
Sweden	15,53
Luxembourg	14,71
United Kingdom	14,51
Greece	12,93
Finland	11,52
France	11,29

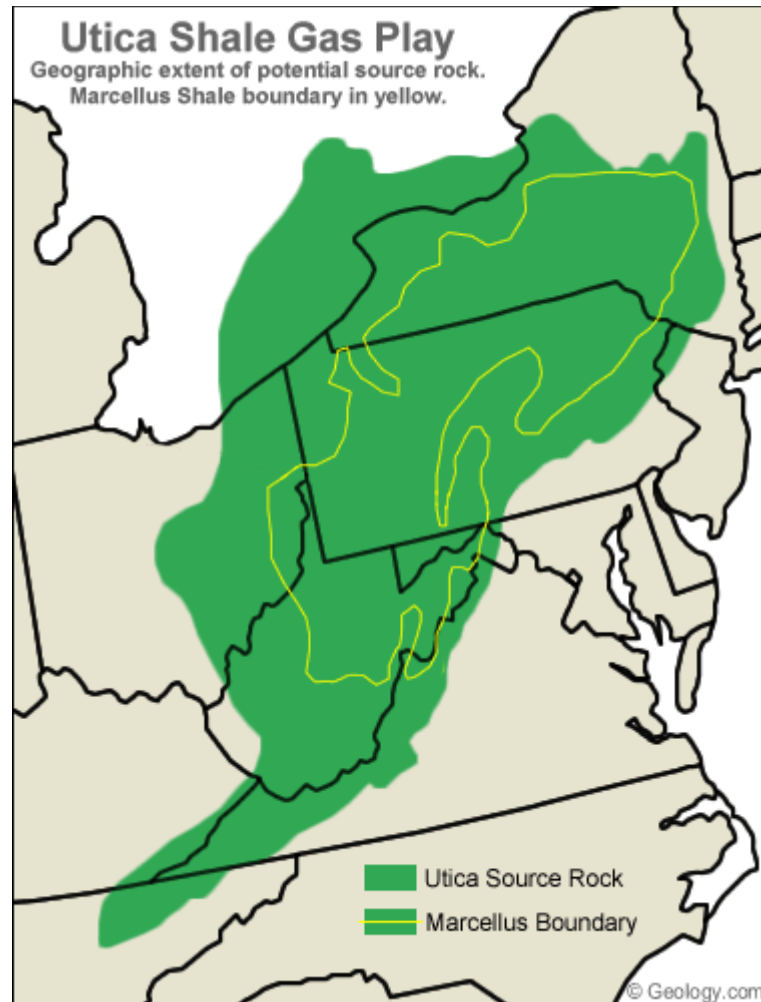
PPP: Purchasing Power Parity

Three Gas Markets

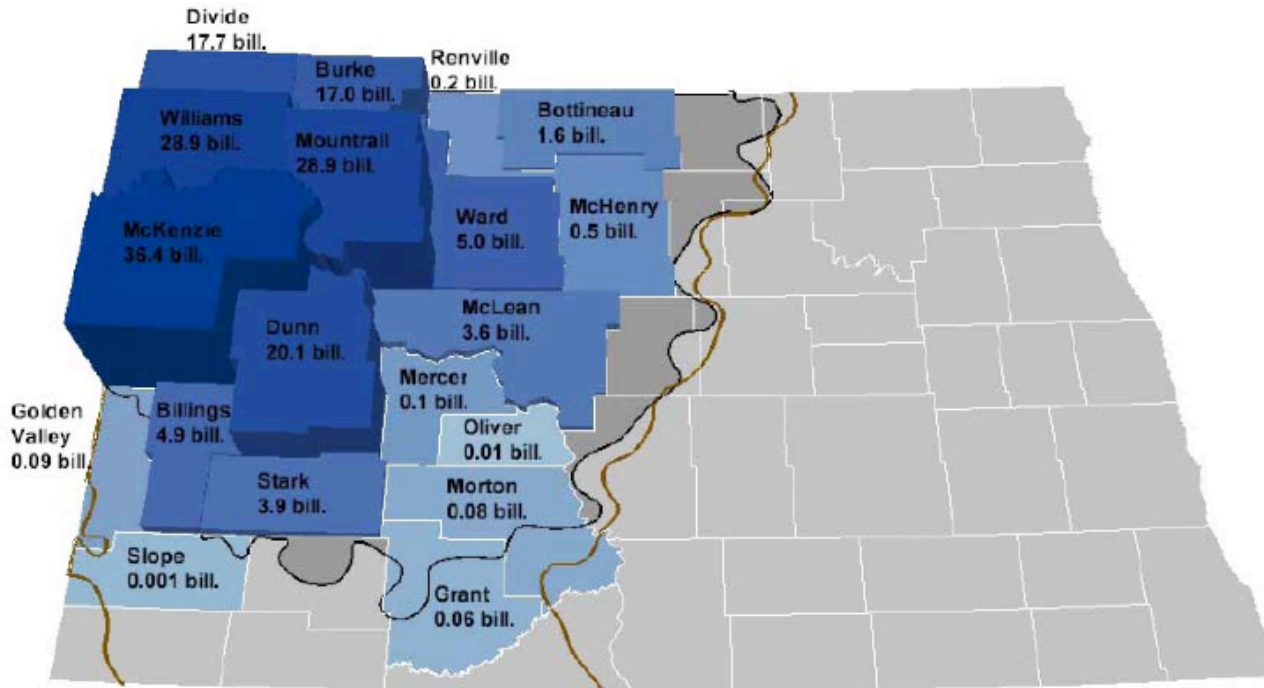
Henry Hub Cash Prices, National Balancing Point System Average Price (SAP), Amsterdam Power Exchange, German gas import price (monthly average), RIM Spot LNG Index, Russian Gas Price at the German Border Chart 6b



