

GREEN ECONOMY



Sustainability Research

Energy transition

Gas is the beneficiary of the green drive

The global energy sector is undergoing arguably its most profound transition ever. Renewables are one of the single biggest elements in this. Gas is a positively correlated beneficiary, offering a means of optimising new energy systems in a world of low carbon and high energy demand. We see investment opportunities across the gas value chain.

■ New energy link: renewables to gas

European energy markets are in oversupply across the region, and conventional power generation capacity is being displaced by renewables. But, according to our models, this will tip into tight markets from 2015 and capacity shortages from 2020. We estimate a requirement for 10-50GW of flexible backup capacity across Europe, for which gas will be the fuel of choice. Hybrid gas-renewables plant is a new prospect. Capacity markets and incentives are shaping up. Policymakers are moving towards prioritising market design in order to optimise renewables rather than pushing for large incremental renewables build alone.

■ Competitive and amply available

Unconventional resources have brought further uplift to an already vast resource base. Around 250 years of current production is available at reasonably accessible resources. This, and the prospect of falling production costs, should ensure sustained low prices. But price differentiation will remain. While oil-gas indexation is still likely to stay in Europe, there are some cracks in the framework, which mean easing pricing. Asian demand will support prices. We think large reserves can be developed at prices up to USD5/mmbtu. At power generation level, low capex, the lowest conventional new entrant cost and the most competitive carbon profile among fossil fuels should lead to ongoing plant build. This is reinforced by less nuclear and coal coupled with demand recovery post the 2008-10 dip.

■ Prefer components, services and midstream

We expect components and services to benefit from order flow for plant build, optimisation and integration with renewables and into the broader system. The midstream sector should benefit from the same theme as well as from global volume growth. System requirements are leading to a positive regulatory environment for gas infrastructure. The E&P sector benefits from demand, but we see risk of reserve writedowns from low gas prices. We highlight **Alstom** (ALO FP, 1/Selected List, TP EUR35), **Wood Group** (WG LN, N/R), **Shell** (RDSA NA/LN, 1/Selected List, TP EUR32.5), **GDF Suez** (GSZ FP, N/R), **Gas Natural** (GAS SM, 2/Outperform, TP EUR12.50) and **Iberdrola** (IBE SM, 1/Selected List, TP EUR4.59).

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I – Executive summary

Profound transition of the energy sector

Gas directly correlated beneficiary of biggest element of change, renewables

Energy services and components to benefit

The global energy sector is undergoing its arguably most profound transition ever. One of the most important elements of this transition is renewables build. Whilst the renewables sector in itself is in deep disarray as it transitions to mainstream, we see another secular opportunity to gain exposure: Gas. Gas will in our view be a long term directly correlated beneficiary of renewables.

Within the gas sector, we see the opportunities in services and components first and foremost, as well as in E&P, midstream and some utilities with integrated gas and renewables power generation. We think that gas supply businesses may benefit from stronger demand brought about by new gas-based energy solutions for environmental or energy-efficiency benefits.

We see energy services and components as benefitting from a long-term favourable outlook for the gas sector on the back of a changing energy landscape, principally resulting from renewables build. There will be gas plant build and optimisation requirement for backing up renewables, as well as possibly hybrid integration. This should lead to component and contract order flow for the energy services and industrials names. We highlight Alstom (ALO FP, 1/Selected List, TP EUR45) and Wood Group (WG LN, N/R).

E&P as well as midstream and infrastructure names will benefit from long-term sustained volume growth, in our view. However, we see short-term risk from reserve writedowns as a result of sustained low gas prices. We highlight Centrica (CNA LN, 3/Underperform, TP 330p), GDF Suez (GSZ FP, N/R) and Shell (RDSA NA 1/Selected List, TP EUR32.50), as names with positive up- and midstream exposure and also power generation and in some cases integrated renewables, but without major risks of writedowns yet to come, in our view. BG (BG/LN – Suspended) has upstream, LNG and power generation exposure but concern over reserve write downs make the name risky. The network and infrastructure names should also benefit from a benign regulatory climate on the back of a large investment requirement.

In the power generation space, we see beneficiaries in names that have flexible portfolios and the potential for renewables to gas integration. We highlight Gas Natural (GAS SM, 2/Outperform, TP EUR12.50) and Iberdrola (IBE SM, 1/Selected List, TP EUR4.59).

EXPOSURES TO GAS THEME FROM RENEWABLES

Company	Ticker	Rating	TP	Exposure
Centrica	CAN LN	3/Underperform	330p	Gas E&P, gas power generation, gas supply, renewables
GDF Suez	GSZ FP	Suspended	–	Gas E&P, gas power generation, gas infrastructure and mid stream, LNG, gas supply, renewables
Shell	RDSA NA	1/Selected List	EUR32.50	Gas E&P, T&D, LNG, power generation
E.ON	EOAN GR	3/Underperform	EUR17	Gas E&P, gas power generation, gas infrastructure and mid stream, gas supply, renewables
Iberdrola	IBE SM	1/Selected List	EUR4.59	Gas storage, power generation, renewables
National Grid	NG/ LN	3/Underperform	700p	Gas infrastructure, power/renewables infrastructure
Amec	AMEC LN	N/R	N/A	Energy and gas services and engineering for E&P, infrastructure, power generation and renewables
Wood Group	WG/ LN	N/R	N/A	Engineering services for energy and power infrastructure, E&P and generation; renewables
Siemens	SIE GR	2/Outperform	EUR81	Turbines and components
Alstom	ALO FP	1/Selected List	EUR35	Turbines and components
Enagas	ENG SM	2/Outperform	EUR16.26	Gas import, storage and transport
Gas Natural	GAS SM	2/Outperform	EUR12.50	Gas distribution, storage, supply, LNG, power generation, supply, energy management
SNAM	SRG IM	2/Outperform	EUR4.20	Gas distribution

Source: Company data, CA Cheuvreux

Supply gaps, carbon imperatives and renewables drive gas demand growth

Displacement vs complement for renewables

10-50GW gas backup capacity requirement in Europe

Global energy demand combines with lower global support for coal and nuclear as well as carbon imperatives. Against this backdrop, gas should grow in share and in absolute terms, to become the fastest growing energy source apart from renewables. Additionally, a changing energy mix with a heavy renewables component alters nameplate reserve capacity requirements.

In power generation, the most important end market, there are two major forces at work: 1) displacement of conventional capacity from renewables crowding out gas; and 2) growing demand for gas as a substitute for coal and nuclear and as backup capacity for renewables.

Our models suggest that European markets will remain oversupplied until 2020, but become tight very quickly around that time due to large conventional plant retirement. We estimate the steepest drop in reserve margins for Germany, sub 10% from 2014 when counting only new conventional plant build under construction. Even with a 70% success rate for the offshore programme and over-achievement in solar, the market looks set to become tight from 2020. Our UK reserve margin estimate of 20%+ post 2020 includes the full nuclear new build programme, which is far from certain. Spain will remain oversupplied well into the next decade, but the high degree of fluctuation from renewables already means a substantial reserve capacity requirement. Italy is oversupplied for this decade, but by 2020, Terna sees a requirement for 10GW of backup capacity.

Renewables are meant to make up for large parts, but build out without further complements is hitting its limits. We estimate c.10-50GW of gas backup and coal replacement plant requirement around 2020 in Europe alone. This could lead to incremental new build of 10-20GW. Markets are not likely to send build signals for some time yet. As a result, capacity schemes particularly aimed at gas are emerging across Europe. Regulators' helping hands will not produce excess returns for gas generators, but should improve spreads over the short run and provide a higher degree of investment certainty that will lead to actual build-related order flow. We think this may lead to build towards the end of the decade. Before this point, we see coal plant achieving higher returns due to low coal prices but think that plant build will remain confined to projects approved up to 2008.

CAPACITY REQUIREMENT FOR RENEWABLES BACK UP AND ADEQUACY OF SUPPLY IN EUROPE

	Units	2012E	2015	2021						
		Available capacity	Required for reserve adequacy	Renewables backup	Required back up build	Capacity	Required for reserve adequacy	Renewables backup	Required build	
Germany 100% target offshore build	[GW]	90.2	90.4	86.3	4.8	0	74.7	83.9	7.5	17
Germany 60% target offshore build	[GW]	90.2	89.4	86.4	4.8	0.0	74.7	85.3	6.8	17
Italy renewables cap	[GW]	77.6	78.95	67.32	2	0	79.4	77.413	4	4
Italy more renewables	[GW]	77.6	80	67.32	3	0	82.4	80.6	10	10
Spain	[GW]	51	54	51.6	15	0	60	52.8	15	0
UK with nuclear life extensions/timely new build	[GW]	79.6	73.7	0.0	1.0	5.0	60.0	51.4	8.0	10.0
UK limited life extensions, new build delayed	[GW]	79.6	73.7	66.7	0	3	55	65.6	8	18.6
Total Europe key markets low end	[GW]	298.4	296.1	205.2	22.8	5.0	274.1	265.5	34.5	30.8
Total Europe key markets high end	[GW]	298.4	298.1	272.1	22.8	3.0	272.1	284.3	39.8	46.0

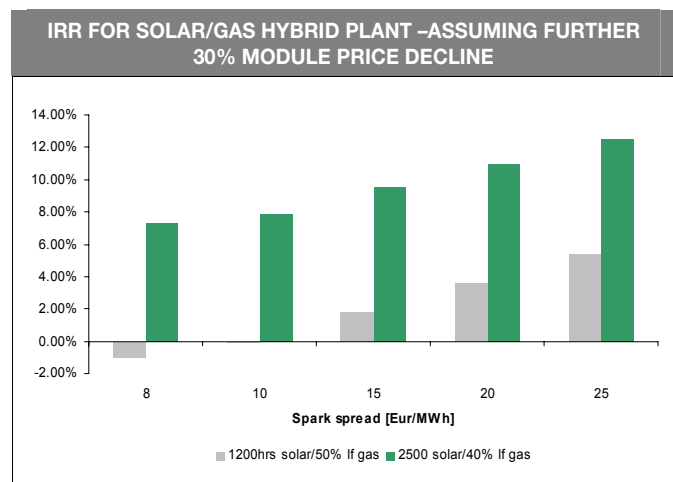
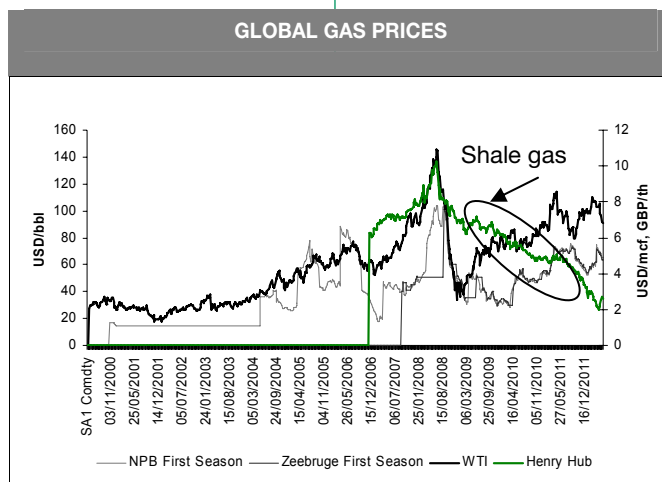
Source: National Grid, Terna, CA Cheuvreux

Coal achieves higher returns over the short to medium term

Hybrid gas/renewables

Over the short to medium term, we see coal plant achieving higher returns due to low coal prices but think that plant build will remain confined to projects approved up to 2008. Amongst others, low coal prices stem from US shale gas which has led to growth in US coal exports to Europe and thereby increased coal to gas competition. Technology improvement has led to lower emissions for coal plant and slightly higher plant flexibility. But we still think there is long term risk from commodity and carbon prices that utilities may find hard to accept for major new build. Flexibility characteristics will favour gas.

Gas is the fuel of choice for balancing and backup capacity. This holds true particularly in Europe. Furthermore, hybrid gas renewables plant will, in our view, be part of the future energy mix. We have seen initiatives in some markets already and think that developers could see this as a means of profitability enhancement for both types of plant as renewable subsidies come to an end. Besides that, gas offers the most competitive cost for power generation aside from nuclear, the lowest carbon profile, the lowest capital cost and very flexible plant build characteristics.



Gas is a competitive fuel in ample supply with unconventional resources reinforcing the case

Global price differentiation but changing patterns

Ample gas supply and greater adoption of advanced production technologies are a backdrop for sustained low gas prices relative to other fuels. This should reinforce positive demand dynamics.

Global conventional and unconventional reserves are sufficient to meet demand for generations. A 660tcf conventional reserve base alone equates to about 120 years of supply. Unconventional resources could increase this to 250 years of production. Unconventional resources are a game-changer for pricing: they will account for the largest share of production growth, and production costs will probably continue to fall.

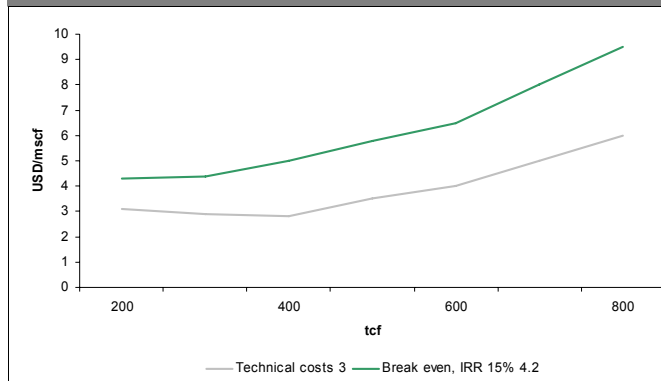
Despite sustained price differentiation between the key global gas regions, North America, Europe and Asia, there are changes in pricing patterns. Oil price links are still persistent in Europe and Asia whilst the Americas are priced off Hubs. But we note pressure towards change in pricing patterns. Hub pricing, gas to gas competition and even gas to coal competition will be future determinants of gas prices, alongside oil indexation. US shale gas may become available for exports from 2015. Whilst it may not flood European markets, there has already been an impact on pricing through increased US coal exports. This has been partially counterbalanced through the opposite impact from lower LNG shipment as a result of diversion of cargoes into Asia. We also see US and global shale as impacting Asian prices over the long term. It will contribute to an easier global supply demand balance, even if large volumes get absorbed by Asian demand. Differentiated regional pricing will continue to exist due to high transport cost of LNG. Also, a lot of the

Profitable development possible

potential new resources outside North America may be more expensive to develop. This, along with a forecast persistent supply deficit in Europe and Asia will mean prices will remain elevated in those markets on a global comparison. US price recovery will take longer than historically despite the already falling drill rates, due to condensates lifting returns.

Under current prices, almost no production is profitable in the US. Yet futures point to prices of USD 4/mmbtu through 2013, at which level the most competitive fields should be profitable. There are vast amounts of reserves, to the tune of 400tcf in the US alone, that can most likely be profitably developed with gas prices below USD5/mmbtu. Resources in Europe and Asia might require north of USD 8-11/mmbtu equivalent which is covered by current prices, but this is without counting technology and infrastructure advance. Given demand growth and supply deficits in these markets, prices should allow for profitability of new resources. The latter will certainly come in with scale. We think that the industry will be able to make gas profitable on the back of this and tightening markets that will lead to price signals.

PRODUCTION COSTS OF NORTH AMERICAN SHALE GAS



Source: Total

IRR FOR SOLAR/GAS HYBRID PLANT –ASSUMING FURTHER 30% MODULE PRICE DECLINE

USD/mmbtu	Conventional	Tight Gas	Shale Gas	CBM
Eastern Europe, Eurasia	2-6	3-7		3-6
Middle East	2-7	4-8		
Asia/Pacific	4-8	4-9		
North America	3-9	3-7	3-7	3-8
Latam	3-8	3-8		
Africa	3-7			
Western Europe	4-9			

Source: IEA

All in all, there is some but limited upward pressure globally on prices on the basis of long-term production cost outlooks, but even the most expensive of unconventional resources can likely be developed.

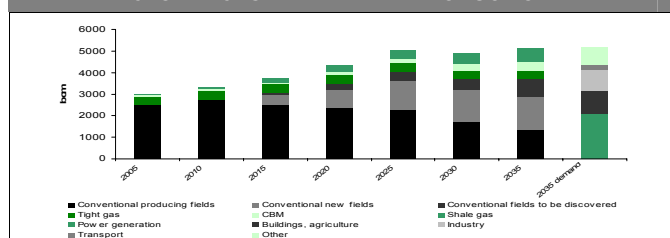
Resistance to shale gas on environmental grounds could put this outlook in jeopardy, but at this stage it is confined to a few countries that do not belong to the group of those with the largest resource bases globally.