Shale Gas Here to Stay



And Shale Oil Too



At oil prices above \$100/barrel

US Unconventional

North Slope Results Compared to Other Basins

- **Shale Oil** – *USGS mean estimates of undiscovered oil*
 - Bakken: 3,645 MMBO
 - **North Slope: 940 MMBO**
 - Eagle Ford: 853 MMBO
 - Woodford (Anadarko): 393 MMBO
 - Niobrara (Powder River B.): 227 MMBO
- **Shale Gas** – *USGS mean estimates of undiscovered gas*
 - Marcellus: 81,374 BCFG
 - Haynesville: 60,734 BCFG
 - Eagle Ford: 50,219 BCFG
 - **North Slope: 42,006 BCFG**
 - Woodford (Delaware B.): 15,105 BCFG

Comparisons are based on USGS mean estimates of undiscovered shale oil and shale gas:
<http://energy.usgs.gov/OilGas/AssessmentsData/NationalOilGasAssessment/AssessmentUpdates.aspx>

Lists include 5 shale-oil and shale-gas assessments by estimated mean resource and presented in rank order. MMBO, million barrels of oil; BCFG, billion cubic feet of gas.

Disparity in Gas Prices

Rapport international du gaz - Comparaison des prix en 2012

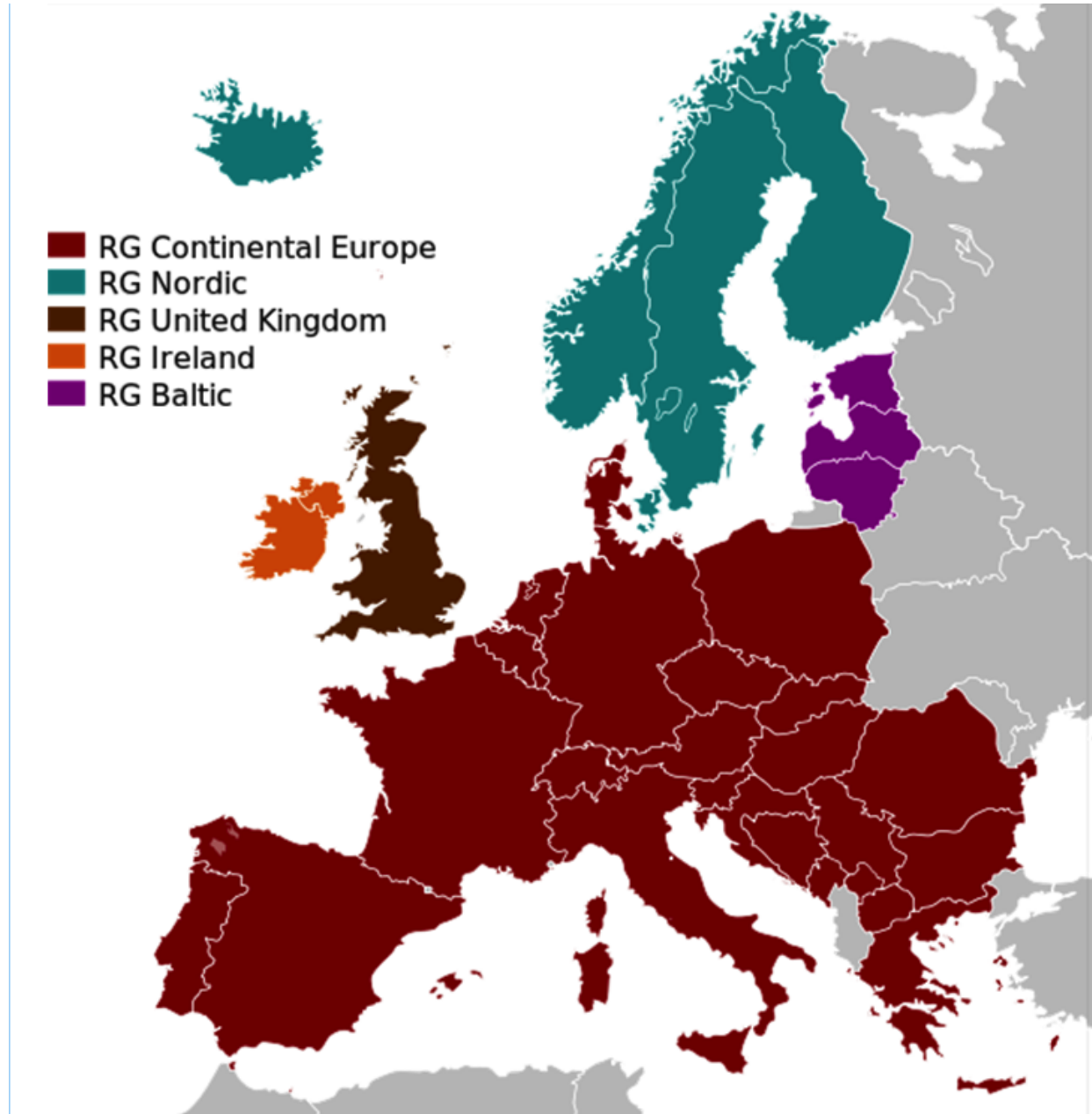
Rang 2012	Rang 2011	Pays	Prix (c€/kWh)	Variation 2011/2012
1	1	Suède	8,32	2,2 %
2	3	Afrique du Sud	5,73	24,3 %
3	2	Finlande	5,64	10,9 %
4	4	Allemagne	4,29	5,3 %
5	6	Portugal	3,96	6,6 %
6	5	Italie	3,94	2,7 %
7	8	Autriche	3,83	4,9 %
8	12	Espagne	3,50	11,8 %
9	9	Royaume-Uni	3,36	- 5,5 %
10	7	France	3,34	- 9,5 %
11	10	Belgique	3,30	1,2 %
12	11	Pays-Bas	3,22	0,3 %
13	13	Pologne	3,14	7,2 %
14	14	Australie	2,65	10,8 %
15	15	USA	1,47	- 27,8 %
16	16	Canada	1,43	- 24 %

Gas Drives Power Prices

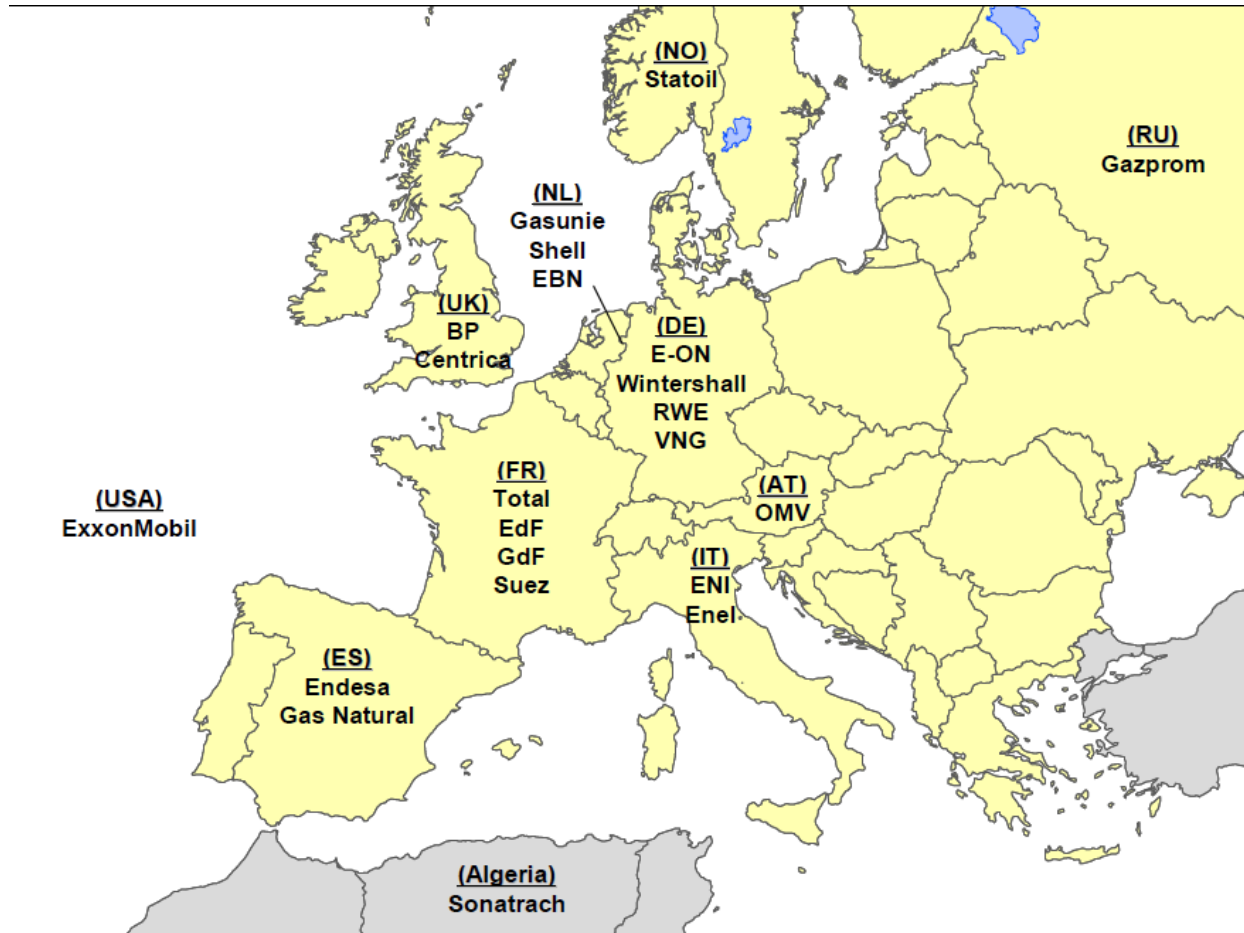
Rapport international sur l'électricité - Comparaison des prix en 2012

Rang 2012	Rang 2011	Pays	Prix (c€/kWh)	Variation 2011/2012
1	1	Italie	16,26	18,4 %
2	2	Allemagne	12,18	- 5,8 %
3	7	Portugal	10,96	12,1 %
4	4	Espagne	10,87	1,4 %
5	3	Royaume-Uni	10,01	- 12,3 %
6	5	Belgique	9,59	- 9,7 %
7	13	Australie	9,39	27,8 %
8	8	Pays-Bas	9,07	- 6,9 %
9	6	Autriche	8,89	- 12,6 %
10	12	Pologne	7,48	0,3 %
11	16	Afrique du Sud	7,34	23,1 %
12	11	USA	7,15	- 6,2 %
13	14	France	7,04	5,1 %
14	9	Finlande	6,95	- 17,7 %
15	10	Suède	6,39	- 22,6 %
16	15	Canada	6,10	1,4 %