GLOBAL GAS RESERVES

	Conventional	Unconventional		
		Tight gas	Shale gas	CBM
Eastern Europe & Eurasia	136	11		83
Middle East	116	9	14	
Asia Pacific	33	20	51	12
OECD North America	45	16	55	21
Latin America	23	15	35	
Africa	28	9	29	
OECD Europe	22		16	
World	404	80	200	116

Source: IEA

GLOBAL GAS DEMAND AND PRODUCTION



Source: IEA

Opportunities for European water/waste names: Veolia, Suez Environnement

On a different read across, there are opportunities in the water and waste treatment sector, particularly from unconventional gas production. Veolia (VIE FP, 2/Outperform, TP EUR9.50) and Suez Environnement (SEV FP, 3/Underperform, TP EUR8.70) are potential beneficiaries through their water treatment and waste businesses.

II – New energy link: renewables to gas

In this note, we look at profound long-term changes in the global energy mix. The break from demand decline from the financial crisis is coming to an end, and with the resumption of demand growth, the theme of global energy transition is regaining urgency. Less coal and nuclear than in the pre-Fukushima outlook make for a world with a greater share of renewables and gas. We see gas as a net beneficiary of and directly correlated to renewables build. With ample supply and sustained low prices, we prefer component, service and infrastructure names in the gas space in order to gain exposure to the renewables-to-gas theme.

■ Energy transition: new pressure towards green and grey

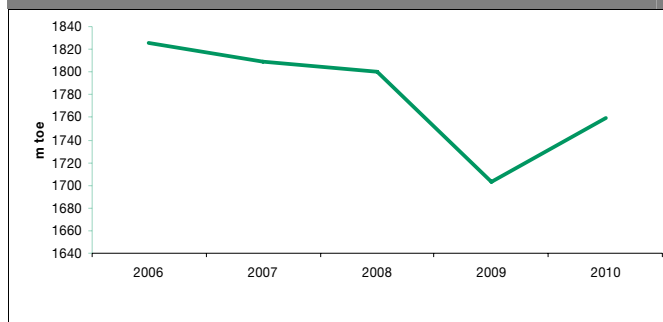
The global energy sector is changing towards a new generation mix, a more integrated nature from commodity and technology links and greater concentration of the main actors.

Europe in particular is undergoing a transition of its energy system that is unique and of a scale of change as yet unseen. Its power generation mix is changing significantly as a result of renewables build first and foremost, along with less coal and nuclear. Besides that, the broader energy transition affects other sectors, such as transport and industry.

The European energy roadmap, and with it energy transition, has gained new urgency again after something of a break provided by recession-induced demand destruction. Energy demand has recovered from the demand recession and begins to slowly rebound.

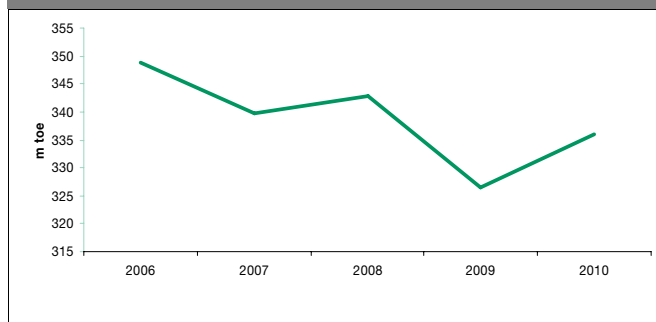
**Unprecedented
change of scale in the
energy system**

PRIMARY ENERGY CONSUMPTION: EU



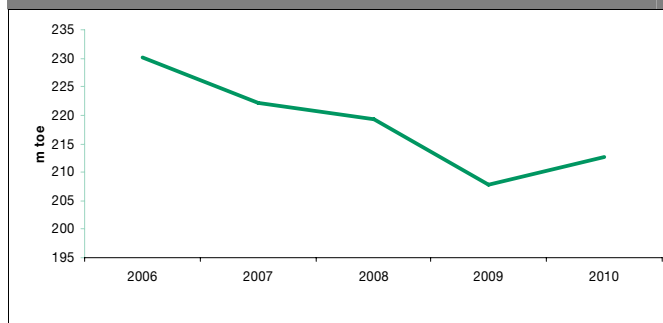
Source: Eurostat

PRIMARY ENERGY CONSUMPTION: GERMANY



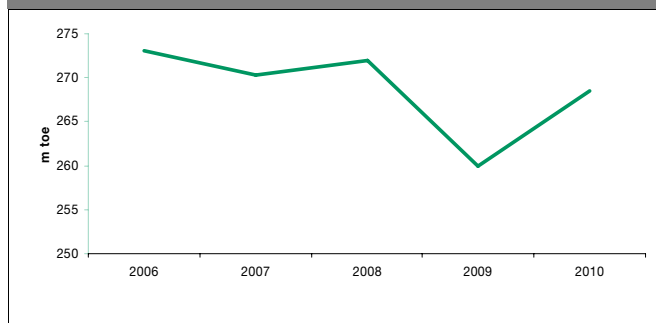
Source: Eurostat

PRIMARY ENERGY CONSUMPTION: UK

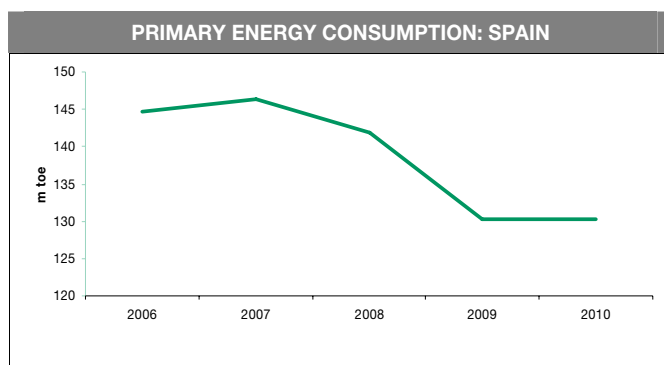


Source: Eurostat

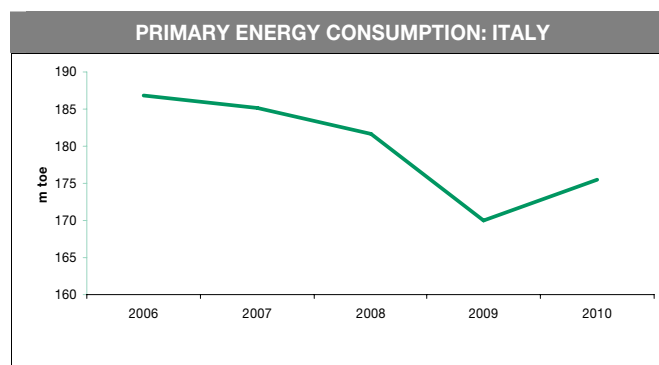
PRIMARY ENERGY CONSUMPTION: FRANCE



Source: Eurostat



Source: Eurostat



Source: Eurostat

Multiple challenges

At the same time, the challenges for the energy sector are multiple.

- The supply mix is changing with a reduced outlook for nuclear.
- Conventional power generation plant is not achieving sufficient levels of profitability due to markets being oversupplied for some years to come, according to our estimates (see below). Power prices are not delivering build signals for capacity of any kind.
- The share of clean power generation is still below many governments' targets. But, as subsidies get reduced, markets saturate, and commodities do not provide a build signal, the build activity of outright renewables is slowing.
- There is risk to security of supply over the longer term as volatile renewables provide periods of over-supply while less nuclear and coal, and low amounts of flexible backup capacity, mean shortages of supply at other times.

Governments across Europe and globally are looking to fill the long-term supply gap, while reducing carbon intensity of the sector and keeping energy affordable. In our view, gas as a backup for power generation as well as energy infrastructure will be a long-term beneficiary of this process of reshaping in the energy sector.

Supply and carbon target gaps

Filling the supply gap

Nuclear is no longer safely assumed to fill long-term supply requirements. This and less coal capacity leaves larger than expected gaps in Europe in terms of security of supply and in terms of the electricity sector's carbon profile.

Conflicting forces at work in Germany

First and foremost, with the German exit, there is a 10-20GW long-term local supply gap even when counting other new build. Conventional reliable capacity excluding renewables amount to c.82GW after accounting for the nuclear shutdown, ie just above peak demand of 80GW. The nuclear exit reduces long-term reserve margins. This is the big change since the energy transition in Germany. There are currently c.30GW of photovoltaic (PV), but this provides only about 10-15% of the gap left by nuclear, at best, due to lower load factors. And it does not fully serve as base load. Without conventional new build of plant under construction, reserve margins would already be in the "tight" sub 10% category, on our estimates. Against that stand conventional and renewables new build. We estimate that counting fossil fuel new build under construction only, reserve margins will fall below 10% by 2014 and the market become under-supplied by 2015.

Renewables alter the picture: counting in our renewables build forecast brings the market into oversupplied territory with a reserve margin of around the 20% up to 2015. Post that time, the nuclear phase-out of remaining capacity really begins to bite. By 2020, we estimate a reserve margin of 12% without counting more than 6GW of old hard coal plant closures, even though the latter could easily amount to 8-10GW.

Germany likely to be undersupplied, with no reserve margin, by 2022

Other sources suggest conventional non nuclear capacity will decrease by 20GW by 2030. Considering that more than 15GW are past their envisaged closure dates with ages well over 40 years, this is a possibility. By 2022, with the full phase-out executed, we estimate the market will be severely undersupplied, with almost no reserve margin left. Our estimates incorporate a success rate of c.70% for the government's targeted offshore wind build and some 2GW of over-achievement on solar build. Both of these assumptions are in our view reasonable, if not lenient, given the delays, bottlenecks and risk already coming through in offshore.

We have based our long-term offshore forecast on the view that either Germany may stop its support scheme as currently legislated at 57GW of installed capacity, or that demand will slow substantially around these levels. Beyond that, our assumption of actual generation from renewables vs capacity build is an average assumption. This means that there may be events where renewables are totally unavailable or only at very limited production. This has occurred before. Thus, our average assumption may not hold. Backup capacity to the tune of 10-15GW at least will be required in our view.

GERMANY ELECTRICITY MARKET FORECAST

		2010	2011	2012	2013	2014	2015	2017	2019	2020	2021	2022	2023	2024	2025
Reliable available capacity	[GW]	95.0	85.6	90.2	90.7	90.7	89.4	86.1	84.7	82.7	74.7	74.7	70.7	70.7	70.7
Nuclear shut down	[GW]	0.0	8.4	0.0	0.0	0.0	1.3	1.3	1.4	0.0	4.1	0.0	0.0	0.0	0.0
Fossil fuel shut down	[GW]	0.0	1.0	1.0	1.3	0.0	0.0	2.0	0.0	2.0	4.0	0.0	4.0	0.0	0.0
Fossil fuel new build	[GW]	0.0	0.0	5.6	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Renewables available capacity	[GW]	5.3	5.8	6.2	6.9	7.6	8.0	8.5	10.4	11.0	11.4	11.8	12.4	12.7	13.3
-Wind installed capacity	[GW]	27.0	29.0	30.0	33.0	36.0	38.0	40.0	43.0	45.0	47.0	49.0	52.0	54.0	57.0
-Solar installed capacity	[GW]	25.0	29.0	34.0	38.0	43.0	46.0	50.0	54.0	57.0	58.0	60.0	60.0	60.0	60.0
Peak demand	[GW]	80	81	81	82	83	83	84	84	85	86	86	87	87	88
% chge		0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Peak demand adjusted for renewables shave	[GW]	75	75	75	75	75	75	75	74	74	74	74	74	75	75
Peak reserve margin		26%	14%	20%	21%	21%	19%	14%	15%	12%	1%	1%	-5%	-5%	-5%

Source: Entso-E, RWE, EPIA, GWEC, CA Cheuvreux

French nuclear new build halted

French nuclear new build has by and large stopped. Following the massive delay and budget overrun at Flammantville, the Penly project was put on hold and no other project is currently under way. The government seems to have backed off its most aggressive phase-out rhetoric, but there is certainly no ambitious new build in the near future. French companies are maintaining their expertise through their international build programmes. Still we see gas build ahead as a way of balancing out and optimising the market.

UK potentially facing power shortages

The UK is potentially contemplating power shortages under the current state of its long-term capacity outlook. In that scenario, reserve margins become precarious from 2020. At this point, the reserve margin stands at a comfortable 18%. But the real issue is the delay to the nuclear new build programme, which is meant to restore security of supply from 2020 onwards. The Energy Market Reform (EMR) bill was presented to Parliament, but the most important details on remuneration for low carbon sources including nuclear, through contracts for differences, are still under heated debate. At the same time, this also puts risk onto the second biggest power generation build programme, offshore, as this is affected in the same way. Life extensions could push the problem out by another decade. These are under discussion and for some reactors applied for. However, the state of the UK nuclear reactors could mean that outages increase further and life extensions might not provide full nameplate capacity. All in all, supply and carbon target gaps in the UK could arise depending on execution on existing policies.

UK ELECTRICITY MARKET FORECAST

Unchanged schedule		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Available capacity	[GW]	78	79.6	80	78.3	73.7	70.1	68.2	68.6	67.9	66.1	69.54	69.9	73.4	73.2	76.5
LCPD shutdowns	[GW]			2	5	4										
Fossil fuel new build	[GW]															
Nuclear shutdowns	[GW]						2.4		1.1	2.36				2.5		
Nuclear life extension	[GW]															
Nuclear new build	[GW]										3		3	2	3	2
Renewables new build	[GW]		2	1.7	1.9	2.1	2.5	2	2.1	2.4	2.3	2.2	2.1	1.6	1.5	1.1
Peak demand	[GW]	58	55	55	56	56	56	57	57	57	58	58	58	59	59	59
% chge		0.0	5.2	-0.5	-0.6	-0.6	-0.	-0.	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
Peak reserve margin		35%	46%	42%	33%	25%	21%	21%	19%	15%	21%	21%	26%	25%	29%	32 %

Source: DECC, National Grid, and CA Cheuvreux estimates

Spain oversupplied, but volatile renewables

The Spanish market is oversupplied, but variability is extremely high. Over our forecast horizon, we see no material relief to oversupply, and a potential worsening if renewables build resumes from the moratorium. However, the great share of renewables means that reserve margins can in certain conditions fall back all the way to adequacy levels of c.15%. The country's close to 30GW of CCGT capacity is under-used and unprofitable but required as renewables backup, chiefly for wind. We don't think there will be incremental gas build in Spain, but we do think that profitability and the value of gas capacity will increase through its balancing value and through capacity payments.

SPAIN ELECTRICITY MARKET FORECAST

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Available capacity	[GW]	50	51	52	53	54	55	56	57	58	59
Nuclear life extensions	[GW]										
Nuclear shutdowns	[GW]										
Fossil shut downs	[GW]					0.5		0.5			
Fossil new build	[GW]										
Renewables new build		0.8	1.1	1.2	1.2	1.1	1.1	1.2	1.2	1.2	1.2
	[GW]	51.0	52.0	53.2	54.4	55.0	56.2	56.8	58.0	59.2	60.4
	[GW]										
Peak demand	[GW]	44	43	43	43	43	44	44	44	44	44
% chge			-2%	0%	0%	0.50%	0.50%	0.50%	0.50%	0.50%	0.50%
	[GW]										
Peak reserve margin		14%	18%	21%	23%	25%	26%	28%	29%	31%	33%

Source: REE, IEA, GWEC, CA Cheuvreux

The Italian market is oversupplied, last not least due to strong renewables build, but also strong CCGT build since 2008. Terna asserts that c 10GW of new capacity will be required from 2021 in order to sustain a reserve margin of 25% which it considers adequate.

ITALIAN RESERVE MARGIN EVOLUTION

(MW, %)	2007A	2008A	2009A	2010A	2011A	2012E	2013E	2014E	2015E	2016E	2017E	2018E
Peak demand (MW)	56 589	52 292	51 873	56 425	56 474	55 062	55 062	56 163	57 287	58 432	59 601	60 793
Y-o-y change	1.7%	-7.6%	-0.8%	8.8%	0.1%	-2.5%	0.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Available capacity (MW)	64 239	65 709	65 604	74 537	76 764	77 624	78 134	78 284	78 434	78 584	78 584	78 584
Y-o-y change	3.4%	2.3%	-0.2%	13.6%	3.0%	1.1%	0.7%	0.2%	0.2%	0.2%	0.0%	0.0%
Peak reserve margin	14%	26%	26%	32%	36%	41%	42%	39%	37%	34%	32%	29%

Source: CA Cheuvreux.

■ Renewables and gas to fill gap under new models

With security of supply firmly back on the agenda and carbon commitments still alive even if with less enthusiasm, renewables are now seen as the solution. This stems partly from the elimination of most other fuel sources, and partly from improved scalability of renewables through offshore wind. The German and UK governments in particular have set on ambitious targets.