An Unstitched Quilt



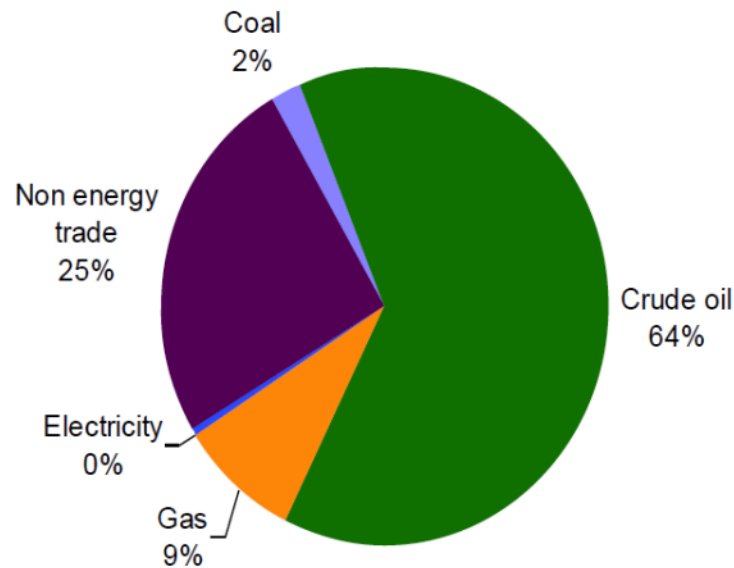
The Established Order



A Logical Trade Relationship



EU-Russia energy relations



EU-Russia Trade value 2010, Eurostat figures

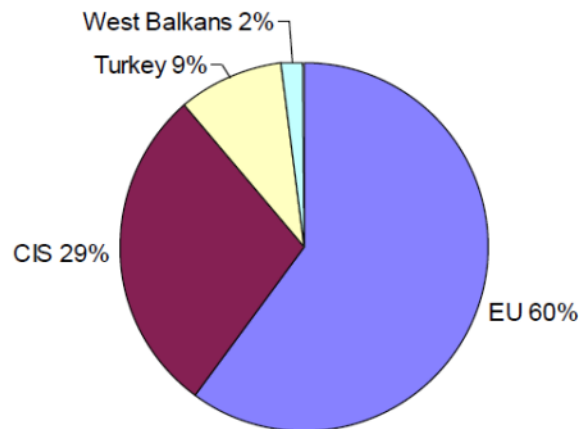
Energy

Really “mutual” ?

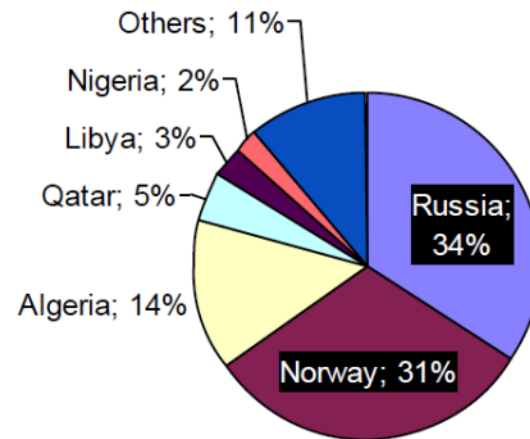


● EU-Russia energy relations – a mutual dependency

Russia's exports of natural gas

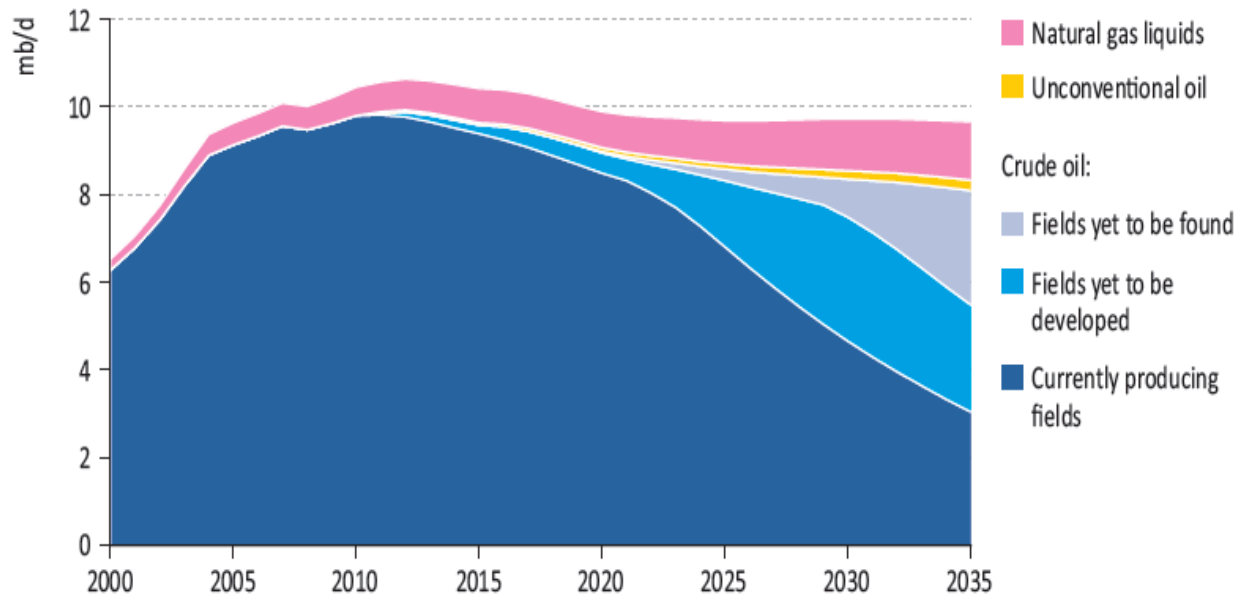


EU imports of natural gas

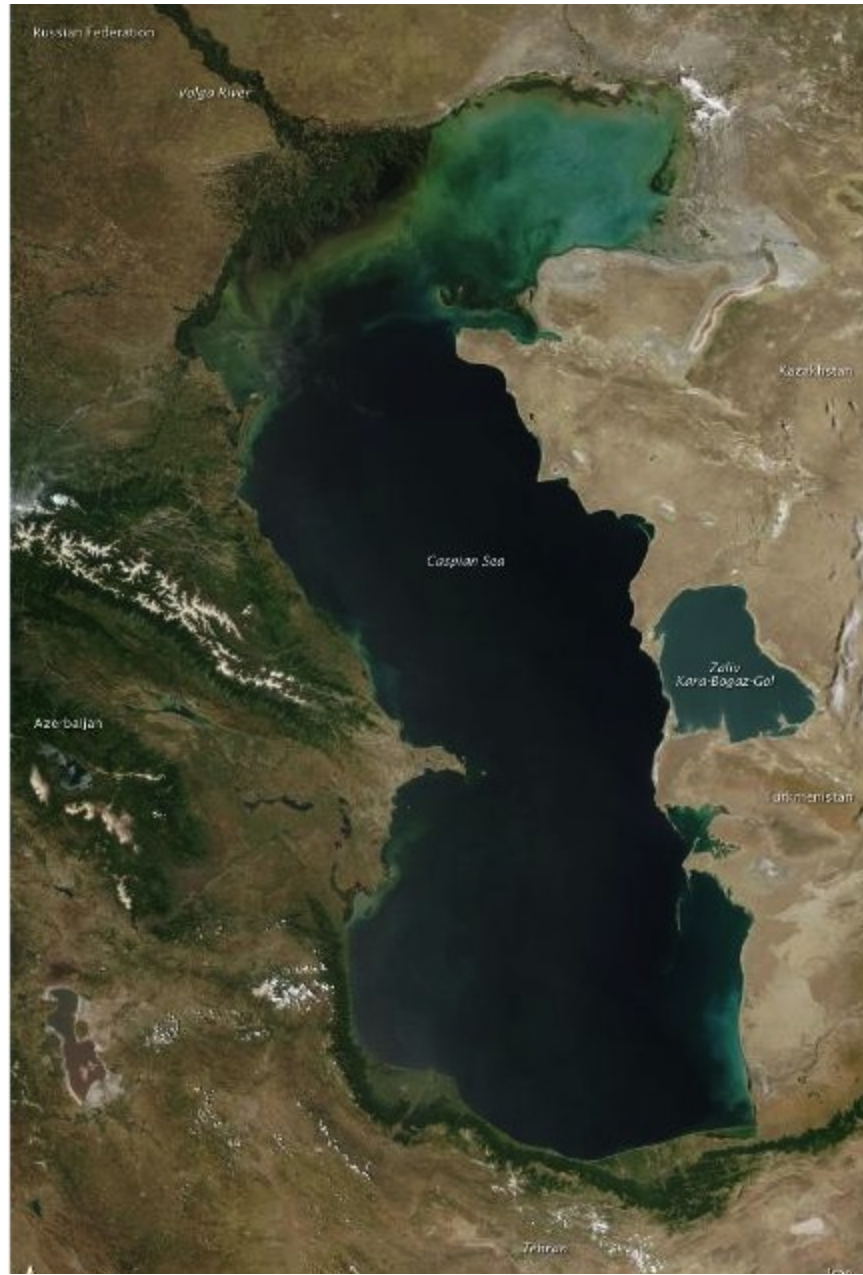


Decline a Policy Consequence?