With this, renewables build looks set to continue, but no longer condition-less. In fact, renewables growth is stuck in many places as subsidies are getting reduced or coming to an end as governments' other imperative kicks in: to contain costs and ensure energy affordability remains acceptable. Besides that, low commodity prices have moved the goal posts for standalone economics.

Considering all of this, renewables will require a new demand and profitability driver. Government subsidies will no longer be a driver for growth by themselves. And for them to continue at all, there have to be pathways for system integration, load factor enhancement and eventually standalone profitability. We think gas as a complement fuel at various levels in power generation and infrastructure may provide this, and become the backbone to more renewables development. Furthermore, we think gas will be the fuel that, if not carbon-free, will be chosen as the one on the fossil spectrum that gets systems closest to desired carbon levels. Given that there will have to be more fossil build besides renewables build in order to make up for the gaps mentioned above, this looks like the path of choice.

Below we recap the current state of renewables ambitions.

RENEWABLES TARGETS IN EUROPE

Country	Wind		Solar		Target other
	Target	Time frame	Target	Time frame	
Germany	10/25GW offshore	2020/30	52GW	n/a	25% renewables 2020, 35% 2035
UK	33-58GW offshore, 24-32GW onshore	2020	n/a	n/a	15% renewables 2020
Spain	3GW offshore, 33GW onshore	2020	n/a	n/a	20% renewables 2020
Italy	12.7GW, 680MW offshore	2020	8GW	2020	17% renewables 2020
France	6GW offshore, 19GW onshore	2020	5.5GW	2020	23% renewables 2020
Denmark	4.6GW offshore	2020	n/a	n/a	50% of electricity from wind 2020
Belgium	4.5GWh pa wind production 2020 Wallonia, 2GW offshore				13% renewables

Source: EU, EWEA, EPIA, various internet sources

■ Renewables penetration hitting a limit

European renewables development has reached a stage where ambitions for more build are still substantial, but many markets are saturated, and systems strained. In some of the major European markets, renewables have reached 10-25% of capacity.

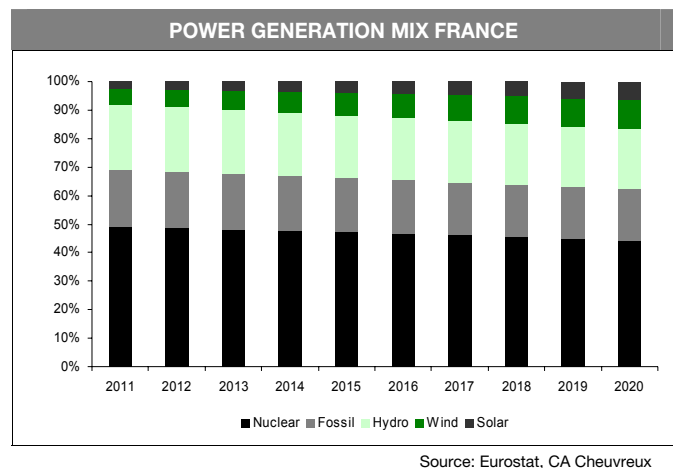
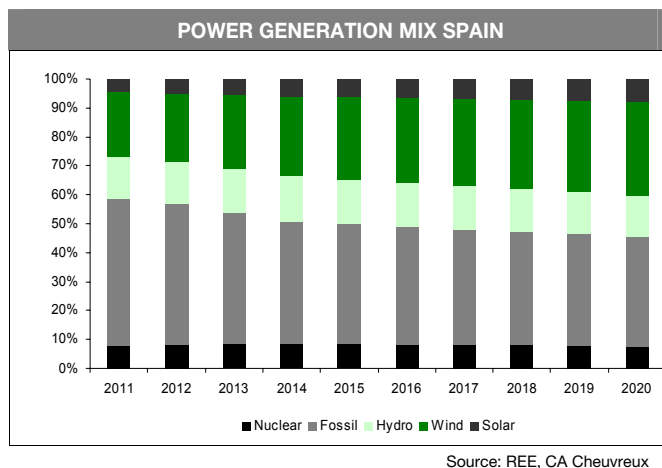
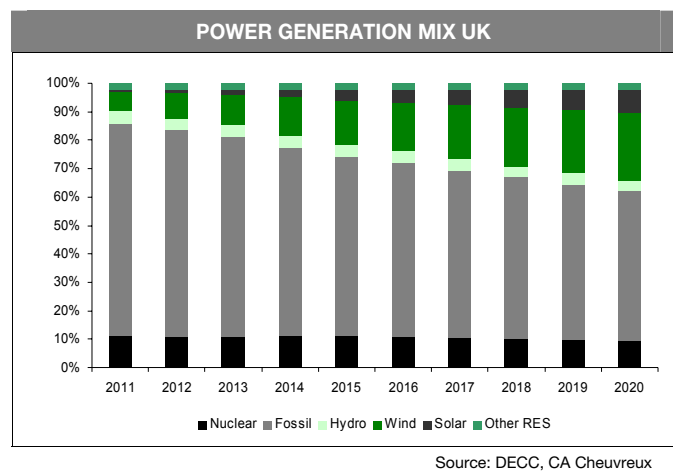
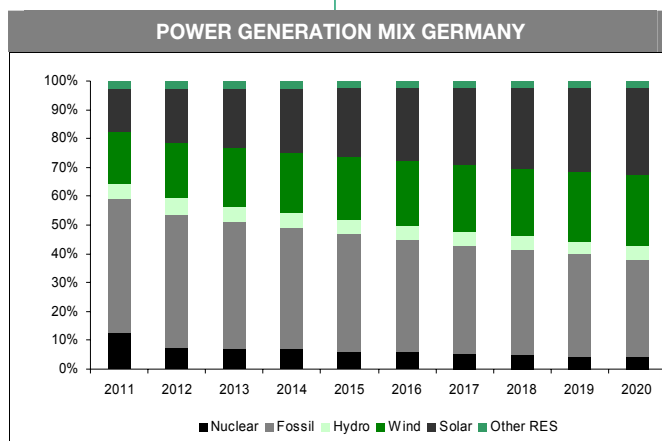
The share of renewables in Germany amounts to about 33% of installed capacity with a target of 35% of generation by 2020 and 80% by 2050.

In the UK, the renewables share is c.7%, but rising towards 13%, on our estimates, due to offshore wind. Note that this is still a miss vs the target of 30% of generation by 2020.

The high proportion of offshore in the UK decreases volatility of the renewables park, but balancing capacity may still be required.

Spain is an illustrative case of how renewables buildout without an integrated backup capacity plan hits its limits. Non-hydro renewables amount to c.25% of capacity. On days of high wind intensity, the market is oversupplied, and negative pricing has come through on regular occasions. In the past, the contribution of wind to peak load coverage has oscillated between 18% and over 50%, leaving the difference as gas backup capacity requirement.

In Italy, the massive solar and wind build has led to renewables more than doubling since 2010. Wind and solar now account for c 10% of total demand. Price volatility has increased as a result, and as a result of peak shaving amongst others, CCGT load factors have reduced by almost half. A cap on wind and reflection on an end of solar incentives by the government confirms that the market is reaching its limit.



■ Capacity requirement for integration and security of supply

With all of the above, we estimate that Europe may need 10-50GW of flexible capacity to ensure security of supply and ensure back up for renewables integration. We have looked at various scenarios with regards to the main uncertainties on policy and energy transition in the key markets in Europe: we distinguish two scenarios whereby Germany fully achieves its offshore target or falls short by 40%. Capacity requirements are similar because in the case of a greater shortfall greater amounts of capacity are required for security of supply. For the UK we have included a delay in its nuclear programme, or alternatively its energy security, with further life extensions for 5GW of those otherwise expiring. We think this could occur in case of delay to new build, at least for short durations. For Italy, we include the scenarios of capping its renewables programme, or allowing further sizeable renewables build. We have assumed less than full nameplate capacity backup, and only assumed incremental build if reserve margins would otherwise fall below tightness thresholds appropriate for the local market. This means no build for Spain. But for Italy there would be build requirement as Terna does not include the interconnector in its adequacy calculation.

CAPACITY REQUIREMENT FOR RENEWABLES BACK UP AND ADEQUACY OF SUPPLY IN EUROPE

	Units	2012E	2015	2021						
			Available capacity	Required for reserve adequacy	Renewables backup	Required back up build	Capacity	Required for reserve adequacy	Renewables backup	Required build
Germany 100% target offshore build	[GW]	90.2	90.4	86.3	4.8	0	74.7	83.9	7.5	17
Germany 60% target offshore build	[GW]	90.2	89.4	86.4	4.8	0	74.7	85.3	6.8	17
Italy renewables cap	[GW]	77.6	78.95	67.32	2	0	79.4	77.413	4	4
Italy more renewables	[GW]	77.6	80	67.32	3	0	82.4	80.6	10	10
Spain	[GW]	51	54	51.6	15	0	60	52.8	15	0
UK with nuclear life extensions/timely new build	[GW]	79.6	73.7	0.0	1.0	5.0	60.0	51.4	8.0	10.0
UK limited life extensions, new build delayed	[GW]	79.6	73.7	66.7	0	3	55	65.6	8	18.6
Total Europe key markets low end	[GW]	298.4	296.1	205.2	22.8	5.0	274.1	265.5	34.5	30.8
Total Europe key markets high end	[GW]	298.4	298.1	272.1	22.8	3.0	272.1	284.3	39.8	46.0

Source: National Grid, Terna, CA Cheuvreux

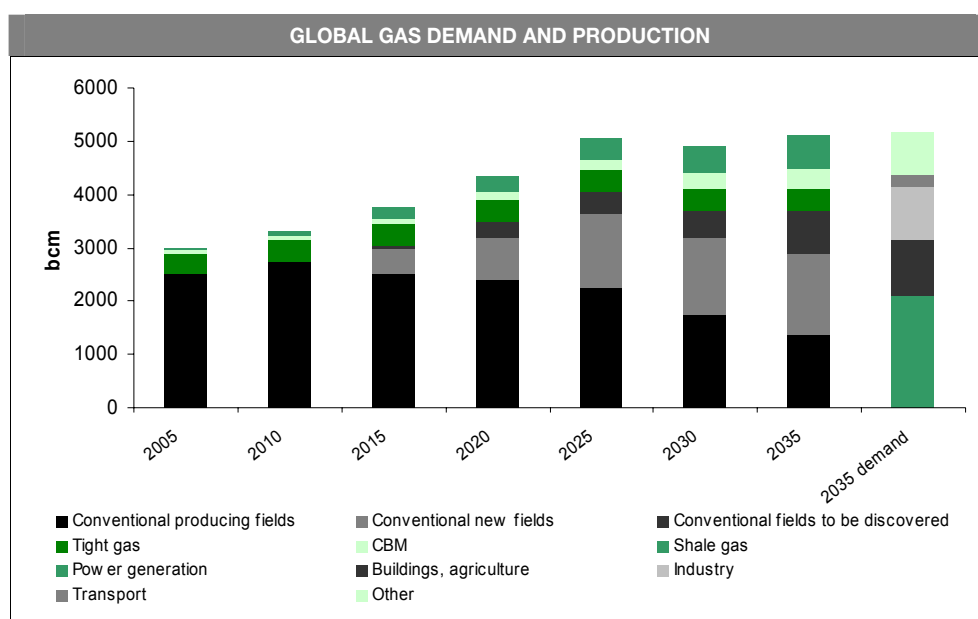
**Plentiful resource
base and technology
advance**

III – Competitive and amply available

■ Gas is a competitive fuel

Favourable supply-demand balance and upstream cost

With a plentiful resource base and growing discovery and exploration, prospects are for sustainably low gas prices over the long term. Over the medium term, production and supply capacity is ample as a result of the glut between 2008 and 2010 which is supportive of continued low prices. Over the long run, prices will need to provide enough incentive for production and capacity investment, but with technological advance and falling costs, enough incentive return should be available. Thus, production and supply to match demand should be amply available.



Unconventional gas plays an important role in the availability and cost outlook: the greatest share of future production growth will probably come from unconventional gas. North American production costs are the most competitive due to infrastructure and the advanced state of the industry.

At this stage, a lot of these resources are new fields outside North America, which means they are relatively costly due to large upfront investment and infrastructure requirements. But costs will come down considerably over time and most likely leave even unconventional gas as one of the cheapest energy resources as adoption spreads and long-term growth comes from incremental projects.

GAS PRODUCTION COSTS

USD/mbtu	Conventional	Tight Gas	Shale Gas	CBM
Eastern Europe, Eurasia	2-6	3-7		3-6
Middle East	2-7	4-8		
Asia/Pacific	4-8	4-9		3-8
North America	3-9	3-7	3-7	3-8
Latin America	3-8	3-8		
Africa	3-7			
Western Europe	4-9			

Source: IEA

Global price differentiation, but changing patterns

New pricing paradigms

Gas prices globally show correlation in movement, but at the same time, the three most important global gas regions, the Americas, Europe, and Asia, are very different in pricing patterns.

That being said, gas pricing has been shifting, driven by two key factors: changes to the long-term supply outlook through a new resource base (see above), and a shift in pricing and contracting patterns. There are indications that gas pricing may take different shapes in the future. Gas is set on the basis of gas-to-gas competition in an increasing number of important markets, currently notably the US, the UK and Australia, but also in more countries in Europe. Oil price linked pricing is very strong, but also in those patterns there has been change.

Increased LNG trading and globally 500bcm of regasification capacity in the planning or construction stage should contribute to a favourable gas price environment. It could also contribute to some erosion of oil/gas links. Transport costs for LNG are still very high, which will continue as a price differentiator. But, increased flows may converge underlying prices. To this add storage development. This will make gas hub pricing less volatile and allow for increased liquidity. Thereby, the argument in favour of hub pricing rather than oil price linking gains in strength.

In a circular fashion, gas prices may also impact oil prices over the long run.

Traditionally, European and Asian gas prices have been established on the basis of a link to oil prices. There are indications of this link weakening, even though many parties still insist on unchanged links and no forthcoming changes. The power sector is fast growing towards being a dominant consumer, and oil has almost disappeared as a power generation fuel, which is an argument against a gas oil link. Further, liquidity of European gas markets, previously an argument that lent a strong base to oil price links, has greatly increased. Lastly, and arguably most importantly, the shift in available resources and trading patterns. Shale gas, albeit not directly, has already had an impact. The US shale boom has led to a crowding out of coal out of the energy mix. As a result, US coal exports have significantly increased, particularly to Europe. This has weakened coal prices and through coal gas competition weakened the negotiating position of suppliers.

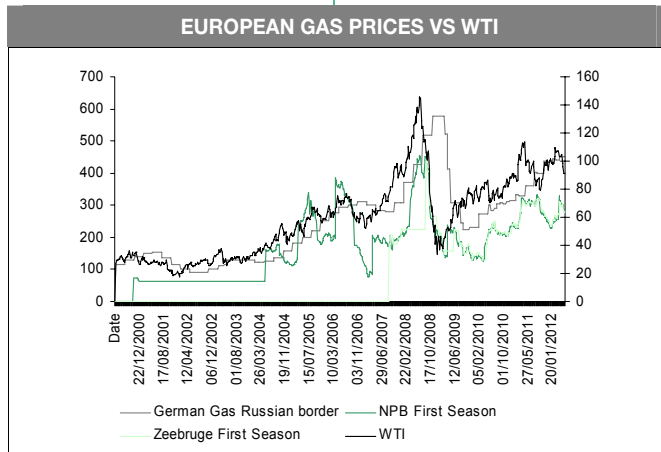
Major north European utilities have gone through re-negotiation of and in many cases arbitration over gas contracts and have achieved material reductions in oil gas linkages. They have begun to demand gas-power linkages as they see margin pressure from being locked into long-term oil indexed supply contracts while selling at gas spot prices. While suppliers are reluctant, Gazprom (GAZP RX, N/R) agreed to partial indexation for European utilities in 2010. Often, there has been a P0 resetting of those contracts that are oil indexed as a result of the negotiations. There has also been a reduction in indexation.

An illustrative case of a market with more flexibility within Europe is Spain: in Iberia, the absence of a spot gas market such as those in the Netherlands and the UK, plus the diversity of gas entries (6 regasification plants, 4 pipeline entries) have implied that gas suppliers have not suffered from gas-to-oil spread issues, which have afflicted northern and central European utilities. Indeed, Gas Natural has been one of the few utilities posting positive earnings surprises over the last few quarters, on the back of resilient domestic gas supply margins and a surprisingly buoyant international gas supply volume and pricing performance, capitalising on its methane ship fleet and its 30bcm procurement portfolio.