Figure 8.11 • Russian oil production by type in the New Policies Scenario

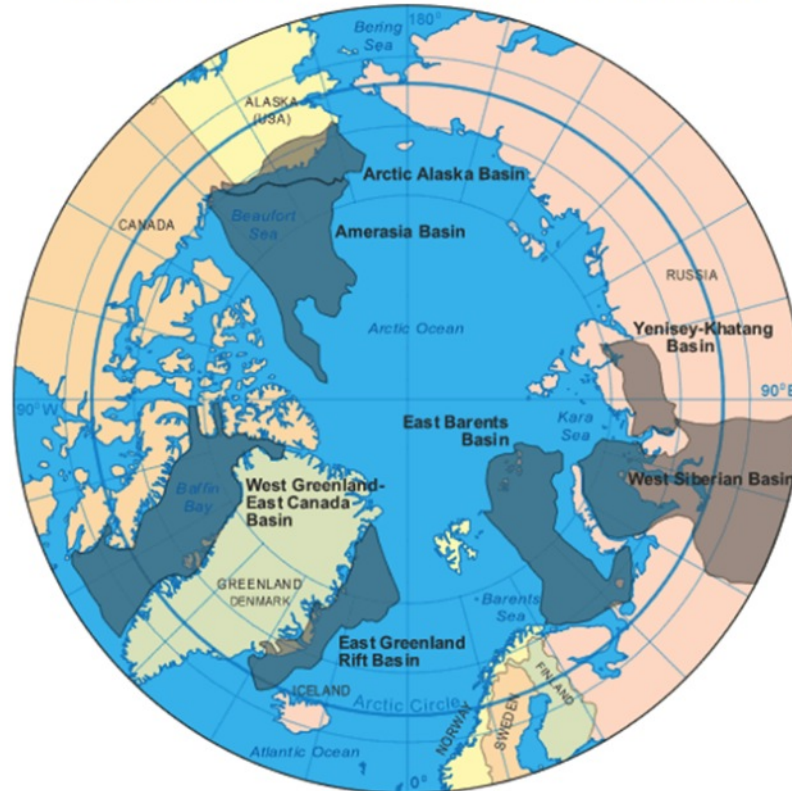


Dialogue on Many Levels



When the Ice Melts

Oil and Natural Gas Resources of the Arctic



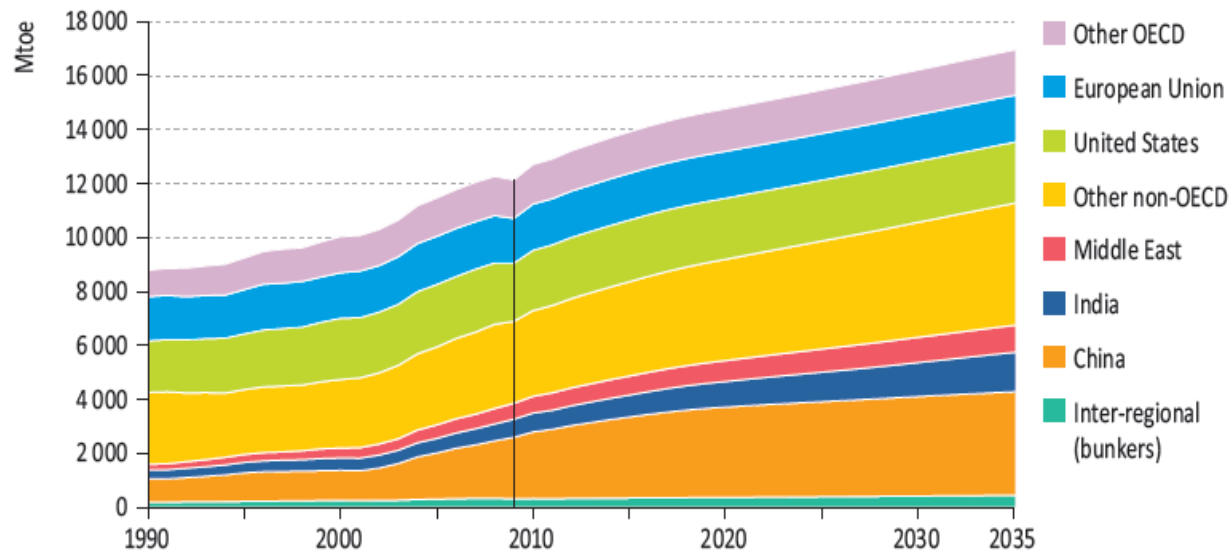
Arctic Oil and Natural Gas Provinces Map: The United States Geological Survey estimates that over 87% of the Arctic's oil and natural gas resource (about 360 billion barrels oil equivalent) is located in seven Arctic basin provinces: Amerasia Basin, Arctic Alaska Basin, East Barents Basin, East Greenland Basin, West Greenland East Canada Basin, East Greenland Rift Basin, West Siberian Basin and the Yenisey-Khatang Basin. Map by Geology.com and MapResources. [1] [2]

G20 – Class of 2012



A Crescendo of Voices

Figure 2.8 • World primary energy demand by region in the New Policies Scenario



Fueling China's Growth












Exploiting Our Wind – and Yours



Then There Were Four

Top 10 wind turbine manufacturers by annual market share (installed capacity) in 2011 by IHS Inc.:^[1]

Country	Name of Company	Market share	Delivery 2011 in MW	Totally installed power in GW
 Denmark	Vestas	12.7%	5,217	40
 China	Sinovel	9.0%	3,700	13 ^[2]
 China	Goldwind	8.7%		^[3]
 United States	GE Energy	8.7%	3,600	12
 Spain	Gamesa	8.0%	3,308	10
 Germany	Enercon	7.8%	3,203	24
 United States	GE Wind Energy	7.7%	3,170	
 India	Suzlon Group	7.6% (inc Suzlon Energy (India) and REpower (Germany))	3,116	20
 China	Guodian United Power	7.4%	3,042	
 Germany	Siemens Wind Power	6.3%	2,591	
 China	Ming Yang	3.6%	1,500	