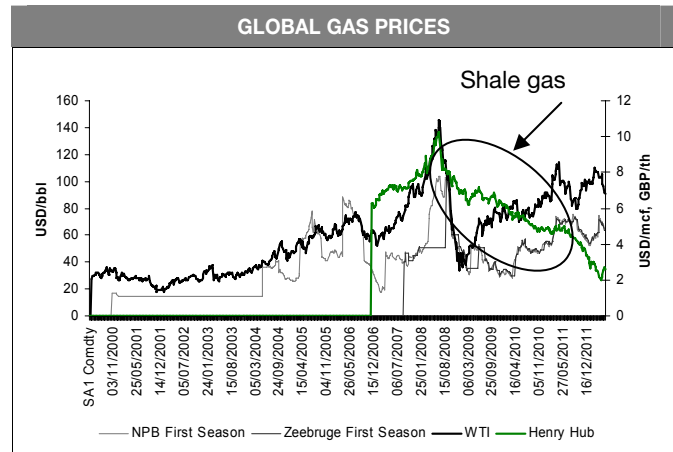
The long-term pattern for Europe is in our view set: even in northern Europe there will be more flexibility on pricing, even with continued oil price links; there may be more frequent renegotiations; increased transportability of gas, gas-to-gas competition and even gas to coal may become a more dominant price driver.

Link between oil and gas prices weakening

The region is still and will remain in a supply deficit for the foreseeable future, so that we don't expect a major downward move in gas prices similar to the US. This may even remain the case with shale development; European shale gas will likely be more expensive than US reserves, too (see below). US shale gas will not likely flood the market: While the US will become a net exporter around the mid of this decade, a lot the incremental flow may be absorbed by Asian demand strength. The decoupling of UK prices from US prices on the back of reduced inflows as shipments have gone to Asia is an illustration. That being said, there will likely be some either direct or indirect impact of the increased resource base.



Source: Bloomberg



Source: Bloomberg

Little prospect of major upward pressure in US prices

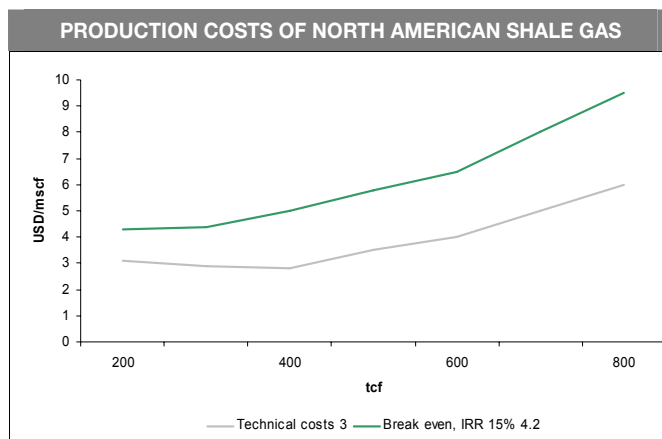
Potentially 400tcf can be developed at prices below USD5/mmbtu

In Asia, demand strength will keep pricing strength. Demand is forecast around 6% CAGR to 2020. The oil price linking remains dominant, even for LNG. A number of new LNG projects are sold under oil indexation. But there is pressure for softening and/or change. Particularly in Japan where gas might play a much increased role in the future energy mix, politicians have called for a change to pricing structures. Chinese shale development might put pressure on prices over the long term.

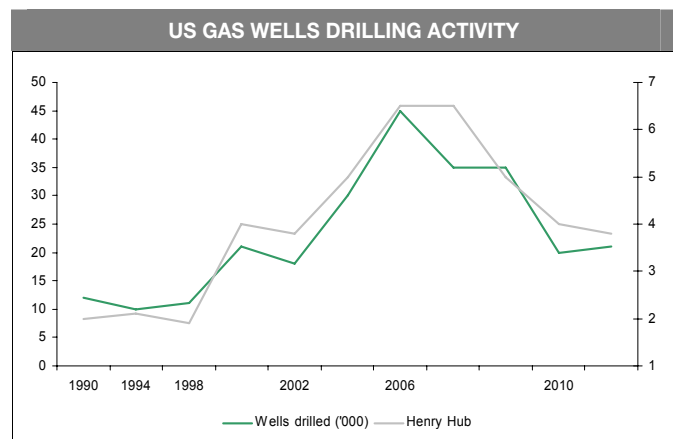
US prices have seen the strongest impact from the paradigm change in the resource base through shale. This has set a new benchmark level of pricing. We think changes in gas prices in the public domain will be considered with that benchmark in mind. Thus, material increases beyond that will be undesirable under the affordability criteria. We think the US will look to strike a balance between achieving profitability for development of its new resources, export and low prices. At this point, a level around USD 5-6/mmbtu seems close to such an equilibrium. However, over the short term, prospects for prices to reach this level are low, and forwards point to USD 4/mmbtu through 2013. Rig count has been decreasing, but this has not had any material impact on production or pricing. A number of fields have production where condensates lift up total return through liquid fuels. With this, the associated gas has been shipped to the market almost regardless of prevailing prices. All in all, the US looks set for sustained low prices.

Can gas be profitable?

Under current gas prices, neither conventional nor unconventional gas production is profitable. However, earlier year prices have allowed for profitability of competitive projects in the US. The US in particular is characterised by transport and hedging distortions. Considering average Henry Hub prices past the initial shale boom; however, ie since 2008, gas can be profitable: the average spot price was around USD4.50/mmbtu which allows for a reasonable return. Industry sources estimate that there are large amounts of shale gas: c.400 tcf could be developed in the US alone with gas prices under USD5/mmbtu. It is noticeable that at prices around USD5, well over 20,000 wells per annum have been drilled in the US since 2008.



Source: Total



Source: Total

**More costly
development outside
of the US supported
by stronger pricing**

Costs elsewhere are still much higher, due to a less advanced state of the industry. For example, Total (FP FP, 2/Outperform, TP EUR44) asserts that an exploration well in Barnett costs USD2m-3m, while the first shale gas well in France will cost c.USD10m. Some of this is due to reserves lying deeper. But also, this is reflective of an earlier stage and less available infrastructure. Wood MacKenzie estimates USD 6.5/mmbtu as a break-even point for Australian CBM.

Yet pricing in Europe and Asia is also well above US levels, at c USD6-8/mmbtu and USD11/mmbtu respectively, equivalents. With prospects for differentiated pricing, there should be opportunity to develop higher cost projects in Europe and Asia. We further note that most of the new discoveries, especially the more expensive projects are developed towards LNG projects. Many of these projects will still be priced with oil indexation. This will be shipped towards Asia and allow for profitability on the back of filling demand, demand will bring production and pricing into equilibrium.

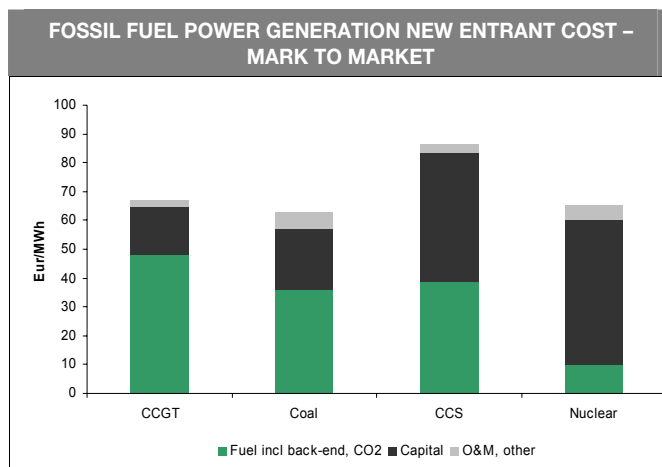
As long as global pricing retains differentiation, we think it is likely that a large resource base will be developed. This will in our view be the case well into the 2020's. Chinese shale development could sever oil indexation and lead to gas to gas competition. But still, because of LNG transport costs and costs of Russia to China pipelines, convergence won't likely occur to US levels. Even with global conversion, we think that any potential conversion level would lie above US prices.

With this, we estimate that the very large parts of the global resource base can deliver profitable production. Deeper, more complex and costlier reserves will require pushes, most likely from supportive policy for gas as a transition fuel of choice as well as market dynamics on the back of its favourable characteristics, and thereby rising prices in order to incentivise production.

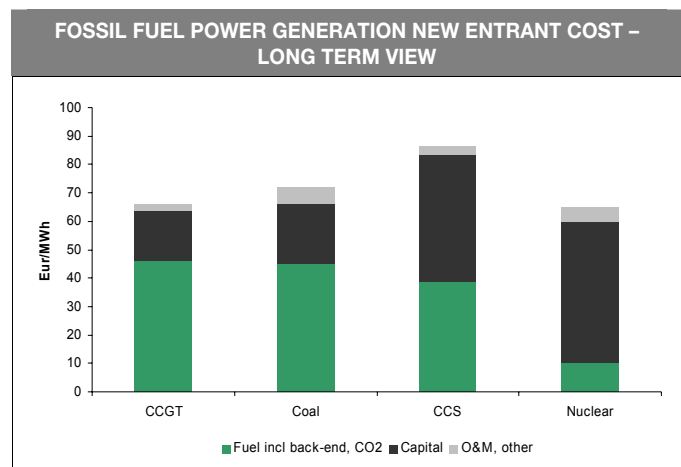
Low cost and carbon profile with flexible operations

Gas is a very flexible fuel with comparatively low construction costs at c EUR600-800/kW, short lead times, typically easy permitting and a flexible operating profile. The latter makes it the prime fuel of choice as backup capacity, especially under scenarios of increased renewables build (see below).

The most competitive costs within the fossil fuel spectrum make gas a fuel of choice. Depending on the gas price outlook, gas can reach parity with nuclear. Given the prospect for sustained competitive fuel prices, the pricing advantage looks set to hold. Our model suggests new entrant costs in the region of EUR66/MWh for gas plant, which is at the low end of the fossil spectrum. Under current market prices, coal has lower costs, but long-term commodity and carbon risks are much higher given that the current cost advantage is predicated on almost no carbon penalty, low transport costs and low commodity costs (see below).



Source: CA Cheuvreux



Source: CA Cheuvreux

NEW ENTRANT COST CCGT PLANT IN FUNCTION OF LOAD PROFILE AND AS BACKUP PLANT

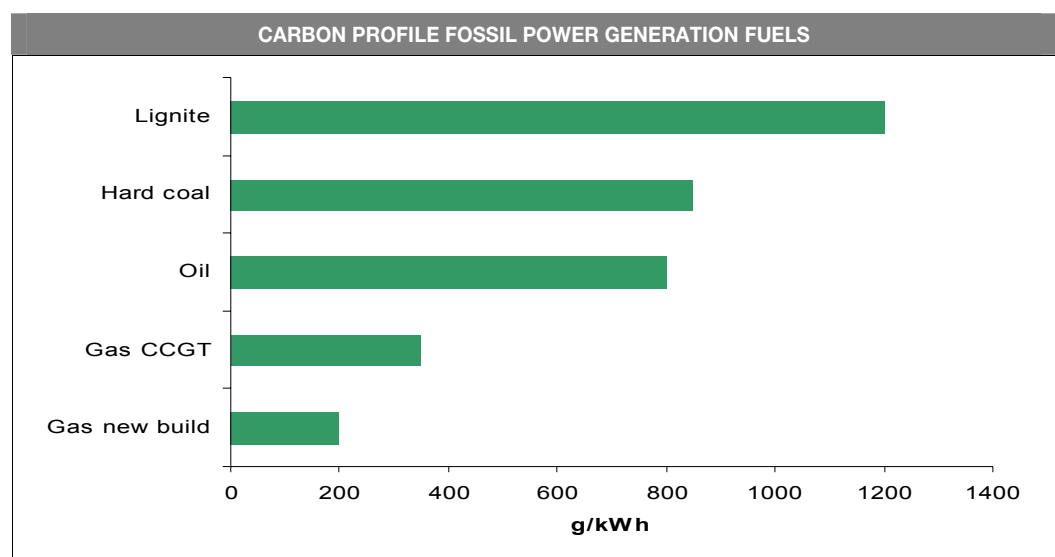
Load profile		Base load	Mid merit	Peak	Back up 20%	Back up 30%
Fuel	[Eur/MWh]	48	48	65	53	32
O&M, Capital, other	[Eur/MWh]	11	19	55	49	50
Levelised new entrant cost	[Eur/MWh]	59	67	120	102	82
Required capacity payment	[Eur/MW]	n/a	n/a	n/a	91104	84096

Source: CA Cheuvreux

Lowest carbon fossil fuel

The cost advantage also holds as far as CO₂ is concerned. Gas is one of the cleanest fuels for many end markets. The power generation carbon profile is particularly attractive: gas is the fuel with the lowest carbon foot print among fossil fuels. The differential between the most efficient coal plants and gas plant is c.200g CO₂/MWh. For an annual level of generation at mid merit level, this would equate to EUR2m annual savings for an average 500MW plant at current CO₂ prices. For a CO₂ price of EUR25, this would increase to EUR10m pa.

While we think that this is clearly driving gas over coal build, we also see other forces at play: the current low levels of CO₂ prices and the prospect of ample supply well into phase III of the EUETS means there is little incentive for renewables build on the sole basis of CO₂. We think chances are gas will pick up the slack with its still low CO₂ profile and other appealing operating characteristics (see below).



Source: Zercarbonhub, Institute of mechanical engineers, EIA

As a result of its own relative carbon advantage vs other fuels, gas also bears an impact on CO2 itself. Because it is displacing coal as the higher emission fuel, overall emissions are decreasing with a higher penetration of gas in the fuel mix. This has already been anticipated in CO2 prices. Aside from other factors, we think thus that there is a circular impact. Increasing gas penetration caps CO2 prices. At the same time, low CO2 prices allow gas to continue to grow without distorting its profitability through high carbon costs. The end impact of this, though, may imply low power prices.

Can coal undermine gas?

Currently, coal plant delivers higher levels of profitability for utilities than gas does. Particularly in Germany, clean dark spreads are c.70% above clean spark spreads.

CLEAN DARK SPREADS

(One-year forward)	(EUR/MWh)	(GBP/MWh)	(EUR/MWh)	(EUR/MWh)	(EUR/MWh)	(EUR/MWh)
Current	10.4	17.3	13.3	12.5	34.9	-1.0
12M low	9.3	5.2	6.3	7.5	26.4	-5.1
12M high	13.0	21.5	15.0	13.6	37.3	3.3
1M % chg.	1%	12%	2%	3%	3%	387%
3M % chg.	-14%	-5%	-1%	-8%	1%	-410%
6M % chg.	3%	109%	35%	21%	-2%	-42%
12M % chg.	-3%	8%	108%	35%	32%	38%

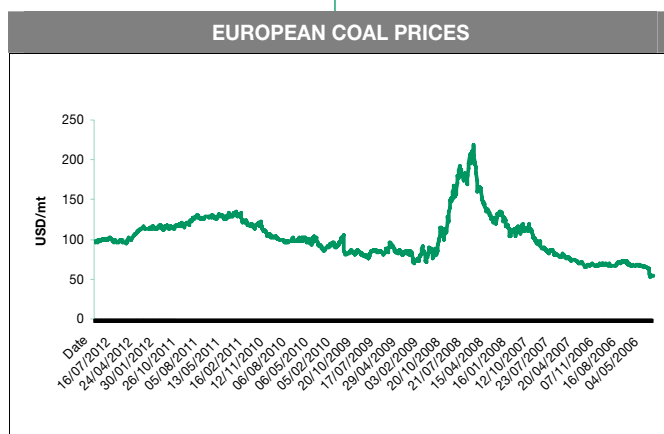
Source: Bloomberg, CA Cheuvreux

CLEAN SPARK SPREADS

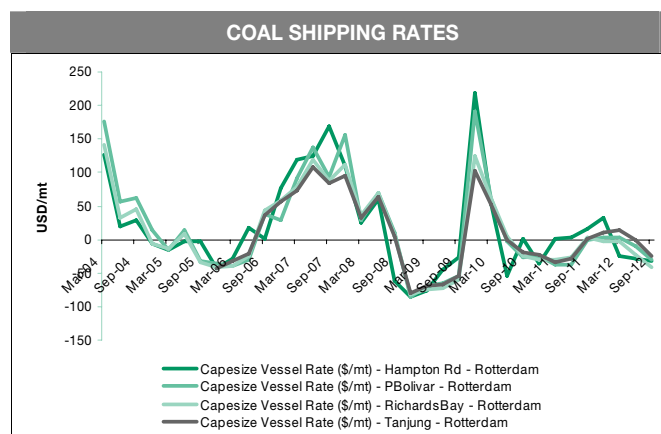
Clean Spark Spread (One-year forward)	Germany (EUR/MWh)	UK (GBP/MWh)	Spain (EUR/MWh)	France (EUR/MWh)	Italy (EUR/MWh)	Nordic (EUR/MWh)
Current	4.2	-0.4		8.8	-1.0	
12M low	4.2	-0.8		8.3	-2.7	
12M high	18.8	10.9		19.5	10.6	
1M % chg.	-49%	-117%		-27%	-259%	
3M % chg.	-52%	-115%		-31%	-122%	
6M % chg.	-66%	-114%		-29%	-147%	
12M % chg.	-67%	-112%		-18%	-131%	

Source: Bloomberg, CA Cheuvreux

The strong improvement in coal profitability comes as a consequence of low coal and CO2 prices, which has been compounded by shipping rates close to multi-year lows. The former is not least a result of US shale gas, which has pushed coal exports onto the European market (see above/below).