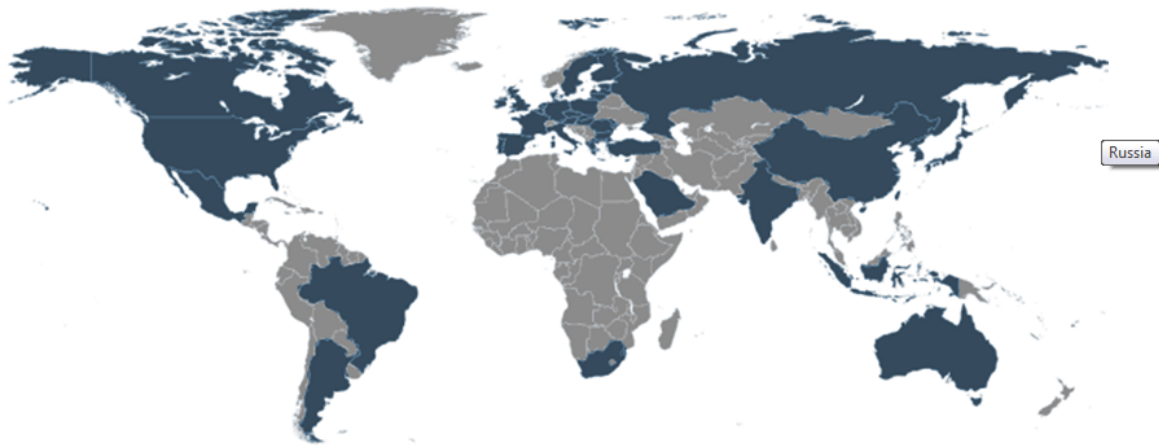
The Audience

- China 1.5 Billion
- India 1.3 Billion
- ASEAN 600 Million
- EU 500 Million
- US 300 Million
- Russia 143 Million

It is hard for 10 million people to be heard

Thank You

ramsay@ifri.org

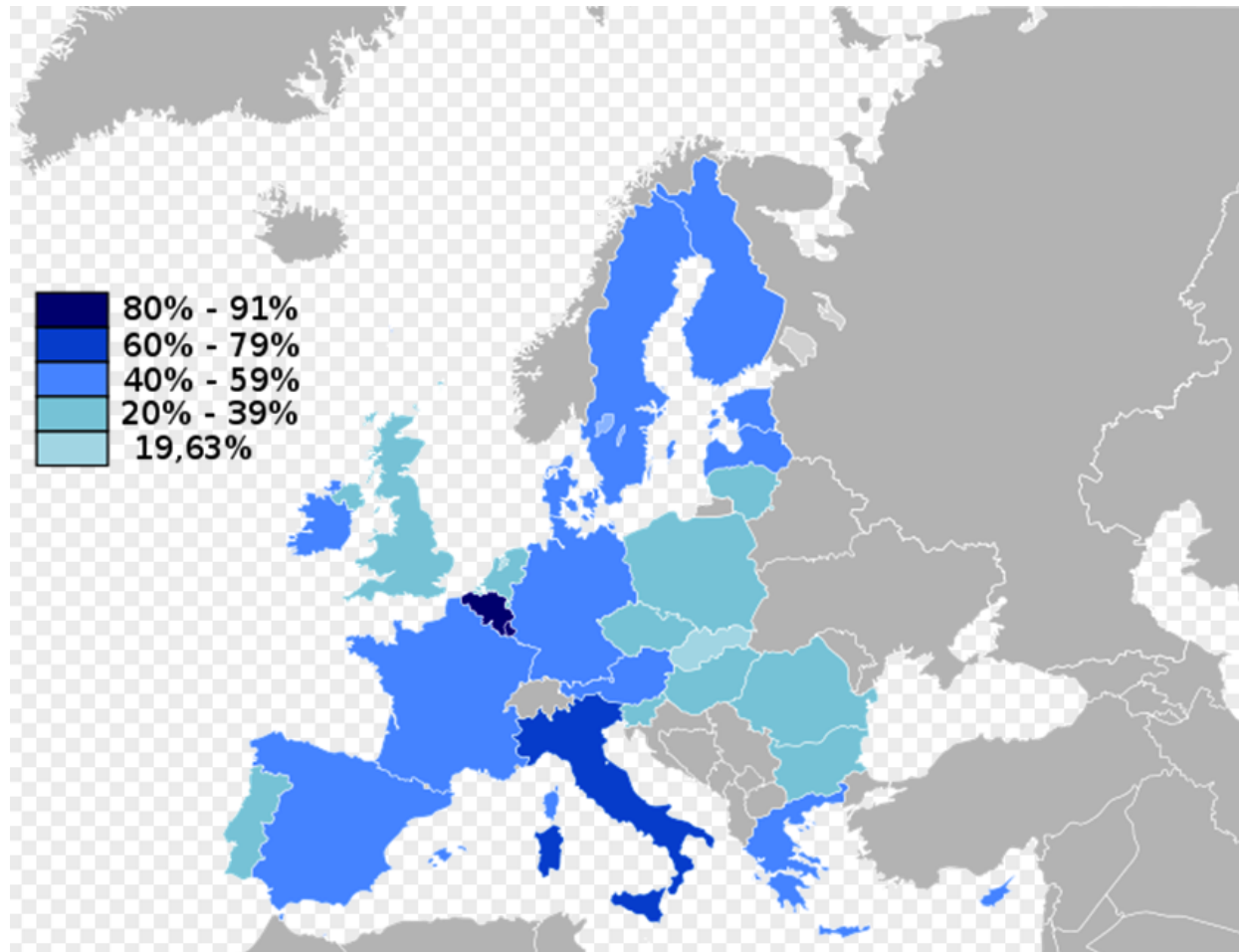


G20 members account for 85 percent of the world economy, 80 percent of global trade, and two-thirds of the world's population. The G20 represents all geographic regions of the world, but remains small enough to be an effective decision-making body.

The members of the G20 are:

- [Argentina](#)
- [Australia](#)
- [Brazil](#)
- [Canada](#)
- [China](#)
- [France](#)
- [Germany](#)
- [Indonesia](#)
- [India](#)
- [Italy](#)
- [Japan](#)
- [Republic of Korea](#)
- [Mexico](#)
- [Russia](#)
- [Saudi Arabia](#)
- [South Africa](#)
- [Turkey](#)
- [United Kingdom](#)
- [United States](#), and
- [European Union](#).