Source: Bloomberg



Source: Bloomberg

Short to medium-term strong outlook for coal - coal gas competition

Gas the solution in the transition to new energy mix?

Further, utilities are successfully working on efficiency improvement of plant. Technology improvement has also increased flexibility. Higher coal than gas utilisation rates could thus well be a feature for most of this decade. And already approved projects years ago were biased towards large coal units, which will come on stream over the next years.

However, even with this, we think that the threat of higher carbon prices are an uncertainty that few utilities are willing to bear given the high amount of capital cost for coal plant. Additional risks are shipping rates and commodity costs increases with a global recovery.

■ Enabler of renewables

The system challenge of renewables brings the need to tackle the volatility issue. System integration implies infrastructure, storage and backup capacity. In our view, apart from infrastructure upgrade which is already under way, gas provides the solution to most of the issues surrounding integration and transition towards a new energy mix:

- **Gas power plant** is the ideally flexible source of generation to complement renewables. Yet currently CCGT capacity is not achieving adequate profitability due to reduced load factors, resulting not least from renewables. Our estimate suggests that gas plant would become profitable very quickly if it was to operate under a capacity market as backup capacity. This could hold even for very low load factors.

IRR GAS BACKUP PLANT: CAPACITY PAYMENT EUR50K/MW					
IRR (%)	Spark spread (Eur/MWh)				
Load factor	8	10	15	20	25
20%	1.9	2.6	4.3	5.9	7.5
30%	2.5	3.5	6	8.3	10.5
40%	3.1	4.5	7.6	10.6	13.5
50%	3.7	5.4	9.2	12.8	16.4

Source CA Cheuvreux:

IRR GAS BACKUP PLANT: CAPACITY PAYMENT EUR20K/MW					
IRR (%)	Spark spread (Eur/MWh)				
Load factor	8	10	15	20	25
20%	-2.7	-1.8	0.3	2.1	3.8
30%	-1.9	-0.6	2.2	4.7	7.1
40%	-1.1	0.5	4	7.2	10.2
50%	-0.4	1.5	5.7	9.5	13.1

Source: A Cheuvreux:

- **Hybrid gas-renewables** generation may become the answer of choice. Solar thermal and gas co-firing is already common place in solar thermal applications. We have also seen initiatives of gas co-firing for solar pv. Flexible plant size allows for such combination. We think that gas may become an enabler for utility scale solar. Such plant could become very profitably as solar tends to recoup peak hours while gas, possibly combined with storage, would significantly increase overall load factors. We see less potential for wind. This is because the big development is now in offshore wind, where hybrid plant is not possible, and onshore markets are more saturated. We think for wind, conventional backup models are more likely.

LOAD ENHANCEMENT FOR HYBRID GAS/SOLAR PLANT					
	Load			Load uplift hybrid	
	Recoverable solar	Recoverable gas	Recoverable hybrid	vs solar	vs gas
Total (hrs)	1200	4015	4425	269%	269%
Average load factor	14%	46%	51%	37%	5%
Peak (hrs)	658	1241	1314	100%	6%
Mid (hrs)	300	1752	1846.8	516%	5%
Base (hrs)	242	1022	1264	422%	24%

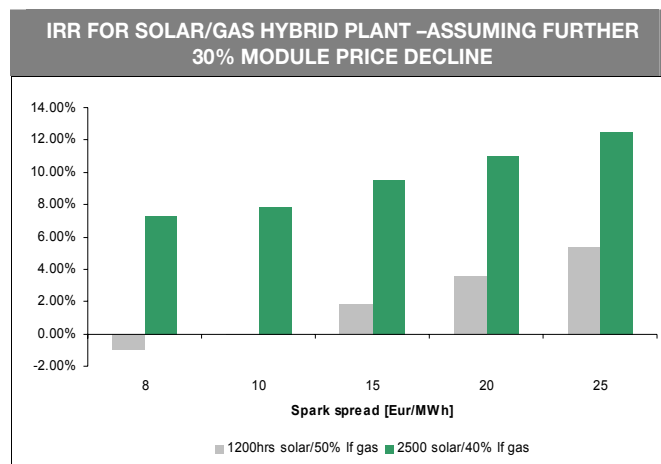
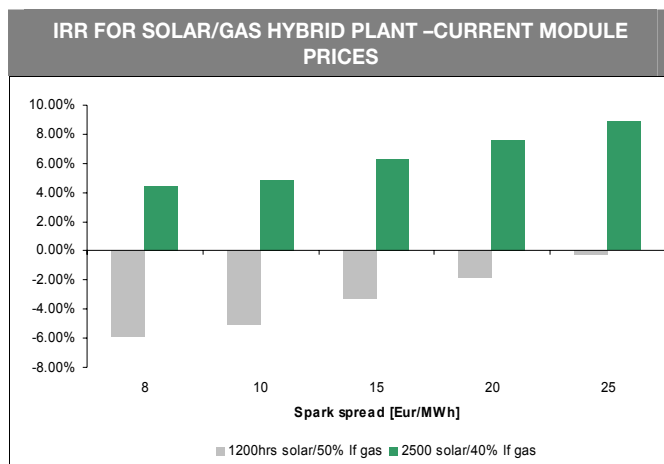
Source: CA Cheuvreux

GAS PLANT IRR'S					
IRR (%)	Spark spread (Eur/MWh)				
Load factor	8	10	15	20	25
40%	nm	-7	-2.5	1.5	4.9
50%	nm	-6.2	-0.3	4.2	8.1
60%	-7.1	-5.2	1.7	6.7	11.1

Source: CA Cheuvreux

SOLAR PLANT IRR'S					
IRR (%)	Power price/FIT				
Sun hours	50	55	60	65	100
1200	-6.4	-5.6	-4.9	-4.2	0.1
2500	0.3	1.4	2.4	3.3	9.3
3000	2.4	3.5	4.6	5.6	12.5

Source: CA Cheuvreux

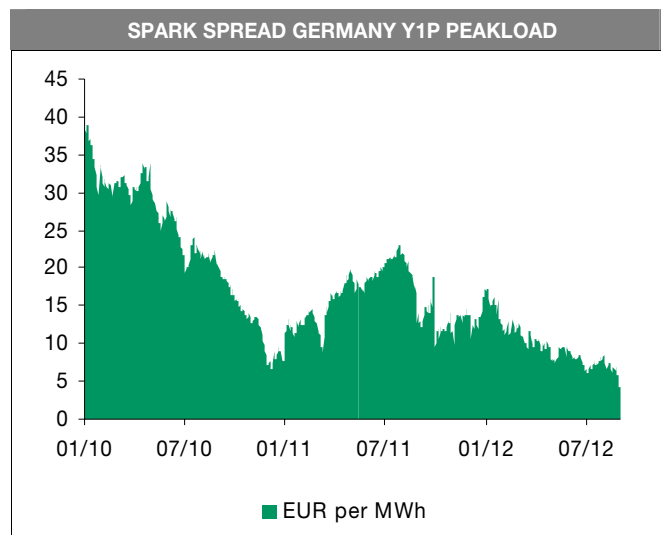
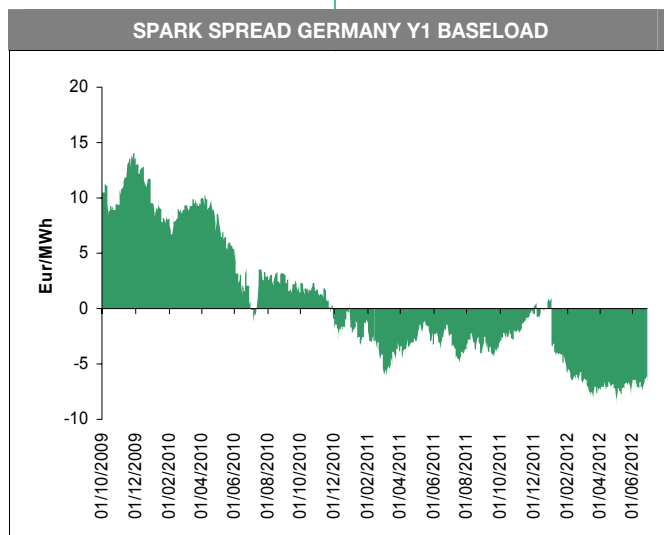


Displacement of gas by renewables vs requirement for gas from renewables

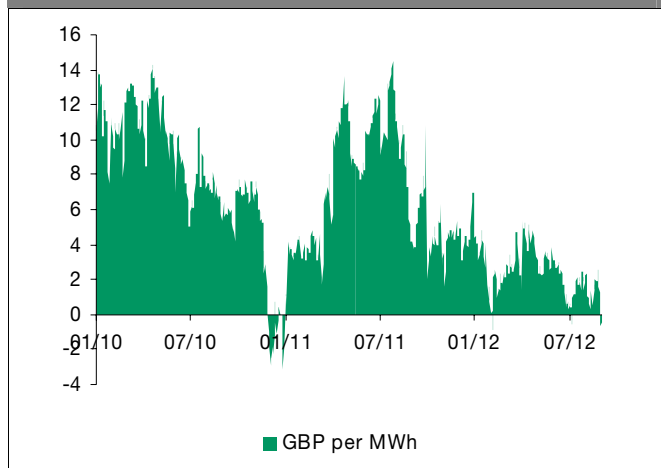
Regulation: capacity incentives

There are conflicting forces at work in the power generation sector: on the one hand, displacement of gas through renewables; and on the other hand, the requirement for gas to balance volatile renewables.

As seen above, current power prices don't send a build signal as CCGTs on their own do not produce IRRs above utilities' hurdle rates. Low CO₂ prices, combined with high gas prices due to oil indexation in Europe, mean insufficient or negative spark spreads for some time to come. Additionally, gas plant is getting crowded out of base load generation and sometimes mid-merit, due to renewables. Nevertheless, the need for flexible backup capacity is recognised by most governments.

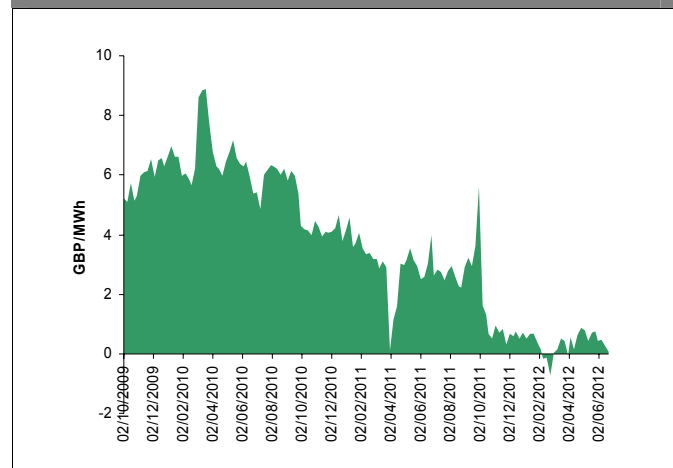


SPARK SPREAD UK Y1 PEAKLOAD



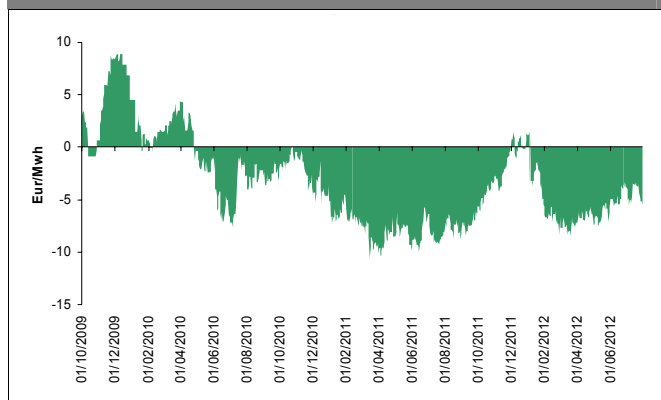
Source: Bloomberg

SPARK SPREAD UK Y1 BASELOAD



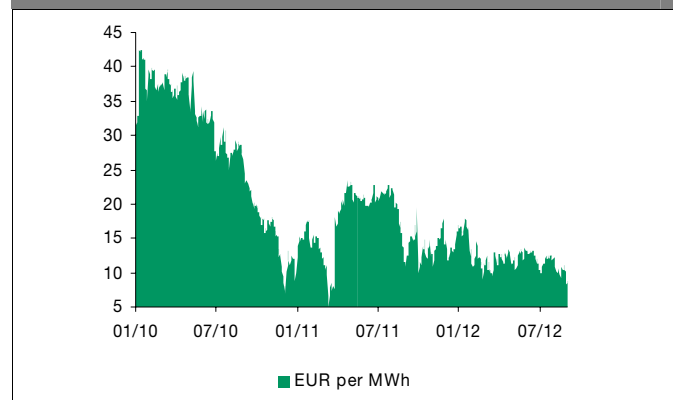
Source: Bloomberg

SPARK SPREAD SPAIN Y1 BASELOAD



Source: Bloomberg

SPARK SPREAD FRANCE Y1 PEAKLOAD



Source: Bloomberg

Governments are looking to correct the distortion of market forces by subsidised renewables through capacity incentives. Across Europe, the liberalised generation market is being complemented with regulated capacity payments in order to support security of supply in a new energy context. Capacity payments are under discussion or already in place in the UK, Italy, Spain and Germany.

In Spain the capacity payment is shaped as an investment incentive investment incentive for CCGTs during the first 10 years of operation of the plant. With load factors plummeting from 50% in 2008 to just above 20% in 2011, the incentive was increased from EUR20/MWh in 2011 to EUR26/MWh in 2012, but round one of the electricity sector reform in Spain reduced it to EUR23.4/MWh in March 2012 (backdated to 1 January). Given that Spain is at the forefront of renewables' adoption, and considering the utilities' threats to shut down close-to-idle CCGT plants, it will be quite interesting to see what policy is finally adopted to keep these backup capacity operations. Spain will breach the 10% reserve margin around 2016E.

The UK government will be introducing a full scale capacity market in its EMR (Energy Market Reform) bill. The exact amounts of available payments are yet to be published.

Discussions are less advanced in Germany as some sources point to risk of a 4-10GW capacity shortage; but we think that it may rise in the debate as the issues around execution on the energy transition become more pressing. State governments are already calling for backup gas capacity for their renewables plant, especially those in the south with a high proportion of renewables, strong demand and upcoming nuclear closures. We

estimate that a capacity incentive in the order of 40K/MW would lead to additional costs of EUR0.01 per household bill vs a likely increase in this year's renewables costs of EUR1.5-3.5 or more per household bill for the German offshore programme.

The Italian energy market authority has issued a general framework and asked Terna to draw up a detailed proposal about a new market mechanism with capacity payments. At the moment, a framework is under discussion where plant operators would be remunerated in a system with contracts for differences with a fixed capacity price per year. There is no specific timeframe for an introduction at this point, but looking at reserve margins, we think 2017 could be a likely horizon.

In most countries, capacity payments are based on the most efficient available gas capacity. Eventually, we think it will be inevitable that capacity markets become a European issue and get integrated across Europe, along with broader energy market integration. It is our expectation that renewables planning going forward will eventually be coupled with a suite of complements, in particular gas backup capacity planning.

STATE OF CAPACITY MARKETS IN EUROPE

Country	Measures
UK	Capacity market to be formalised in EMR
Germany	Capacity payments suggested, under discussion in context of energy market reform. Government committed to capacity market.
France	Capacity market planned, but first auction for 2015/16 capacity delayed. Final policy decisions due mid 2013.
Italy	New decree foresees payments for capacity filling in for renewables gaps.
Spain	EUR23.4k/MW pa investment incentive.

Source: CA Cheuvreux and internet news wires

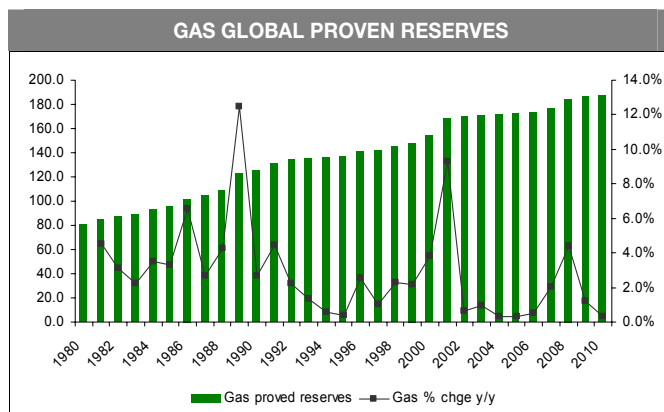
**Gas resources
comfortably cover
long-term demand**

■ Availability of gas: plentiful

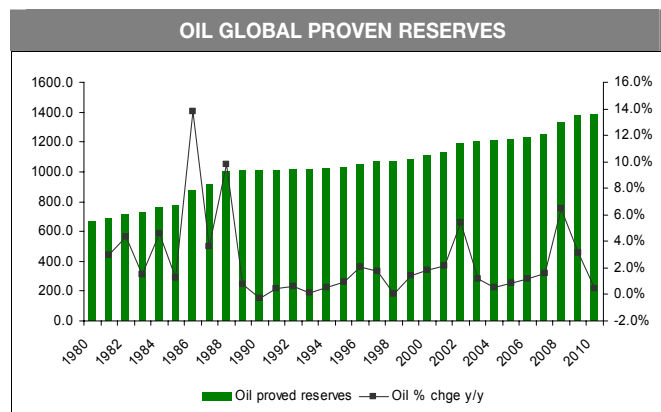
Gas resources are abundant, geographically diversified and increasingly tradable. Extraction is also relatively competitive vs other fuel sources. According to the IEA, resources can comfortably meet demand well beyond 2035.

It is known that global gas resources are very large, even though the exact size of the resource base is not known. But this is due to large unexplored parts and the yet not fully understood potential of unconventional resources (see below).

The world currently has c.660tcf of proven conventional gas reserves, with historic reserve growth of about 3% over the past 30 years. Conventional recoverable resources equate to more than 120 years of current production. Proven oil reserves growth has been 2.5% over the same period. Global gas consumption is just short of 60bcf/day.

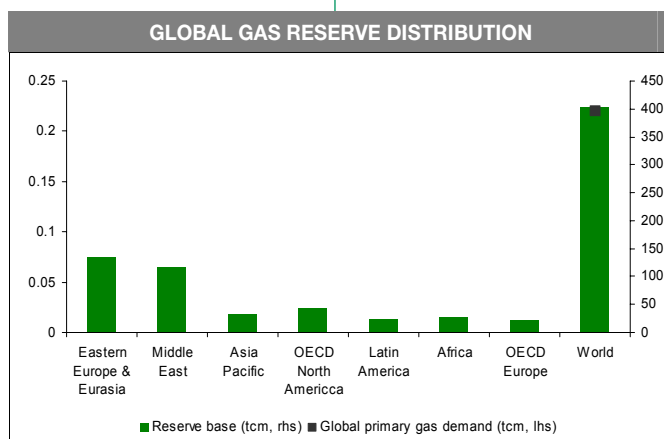


Source: BP

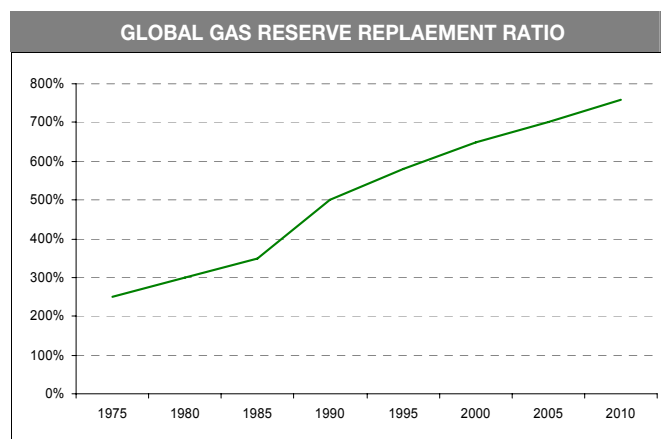


Source: BP

Reserve replacement ratios have run well above 100% for decades, which is yet another indicator of a comfortable resource base. At the beginning of 2010, reserves stood at twice the rate produced to date, and equivalent to more than 50 years of production at current rates (source: IEA).



Source: IEA



Source: IEA

WORLD'S LARGEST GAS FIELDS

Name	Country	Recoverable reserves (tn cf)
South Pars/North Dome	Iran/Qatar	1235
Urengoy	Russia	222
Yamburg	Russia	138
Hass R Mel	Algeria	123
Shtokman	Russia	110
South Oilotan-Osman	Turkmenistan	98
Zapolyarnoye	Russia	95
Hugoton	USA	81
Groningen	Netherlands	73
Vonanken	Russia	70
Medvezhye	Russia	68
North Pars	Iran	48
Dauletabad-Donmez	Turkmenistan	47
Karachaganak	Kazakhstan	46
Kish	Iran	45
Orenburg	Russia	45
Kharsavey	Russia	42
Shah Deniz	Azerbaijan	42
Golshan	Iran	30
Tabnak	Iran	22
Kangan	Iran	20

Source: CIA, Wikipedia

Unconventional developments

■ The ultimate new world: unconventional resources

Unconventional resources are altering the global energy landscape in favour of gas. Over the long term, this could be the principal driver of changes in the energy mix. Unconventional resources have led to a profound change in views on and prospects of gas. In the gas mix, it is the fastest growing fuel in terms of supply. Supply could grow by 55% to 2035.

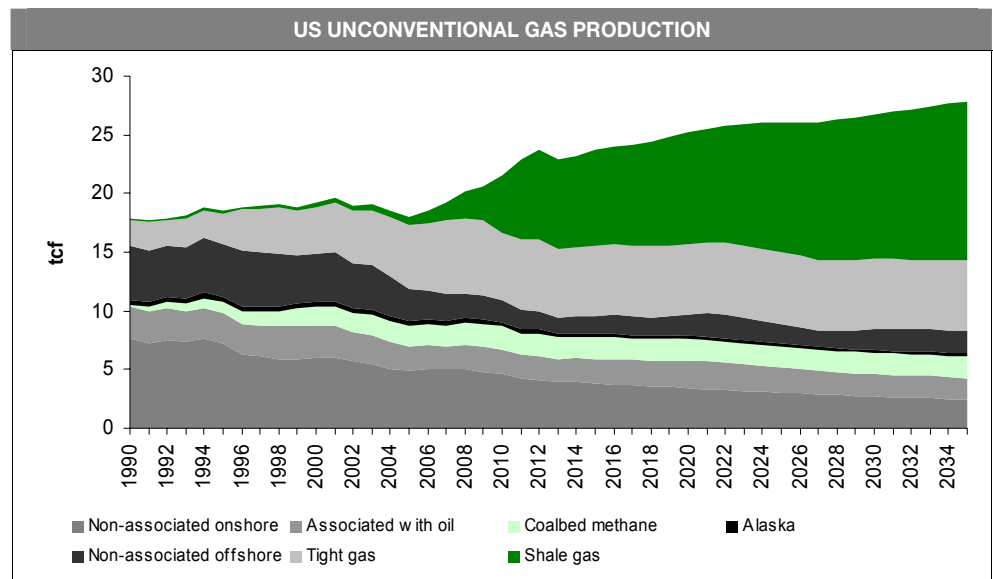
The IEA currently estimates a resource potential of 406tcm. This doubles resource availability from conventional resources, and taken altogether with conventional resources brings resources beyond 250 years of current production. Shale gas is by far the most important resource with an estimated 200tcm global resource base.

GLOBAL UNCONVENTIONAL GAS RESERVES (TCM)				
	Conventional	Unconventional		
		Tight gas	Shale gas	CBM
Eastern Europe & Eurasia	136	11		83
Middle East	116	9	14	
Asia Pacific	33	20	51	12
OECD North America	45	16	55	21
Latin America	23	15	35	
Africa	28	9	29	
OECD Europe	22		16	
World	404	80	200	116

Source: IEA

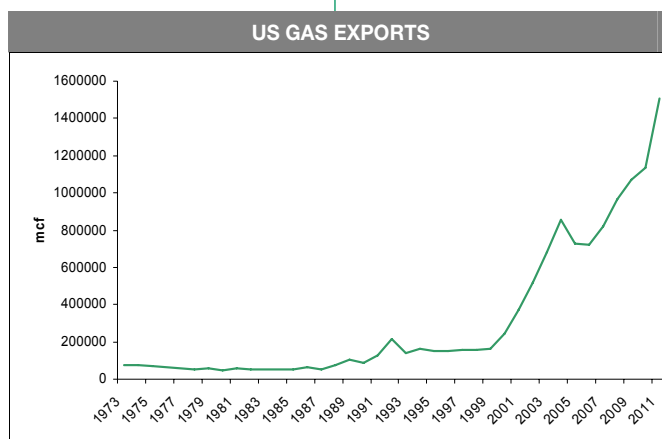
Pioneers: the US

The US is the predominant example of how unconventional gas changes global energy markets. The unexpected availability of vast amounts of shale gas has significantly and durably altered the North American energy market, with repercussions for broader global markets. Local production has reduced imports, left LNG facilities under-used and freed up capacity for export. Along with production, estimates going forward have also increased. Between 2009 and 2011, the DOE has increased its forecast for shale gas contribution by a factor of two.

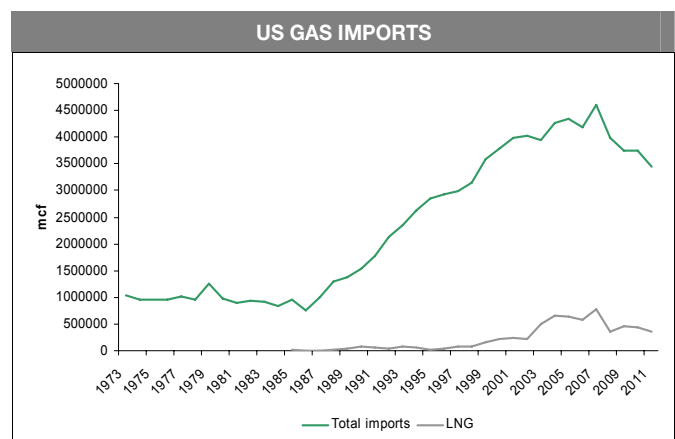


Source: EIA

The resource base is well known, and with this the amount of recoverable base as currently understood is probably reliable. With this, the US is on the path to becoming more than energy independent at least for gas, one of the country's prime targets of energy policy. It is now close to being energy autonomous.



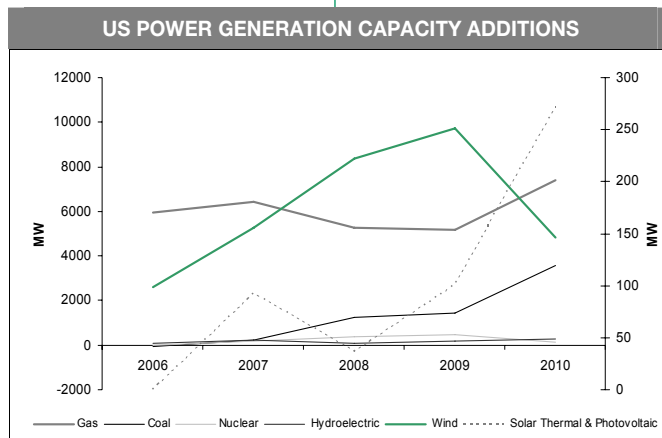
Source: EIA



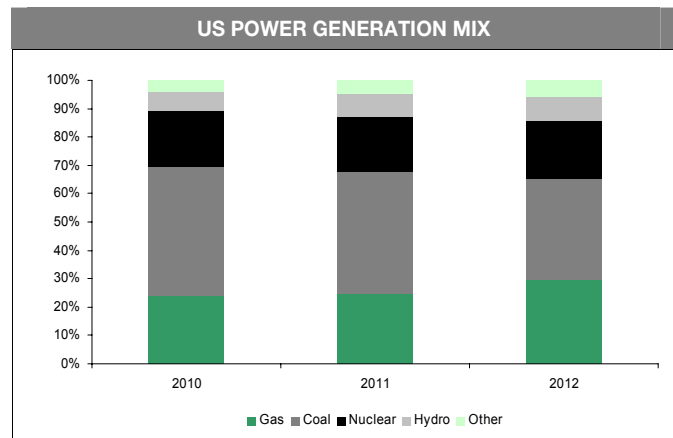
Source: EIA

The broader availability of gas, helped by the macro slowdown, has led to the well documented significant decline in gas prices with little prospect of a major return to past pricing levels.

The power generation mix in the US has seen a notable shift towards gas as a result of the paradigm shift in the gas market. The renewables sector in particular has been impacted as gas is the prime competitive fuel in the US against which its relative economics are measured for merchant and regulated plant.



Source: EIA



Source: EIA

We believe some factors set the US apart from other regions:

- The development of shale gas production occurred under very favourable commodity price conditions when Henry Hub prices were around USD16/mbtu, which led to about 20-30000 wells being dug per annum.
- Independent oil companies with an ability to secure funding for high risk activities have developed most of the activity.
- Infrastructure and services are plentiful, with for example 1,600 rigs operational in the US.

Current estimates for production show that very large amounts of gas in the US can be produced profitably with gas prices below USD5/mbtu.

Global repercussions

The repercussions of the US shale gas boom have extended beyond the well documented fall in gas prices. The US will not only be energy-independent, but according to DOE estimates become a net LNG exporter from 2016, a global net exporter from 2021 and a net pipeline exporter potentially from 2025. Some of this could be counterbalanced if the US adopts a shift in its gasoline policy away from biofuels towards gas and GTL.

Reduced LNG imports from the US have freed up Middle Eastern and Asian LNG capacity, the output of which has contributed to the considerable easing of the European supply/demand balance and pricing. Beyond that, increased LNG liquefaction capacity should increase global trade flow. Global capacity has already increased from 250bcm to 370bcm between 2007 and 2011. There are current projects under way of c.80bcm by 2014-16, of which c.50bcm in Australia. Beyond 2015, there are projects totalling 500bcm under evaluation. In total, this will bring global LNG infrastructure capacities to twice the amount of European import volumes. All of this should continue, and accelerate, as Europe and Asia develop their own unconventional resources.

European prices have eased as a result of higher available resources. Average prices have decreased close to 30%. This has brought about the well documented squeeze on gas and power utilities due to their oil-price linked supplies (see above).

**Fracking
environmental
concerns in Europe****Chinese resource
development could
alter the balance in
Asia**

Europe

Resources in Europe are lower than elsewhere, c.2/3 of those of the US, but they can still bring effects of materially improving the supply outlook. Shale gas is attractive for Europe as the region looks to lower its import dependency. Within Europe, Poland is the main centre of development. The country is highly dependent on Russia, which accounts for two-thirds of its gas imports. In addition, there is the attraction of reducing the country's coal dependency through domestic gas. Poland may have about 1.4-5.3tcm in shale gas. Studies so far suggest production costs well above those of the US, but still competitive. France also holds a good resource base, namely in the Paris basin. The UK could hold over 1000tcf of offshore shale reserves. There is active exploration in Germany and other countries.

However, E&P has encountered resistance in Europe, due to environmental concerns. France has reacted through imposing a moratorium of further exploration and a ban on fracking. There have been recent suggestions that the French government may ease the fracking ban. But the new environment minister has still confirmed that the current government's position is against fracking in the context of the preparation of a new mining code. Comprehensive environmental legislation will take time to put in place, which means meaningful production may not come in before 2020.

Africa

South Africa has the fifth largest technically recoverable shale gas reserve in the world. The country recently lifted a moratorium on exploration. The Mineral Resources Ministry is now considering development applications for the Karoo basin.