Voter Turnout in 2009 EP Elections



DILBERT

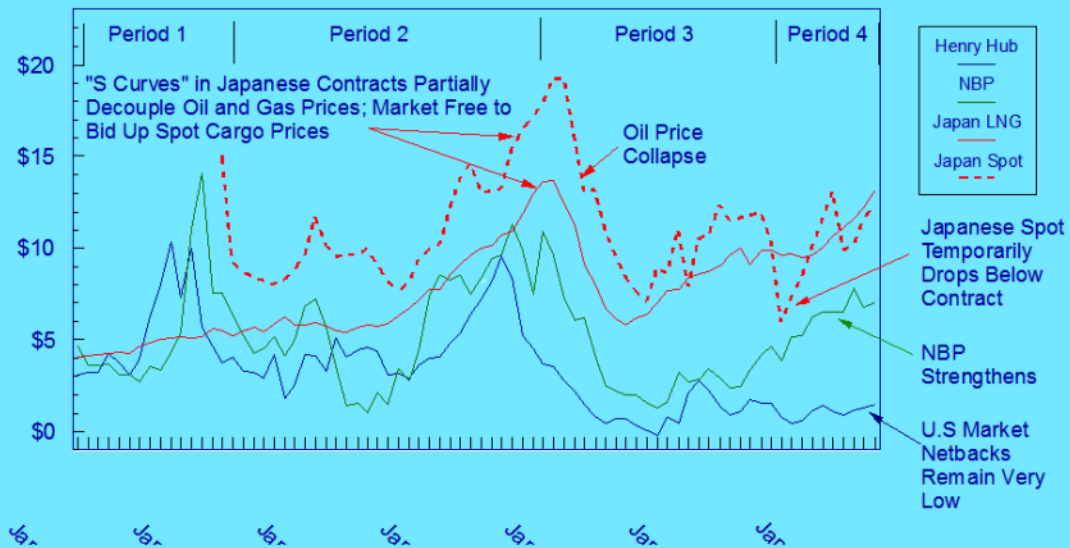
Copyright © 1997 United Feature Syndicate, Inc.
Redistribution in whole or in part prohibited.

BY SCOTT ADAMS

Member State	Demand (TWh)	Companies	National production company (TWh)	Concentration Ratio	
Spain	260	Endesa	98	c1	38%
		Iberdrola	66	c2	63%
		Union Fenosa	26	c3	73%
		Hidrocantabrica	15	c4	79%
Portugal	51	Electricidade de Portugal	25	c1	49%
France	477	EDF	429	c1	90%
Belgium	88	Electrabel	76	c1	86%
Germany	554	E.On	150	c1	27%
		RWE	140	c2	52%
		Vattenfall Europe	83	c3	67%
		EnBW	55	c4	77%
UK	390	British Energy	73	c1	19%
		E.On UK	35	c2	28%
		RWE	33	c3	36%
		EDF Energy	25	c4	43%
Austria	62	Verbund	30	c1	48%
Scandinavia	379	Vattenfall	88	c1	23%
		Fortum	54	c2	37%
		Statkraft	34	c3	46%
		E.On Nordic	33	c4	55%
Italy	322	Enel	126	c1	39%
		Edison	48	c2	54%
		Edipower	25	c3	62%
		Endesa Italia	21	c4	68%

Figure 3
LNG NETBACK TO A HYPOTHETICAL QATAR SHIPPER ASSUMING 2009 COSTS AND AVAILABILITY OF RECEIPT TERMINAL CAPACITY AT MARKET

\$/MMBtu



Period 1 - The "Perfect Storm" - Markets Extremely Tight; Atlantic and Pacific Basins Compete for Cargoes

Period 2 - Atlantic Basin Markets Soften, Asian Markets Remain Very Tight

Period 3 - Recession and LNG Surplus Create Substantial Competition Everywhere

Period 4 - Resurgent Demand Brings Back Tighter Eastern Hemisphere Markets

Jensen Associates

Member states of the EU (year of entry)



[Austria](#) (1995)



[Belgium](#) (1952)



[Bulgaria](#) (2007)



[Cyprus](#) (2004)



[Czech Republic](#) (2004)



[Denmark](#) (1973)



[Estonia](#) (2004)



[Finland](#) (1995)



[France](#) (1952)



[Germany](#) (1952)



[Greece](#) (1981)



[Hungary](#) (2004)



[Ireland](#) (1973)



[Italy](#) (1952)



[Latvia](#) (2004)



[Lithuania](#) (2004)



[Luxembourg](#) (1952)



[Malta](#) (2004)



[Netherlands](#) (1952)



[Poland](#) (2004)



[Portugal](#) (1986)



[Romania](#) (2007)



[Slovakia](#) (2004)



[Slovenia](#) (2004)



[Spain](#) (1986)



[Sweden](#) (1995)



[United Kingdom](#) (1973)



● The Way Forward

- 2020 strategy – precondition
 - No regret options: energy efficiency, renewable energy, more and smarter infrastructure
 - Need for fully integrated, well-designed markets for gas and electricity
 - Innovation for low-carbon solutions
 - Nuclear safety
 - Broader and coordinated approach
- ⇒ **(1) Launch a dialogue on the development of future energy systems/transformation**
- ⇒ **(2) Develop milestones for 2030**