Asia/Pacific

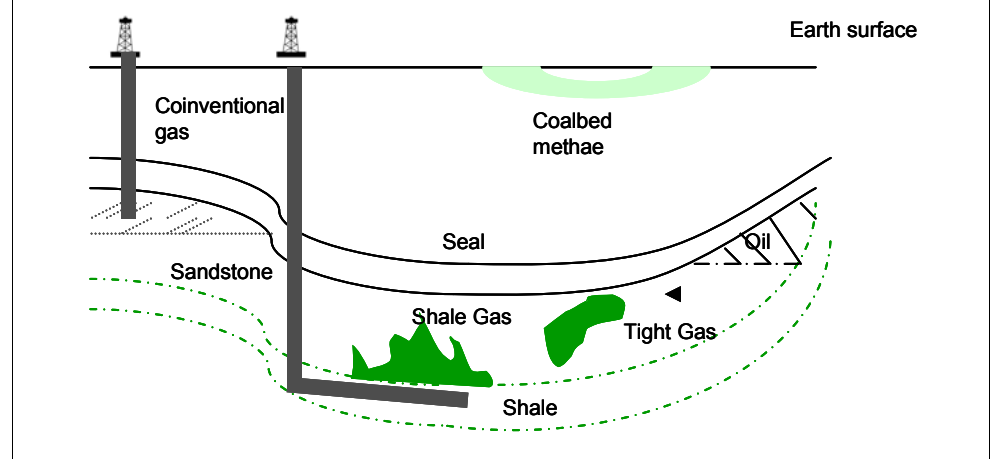
China has announced its first licensing rounds for shale gas and is looking for more development. The Sichuan and Ordos basins contain large reserves of shale gas and CBM. The government is looking to maximise production and has already increased well head prices in order to encourage production. Australia is looking for development and recently published a report suggesting that shale gas could double its gas resources, leading to a 184-year resource base. The country has a CBM resource in the order of 420bcm. Australia could become the first CBM-based LNG exporter. India has been looking to develop unconventional gas for a while: several licensing rounds have already been completed, but so far administered prices have not been supportive enough. With this, the country is likely to become a major LNG supplier, with significant unconventional resources.

UNCONVENTIONAL GAS

Shale gas refers to gas contained within shale rock formations, typically 1500-500m below the surface of the earth. These sedimentary formations with limited permeability trap gas. Gas is extracted by horizontal drilling and hydraulic fracturing (fracking). Under this process, high-pressure steam and fracturing fluid are injected into the rock in order to create fractures to allow the gas to escape. The gas is then captured through a well.

Tight gas is another variation of unconventional gas, also found under tight, hard rock, sandstone and impermeable rock formations.

Coalbed methane is formed within coal deposits and trapped under the earth.



Source: Geology , Wikipedia, CA Cheuvreux

**Resistance to
fracking...**

**... but not so much in
regions of large
reserves**

Gas getting greener

Risk of resistance on environmental and acceptability grounds

There are numerous environmental concerns and risks that have led to controversy around shale gas in particular. Many deposits are above aquifers, which means that accidents can lead to fracking chemicals leaking into ground water. Sludge waste disposal is another issue. Beyond that, shale gas production involves very large amounts of water usage, which has led to resistance against the technology. There are also some studies that claim that shale gas extraction produces more greenhouse gas emissions, chiefly methane, than conventional gas. But these are also controversial as other proponents put forward arguments of improving environmental technologies that will curb fugitive and other emissions.

All of these issues have led to resistance that varies in strength from country to country. It does imply risk that not all developments may be allowed or that that heavy regulations may render projects unprofitable. So far, resistance in regions with large reserves has been limited and development has continued on a strong growth path.

Gas is greening

Gas is in itself becoming greener, which reinforces its potential as clean fuel of choice among fossil fuels and as an alternative to costly renewables. This is visible in power generation. A great number of new gas plant projects are being planned and built with readiness for CCS. CCS is far from being commercially viable, according to our calculations, but when and if it becomes so, this plant can be retrofitted with ease. Such projects have potential to be winners in a low-carbon world as well offering the benefits of conventional gas. Besides that, biogas is another avenue that greens the gas power generation sector, albeit on a small scale. Co-firing with renewables brings gas closer to the green energy sector, as outlined above.

**Water treatment and
environmental
remediation
opportunity for Veolia,
Suez Environnement**

In gas production, CCS also plays a role, arguably with more potential than in the power industry. Gas capturing encompasses gas for reuse, but also storage and disposal of harmful gas without reuse purpose. A major project that will capture c.800kt of CO₂ from gas fields is currently under development, to name one example. Middle Eastern and global oil companies are said to have shown interest in similar projects. There is also potential for renewables, particularly solar as a complementary source of energy for production operations. We think such initiatives will gain in importance as the sector looks to become a more important part of the energy mix and gain traction as a clean fuel.

Opportunity beyond the energy sector

It seems clear that shale gas development and production will be a part of the energy mix. In the US, this is already firmly established. Both presidential candidates have supported it in their energy programmes. In the US, environmental regulation is coming into place. Development in other regions, particularly Europe, may be more heavily constrained by regulations that could widen the opportunity and increase potential margins for services operators.

This opens various opportunities. First and foremost, there are water and waste treatment opportunities for fracking chemicals, residues and waste water. Given the high amount of water consumption for shale gas production, this is a sizeable volume opportunity, probably at good margins for the global water treatment names. Beyond that, there will be demand for environmental remediation around projects requiring specialised waste services.

Veolia (VIE FP, 2/Outperform, TP EUR9.50) and Suez Environnement (SEV FP, 3/Underperform, TP EUR8.70) are potential beneficiaries through their water treatment and waste businesses.

IV – Prefer components, services & midstream

We see several areas of growth: utility & power plant, infrastructure & storage, and components & services.

■ Components, services and industrials

Our preferred segment is components & services. We think that there will be plant build over the next few years as reserve margins tighten in major markets from 2020, and more importantly, as renewables require reserve capacity. We further think that plant management and enhancement for existing plant under new regulatory and market regimes could bring contract flow for energy services names.

Resulting from plant build and infrastructure requirements, we see the energy services sector benefitting. Amec (AMEC LN, N/R) provides services across the energy spectrum, including unconventional gas, renewables and power. The company also provides gas turbines and other components, as well as CO₂-reduction solutions for power plants. The latter makes it competitive as an engineer in new gas plant build and infrastructure. The company has also recently won sizeable contracts in the solar sector. Wood Group (WG LN, N/R) is active in gas services including shale gas and also power generation services. Within this, there is an optimisation business which we think may fare well in the changing environment. It also has a sizeable renewables business.

Industrial names in the manufacturing and component sector should also benefit. We highlight **Siemens** (SIE GR, 2/Outperform, TP EUR81) and **Alstom** (ALO FP, 1/Selected List, TP EUR35) for its turbine, component and engineering businesses. Both companies should benefit from their global footprint and thus non-European demand, but also European backup capacity demand.

■ Up/midstream gas, trade, power generators & infrastructure

E&P businesses should benefit from buoyant demand over the short term and structurally. There should be some strengthening of pricing resulting from demand, particularly for companies with exposure to Asia and the US. Reserve quality will be a key distinguishing factor as the less mature and more complex reserve bases will require more positive price momentum. However, we are cautious on names with substantial reserve exposure: we see risk of asset writedowns from the scenario of sustained low gas prices. These are non-cash but could lead to credit issues and weigh on reported earnings. We highlight **Shell** (RDSA NA – 1/Sel List, TP Eur 32.50) for its upstream but also midstream exposure. We also highlight ENI (ENI IM – 2/OP, TP Eur 21).

Gas trade flow and mid stream businesses should benefit from their ability to arbitrage between global locations and between spreads.

Demand for gas plant should provide organic growth opportunities from new plant build. Gas capacity may achieve improved profitability through higher load factors as backup plant and through capacity payments. This may counteract the crowding-out impact from renewables. But price signals for sizeable new capacity build will be required, and in the larger European markets we expect these only towards the end of this decade. However, we sense some structural change in utility gas pricing due to greater gas availability. Gas power generation merits a neutral positioning, in our view. Power generators with vertically integrated gas businesses should benefit.

Supply margins may improve through better pricing power on the back of higher gas demand.

**Contract flow ahead
for service providers**

**E&P to benefit from
buoyant demand...**

**... but watch out for
asset writedowns**

We highlight **Centrica** (CNA LN, 3/Underperform, TP 330p) should benefit from its combination of a growing offshore wind business backed by a strong vertically integrated gas business. **GDF Suez** (GSZ FP, N/R), with its globally integrated gas business with upstream, should benefit from volume growth, plus unique global gas trade through LNG, supply as well as power generation and growing renewables. **E.ON** (EOAN GR, 3/Underperform, TP EUR17) is heavily exposed to one of the markets with arguably the biggest renewables integration challenge: Germany. It is an active renewables builder with a large German offshore pipeline and global renewables portfolio, and its conventional power generation business should benefit from improved gas business profitability and possibility longer-term gas buildout. We recognise that its gas supply portfolio is still producing losses, but believe this is largely priced in. Going forward, it has been adjusted so that now only about 40% of supplies are exposed to gas-oil spreads. With this, and thinking of the likelihood of future adjustments, the impact of future gas oil spread widening is now minimal. In addition, there should be benefits for the pan-European gas business which the company is increasingly positioning as an optimisation and complementary business within the energy value chain. We further mention **Iberdrola** (IBE SM, 1/Selected List, TP EUR4.59) for its gas storage business and exposure through power generation.

The infrastructure sector should benefit from a benign regulatory environment, support for capex growth with attractive returns as regulators look to facilitate investment, and long-term volume growth. We highlight **National Grid** (NG/LN, 3/Underperform, TP 700p) and **GDF Suez** (see above) as well as **Gas Natural** (GAS SM, 2/Outperform, TP EUR12.50).

EXPOSURES TO GAS THEME FROM RENEWABLES

Company	Ticker	Rating	TP	Exposure
Centrica	CAN LN	3/Underperform	330p	Gas E&P, gas power generation, gas supply, renewables
GDF Suez	GSZ FP	Suspended	–	Gas E&P, gas power generation, gas infrastructure and mid stream, LNG, gas supply, renewables
E.ON	EOAN GR	3/Underperform	EUR17	Gas E&P, gas power generation, gas infrastructure and mid stream, gas supply, renewables
Iberdrola	IBE SM	1/Selected List	EUR4.59	Gas storage, power generation, renewables
National Grid	NG/ LN	3/Underperform	700p	Gas infrastructure, power/renewables infrastructure
Amec	AMEC LN	N/R	N/A	Energy and gas services and engineering for E&P, infrastructure, power generation and renewables
Wood Group	WG/ LN	N/R	N/A	Engineering services for energy and power infrastructure, E&P and generation; renewables
Siemens	SIE GR	2/Outperform	EUR81	Turbines and components b
Alstom	ALO FP	1/Selected List	EUR35	Turbines and components
Enagas	ENG SM	2/Outperform	EUR16.26	Gas import, storage and transport
Gas Natural	GAS SM	2/Outperform	EUR12.50	Gas distribution, storage, supply, LNG, power generation, supply, energy management
SNAM	SRG IM	2/Outperform	EUR4.20	Gas distribution

Source: Company data, CA Cheuvreux

V – Company profiles

- Alstom
- Centrica
- Enagas
- E.ON
- Gas Natural
- Iberdrola
- National Grid
- Royal Dutch Shell
- Siemens
- SNAM

CAPITAL GOODS

Alstom

New upcycle

■ Investment case

The new May 2015 guidance offers visibility: Alstom aims at 1) positive FCF in each of the next three years; 2) organic growth in sales of at least 5% p.a.; and 3) an operating margin of around 8% at end FY 2014-15 vs 7.1% at end March 2012. This guidance still strikes us as cautious, but represents the beginning of a new upcycle for the group. Fundamentally, Alstom is about to become more competitive in each of its business lines. It has launched several new products (better gas turbines, trains, HVDC, etc) and more launches are planned. The group is also extending its geographical footprint and already boasts a number of successes in emerging markets. It plans to reinvest most of its cost savings in increasing its competitiveness in order to win (back) market share.

■ Gas-to-renewables exposure

As a capital goods and infrastructure provider, Alstom Power has opportunities to benefit from improving gas markets through gas turbine sales and service business. Gas turbine sales currently represent c.10% of Thermal Power revenues, but are expanding their share. Gas represents the majority of Thermal Service revenues, which accounts for 50% of Thermal Power and is highly profitable. The recent launch of a working 60Hz turbine (GT24) allows the company to target the North American market, which had been closed to it as far as gas is concerned. Other important countries where Alstom has achieved recent gas order wins are Russia, China and India.

■ Valuation

Alstom shares are still trading at historical lows and multiples put the stock at a 30% discount to peers. Our target price of EUR35 indicates more upside potential. We use an SOP valuation, given that Power Service is a highly recurring and profitable business, and that Alstom acquired its grid business only in mid-2010. We value the rest of the group with an EV/EBIT multiple of 9.0x, which yields a price of EUR32 per share. Based on historical multiples, the average valuation for FY 2012-13E works out at EUR37 per share.

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Rating **1/Selected List**

Target price (6 months) **+30.7% EUR35.00**

Price (03/10/2012) **EUR26.78**

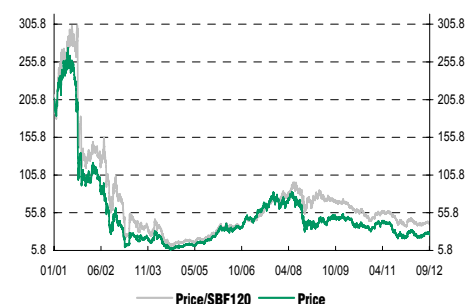
Reuters: **ALSO.PA** Bloomberg: **ALO FP**

Stock data

Market capitalisation	EUR7,955m
Free float	EUR5,568m
Enterprise value	EUR11,482m
No. of shares, adjusted	297m
Daily volume	EUR46m

Performances

	1 month	3 months	12 months
Absolute perf.	-6.5%	2.6%	12.4%
Relative perf.	-5.8%	-1.8%	-4.1%


Shareholders

Free Float 70.0%, Bouygues 30.0%

	11/12	12/13E	13/14E	14/15E
P/E (x)	8.8	8.4	7.5	6.6
EV/EBITDA (x)	7.1	6.0	5.5	4.6
Attrib. FCF yield (%)	NS	5.6	8.2	12.4
Net debt/EBITDA (x)	1.4	1.2	1.0	0.6
Yield (%)	2.7	4.2	4.7	5.4
ROCE after tax (%)	11.3	12.0	12.5	13.9
EV/Capital empl. (x)	1.3	1.1	1.1	1.0

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Alstom

FY to 31/3 (EUR m)	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13E	2013/14E	2014/15E
Profit & Loss Account									
Sales	14 208.0	16 908.0	18 739.0	19 650.0	20 923.0	19 934.0	20 988.9	21 838.0	23 308.2
% Change	5.9%	19.0%	10.8%	4.9%	6.5%	-4.7%	5.3%	4.0%	6.7%
Staff costs	(2 439.7)	(2 854.6)	(3 078.0)	(3 135.3)	(3 432.5)	(3 373.2)	(3 652.9)	(3 910.3)	(4 290.9)
Other costs	(10 595.3)	(12 535.4)	(13 878.0)	(14 457.7)	(15 567.5)	(14 814.8)	(15 428.0)	(15 897.7)	(16 751.3)
EBITDA	1 173.0	1 518.0	1 783.0	2 057.0	1 923.0	1 746.0	1 908.0	2 030.0	2 266.0
% Change	9.8%	29.4%	17.5%	15.4%	-6.5%	-9.2%	9.3%	6.4%	11.6%
Depreciation	(216.0)	(223.0)	(247.0)	(278.0)	(353.0)	(340.0)	(360.0)	(380.0)	(400.0)
EBITA	957.0	1 295.0	1 536.0	1 779.0	1 570.0	1 406.0	1 548.0	1 650.0	1 866.0
% Change	28.3%	35.3%	18.6%	15.8%	-11.7%	-10.4%	10.1%	6.6%	13.1%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	(131.0)	(74.0)	(93.0)	(150.0)	(806.0)	(334.0)	(200.0)	(150.0)	(150.0)
EBIT	826.0	1 221.0	1 443.0	1 629.0	764.0	1 072.0	1 348.0	1 500.0	1 716.0
Net financial items	(111.0)	(69.0)	21.0	(42.0)	(136.0)	(177.0)	(164.0)	(151.0)	(138.0)
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax	(145.0)	(291.0)	(373.0)	(385.0)	(141.0)	(179.0)	(260.5)	(310.3)	(378.7)
Associates [contribution]	0.0	1.0	27.0	3.0	3.0	28.0	29.4	30.9	32.4
Discontinuing activities	(32.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	538.0	862.0	1 118.0	1 205.0	490.0	744.0	952.9	1 069.6	1 231.7
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	9.0	(10.0)	(9.0)	12.0	(28.0)	(12.0)	(20.0)	(23.0)	(26.5)
Net attributable profit [loss]	547.0	852.0	1 109.0	1 217.0	462.0	732.0	932.9	1 046.6	1 205.2
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	0.0	0.0	0.0	0.0	253.0	249.0	0.0	0.0	0.0
Net attrib. profit [loss], restated	547.0	852.0	1 109.0	1 217.0	715.0	981.0	932.9	1 046.6	1 205.2
% Change	45.5%	55.8%	30.2%	9.7%	-41.2%	37.2%	-4.9%	12.2%	15.2%
Cash flow	785.0	1 232.0	1 364.8	1 608.0	1 145.0	916.0	957.6	1 124.0	1 496.4
Balance Sheet									
Shareholders' equity [group share]	1 333.0	2 210.0	2 852.0	4 091.0	4 060.0	4 327.0	5 024.0	5 740.2	6 575.7
Minority interests	42.0	35.0	32.0	10.0	92.0	107.0	127.0	150.0	176.5
Net debt [cash]	90.0	(878.0)	(2 031.0)	(2 222.0)	1 286.0	2 492.0	2 273.9	1 939.8	1 300.5
Gearing [%]	6.5	NS	NS	NS	31.0	56.2	44.1	32.9	19.3
Per Share Data (at 3/10/2012)									
EPS before goodwill	1.92	2.95	3.76	4.12	2.45	3.33	3.17	3.55	4.08
EPS, reported	1.90	2.95	3.77	4.14	1.56	2.46	3.14	3.52	4.06
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	0.40	0.80	1.12	1.24	0.62	0.80	1.12	1.25	1.44
Cash flow per share	2.73	4.24	4.61	5.42	3.88	3.12	3.26	3.81	5.05
Book value per share	4.2	6.9	8.6	12.7	13.1	13.8	15.8	18.1	20.7
No. of shares, adjusted	287.386	288.528	293.884	293.884	296.979	297.094	297.094	297.094	297.094
Latest price	51.35	73.50	38.99	46.17	41.73	29.26	26.78	26.78	26.78
Market capitalisation	14 757.3	21 206.8	11 457.1	13 568.6	12 391.4	8 693.0	7 954.7	7 954.7	7 954.7
Enterprise value	15 490.6	21 315.9	10 405.5	12 079.8	14 902.8	12 454.4	11 482.9	11 148.8	10 509.5
Valuation									
P/E	26.7	24.9	10.4	11.2	17.1	8.8	8.4	7.5	6.6
P/E before goodwill	26.7	24.9	10.4	11.2	17.1	8.8	8.4	7.5	6.6
P/CF	18.8	17.3	8.5	8.5	10.7	9.4	8.2	7.0	5.3
Attrib. FCF yield [%]	7.2	7.6	12.8	1.4	NS	NS	5.6	8.2	12.4
P/BV	12.1	10.7	4.5	3.6	3.2	2.1	1.7	1.5	1.3
Enterprise value / Op CE	3.6	5.7	3.1	2.8	1.7	1.3	1.1	1.1	1.0
Yield [%]	0.8	1.1	2.9	2.7	1.5	2.7	4.2	4.7	5.4
EV/EBITDA, restated	13.2	14.0	5.8	5.9	7.8	7.1	6.0	5.5	4.6
EV/EBITA, restated	16.2	16.5	6.8	6.8	9.5	8.9	7.4	6.8	5.6
EV/Sales	1.09	1.26	0.56	0.62	0.71	0.63	0.55	0.51	0.45
EV/Debt-adjusted cash flow	18.0	16.4	7.6	7.4	11.7	11.6	10.4	8.9	6.5
Return [%]									
Pre-tax ROCE	22.2	34.4	46.2	41.3	18.0	14.2	15.4	16.3	18.3
ROE [%]	51.6	47.8	48.3	34.9	12.1	18.5	20.5	20.1	20.2
ROE, restated	51.6	47.8	48.3	34.9	19.3	25.6	20.5	20.1	20.2

UTILITIES

Centrica

Fully valued

■ Investment case

Thanks to its large end-customer business, Centrica has a comparably stable earnings profile. Recently, however, its UK downstream business has come under severe pressure as a result of the economic slowdown and a reluctance among both households and business customers to invest.

The company is facing massive capital expenditure, particularly in its oil and gas upstream division, where highly profitable, but ageing fields need to be replaced. At group level this is likely to lead to a double-digit rise in capital employed, with a risk that EBIT growth will not follow adequately. We forecast 5% y/y organic growth.

■ Gas-to-renewables exposure

Centrica is among the largest utilities in the UK and has significant operations in North America. It also has smaller business operations in Norway, Germany, the Netherlands and Nigeria. In 2011 the group generated 69% of its revenues in the UK, followed by 17% in the US, 9% in Canada and 5% in the rest of the world.

The company is active in both gas and electricity across the whole value chain from upstream/generation to trading/storage and downstream operations. It generates the majority of its EBITDA in its UK upstream (51% of group total) and downstream business (32%), while the remainder stems from its UK storage (3%) and North American business (13%).

Centrica is among the leading players in the UK downstream segment. Its UK upstream electricity business also has a significant market share, although it does not occupy a leading position. Its main fuel source is gas, in addition to nuclear from its 20% stake in British Energy.

■ Valuation

Looking at the full-year 2012E, in light of the headwinds the company is facing, we see very little room for consensus EPS upgrades. Overall, at current levels we consider Centrica shares to be fairly valued.

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Rating 3/Underperform

Target price (6 months) -1.2% 330p

Price (03/10/2012) 334p

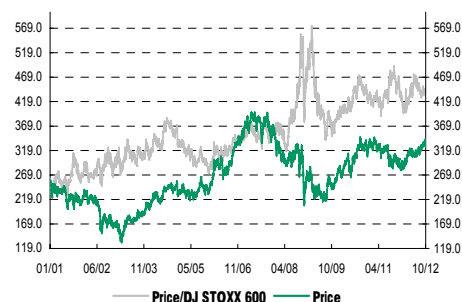
 Reuters: **CNA.L** Bloomberg: **CNA LN**

Stock data

Market capitalisation	GBP17,269m
Free float	GBP17,269m
Enterprise value	GBP21,699m
No. of shares, adjusted	5,170m
Daily volume	GBP39m

Performances

	1 month	3 months	12 months
Absolute perf.	1.6%	5.1%	11.3%
Relative perf.	0.5%	-0.3%	-8.3%



Shareholders

Free Float 100.0%

	2011	2012E	2013E	2014E
P/E (x)	35.5	13.0	12.1	11.0
EV/EBITDA (x)	8.4	5.9	5.3	4.9
Attrib. FCF yield (%)	8.7	7.9	10.8	10.1
Net debt/EBITDA (x)	1.3	0.7	0.5	0.3
Yield (%)	5.2	4.8	4.8	5.4
ROCE after tax (%)	6.5	18.1	19.3	20.8
EV/Capital empl. (x)	2.6	2.8	2.7	2.6

 Disclosures available on www.cheuvreux.com

Centrica

FY to 31/12 (GBP m)	2006	2007	2008	2009	2010	2011	2012E	2013E	2014E
Profit & Loss Account									
Sales	16 450.0	16 272.0	20 872.0	21 963.0	22 423.0	22 824.0	23 787.1	25 666.2	26 651.4
% Change	26.6%	-1.1%	28.3%	5.2%	2.1%	1.8%	4.2%	7.9%	3.8%
Staff costs	0.0	(1 316.0)	(1 364.0)	(1 434.0)	(1 491.6)	(1 707.1)	(1 729.4)	(1 759.4)	(1 837.1)
Other costs	(14 449.0)	(12 207.0)	(18 217.0)	(18 630.0)	(16 927.4)	(18 776.9)	(18 378.9)	(19 959.8)	(20 672.9)
EBITDA	2 001.0	2 749.0	1 291.0	1 899.0	4 004.0	2 340.0	3 678.8	3 947.0	4 141.4
% Change	1.9%	37.4%	-53.0%	47.1%	110.8%	-41.6%	57.2%	7.3%	4.9%
Depreciation	(559.0)	(565.0)	(630.0)	(724.0)	(930.0)	(926.0)	(1 135.5)	(1 191.4)	(1 270.5)
EBITA	1 442.0	2 184.0	661.0	1 175.0	3 074.0	1 414.0	2 543.3	2 755.6	2 870.9
% Change	-2.7%	51.5%	-69.7%	77.8%	161.6%	-54.0%	79.9%	8.3%	4.2%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	1 442.0	2 184.0	661.0	1 175.0	3 074.0	1 414.0	2 543.3	2 755.6	2 870.9
Net financial items	0.0	(73.0)	(2.0)	(179.0)	(265.0)	(146.0)	(179.1)	(162.4)	(165.9)
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	(1 262.0)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax	0.0	(813.0)	(613.0)	(346.0)	(929.0)	(826.0)	(1 040.3)	(1 166.9)	(1 136.1)
Associates [contribution]	0.0	209.0	(182.0)	206.0	62.0	(21.0)	0.0	0.0	0.0
Discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	180.0	1 507.0	(136.0)	856.0	1 942.0	421.0	1 324.0	1 426.2	1 568.9
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	0.0	(2.0)	(1.0)	(12.0)	(7.0)	0.0	0.0	0.0	0.0
Net attributable profit [loss]	180.0	1 505.0	(137.0)	844.0	1 935.0	421.0	1 324.0	1 426.2	1 568.9
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net attrib. profit [loss], restated	180.0	1 505.0	(137.0)	844.0	1 935.0	421.0	1 324.0	1 426.2	1 568.9
% Change	-90.7%	NS	NS	NS	129.3%	-78.2%	NS	7.7%	10.0%
Cash flow	0.0	739.0	(622.0)	1 854.0	3 429.0	1 912.0	2 767.4	3 026.2	3 159.6
Balance Sheet									
Shareholders' equity [group share]	1 585.0	3 301.0	4 312.0	4 192.0	5 819.0	5 600.0	6 136.5	6 736.0	7 458.0
Minority interests	57.0	59.0	60.0	63.0	0.0	0.0	0.0	0.0	0.0
Net debt [cash]	2 010.0	795.0	511.0	3 136.0	3 312.0	3 022.0	2 674.4	1 887.5	1 232.3
Gearing [%]	122.4	23.7	11.7	73.7	56.9	54.0	43.6	28.0	16.5
Per Share Data (at 3/10/2012)									
EPS before goodwill	0.04	0.37	(0.03)	0.17	0.38	0.08	0.26	0.28	0.30
EPS, reported	0.04	0.37	(0.03)	0.17	0.38	0.08	0.26	0.28	0.30
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	0.10	0.13	0.13	0.13	0.14	0.15	0.16	0.16	0.18
Cash flow per share	0.25	0.18	(0.15)	0.36	0.67	0.37	0.54	0.59	0.61
Book value per share	0.2	0.8	0.7	0.7	1.0	0.9	1.0	1.1	1.3
No. of shares, adjusted	5107.659	3679.980	5107.660	5132.050	5152.560	5170.340	5170.340	5170.340	5170.340
Latest price	3.55	3.59	2.66	2.81	3.32	2.89	3.34	3.34	3.34
Market capitalisation	12 979.7	13 201.9	13 586.4	14 426.2	17 085.9	14 957.8	17 268.9	17 268.9	17 268.9
Enterprise value	15 285.7	14 576.1	14 957.9	19 384.0	21 979.3	19 675.8	21 699.0	21 027.8	20 436.3
Valuation									
P/E	NS	9.8	NS	17.1	8.8	35.5	13.0	12.1	11.0
P/E before goodwill	NS	9.8	NS	17.1	8.8	35.5	13.0	12.1	11.0
P/CF	14.1	20.0	NS	7.8	5.0	7.8	6.2	5.7	5.5
Attrib. FCF yield [%]	16.4	12.1	NS	7.6	8.6	8.7	7.9	10.8	10.1
P/BV	16.8	4.7	3.7	4.1	3.4	3.1	3.3	2.9	2.6
Enterprise value / Op CE	2.7	3.7	3.5	3.3	2.8	2.6	2.8	2.7	2.6
Yield [%]	2.8	3.6	4.9	4.6	4.2	5.2	4.8	4.8	5.4
EV/EBITDA, restated	7.6	5.3	11.6	10.2	5.5	8.4	5.9	5.3	4.9
EV/EBITA, restated	10.6	6.7	22.6	16.5	7.2	13.9	8.5	7.6	7.1
EV/Sales	0.93	0.90	0.72	0.88	0.98	0.86	0.91	0.82	0.77
EV/Debt-adjusted cash flow	11.9	18.6	(24.2)	9.7	6.1	10.0	7.6	6.7	6.3
Return [%]									
Pre-tax ROCE	25.0	56.0	15.3	19.9	39.1	18.6	32.3	35.1	35.8
ROE [%]	12.0	59.1	NS	22.4	39.9	7.8	24.2	23.7	23.5
ROE, restated	12.0	59.1	NS	22.4	39.9	7.8	24.2	23.7	23.5

UTILITIES

Enagas

Probably the lowest risk situation in Spain

■ Investment case

Enagas is Spain's gas transmission & system operator (TSO). Its three core businesses are: 1) Transport, which owns Spain's high pressure gas pipeline network (9300km); 2) Regasification, which owns three regas terminals (Barcelona, Cartagena and Huelva), with a fourth (El Musel in Asturias) under construction, plus a 40% stake in the BBG terminal (Basque Country); and 3) Underground Storage, owner of two facilities, Serrablo and Gaviota. It is also finalising the Yela facility and has a call option on a 33% stake in Castor (RAB basis). The moving parts looking forward are: 1) Castor (a large ACS-owned underground storage facility) that would add c.12% to the gas system's cost base on a FY basis; and 2) gas demand. The government has frozen Castor for the time being, but if we assume remuneration kicks in from January 2013 (a half-year delay), and factor in low single-digit demand growth over the next five years, a CAGR of 4% in access tariffs over the same period (after an 8% increase in 2012) would resolve the imbalance (requiring acceptable retail tariff increases of 2% p.a.).

■ Gas-to-renewables exposure

Enagas's gas transport, regasification and storage activity in Spain represents 100% of its EBITDA. The company expects that, from 2014, capex will decline sharply, and that the increasing free cash flow will be mostly channelled into a higher dividend distribution. Until now an exclusively domestic operator, the company recently made some international investments, always in very specific projects (mainly regasification terminals in Chile and Mexico). However, the Chairman recently suggested that international investment opportunities that meet Enagas's hurdle rates are limited, hence the likely emphasis on higher dividends in the medium term.

■ Valuation and rating

The stock offers 23% upside to our TP and a very attractive yield. Importantly, the legacy asset base already operates under a phase-out scheme (amortised assets are removed from remuneration), and regasification and storage have modest IRRs. All in all, we believe risk/reward has significantly improved after the recent review.

José PORTA

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Rating 2/Outperform

Target price (6 months) +1.5% **EUR16.26**
Price (03/10/2012) **EUR16.02**

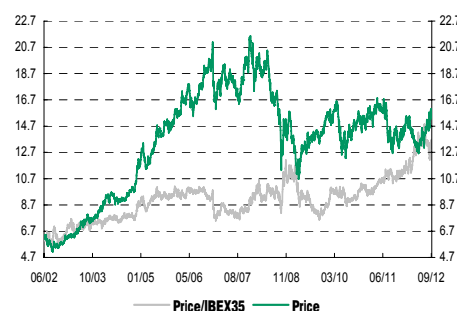
 Reuters: **ENAG.MC** Bloomberg: **ENG SM**

Stock data

Market capitalisation	EUR3,823m
Free float	EUR3,058m
Enterprise value	EUR7,635m
No. of shares, adjusted	239m
Daily volume	EUR15m

Performances

	1 month	3 months	12 months
Absolute perf.	9.1%	10.0%	18.1%
Relative perf.	3.7%	1.4%	26.1%



Shareholders

Free Float 80.0%, Sepi 5.0%, Oman Oil 5.0%, Kutxabank 5.0%, Liberbank 5.0%

	2011	2012E	2013E	2014E
P/E (x)	9.4	10.9	9.8	9.2
EV/EBITDA (x)	7.7	8.2	7.7	7.5
Attrib. FCF yield (%)	NS	NS	1.2	2.4
Net debt/EBITDA (x)	3.9	4.1	4.0	3.9
Yield (%)	6.9	6.4	7.1	7.6
ROCE after tax (%)	7.7	7.4	7.7	7.8
EV/Capital empl. (x)	1.3	1.3	1.3	1.2

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Enagas

FY to 31/12 (EUR m)	2006	2007	2008	2009	2010	2011	2012E	2013E	2014E
Profit & Loss Account									
Sales	778.0	816.5	860.2	901.5	1 000.8	1 155.1	1 212.6	1 314.0	1 396.8
% Change	14.3%	4.9%	5.4%	4.8%	11.0%	15.4%	5.0%	8.4%	6.3%
Staff costs	(54.3)	(62.0)	(69.0)	(60.7)	(67.2)	(67.0)	(70.4)	(73.9)	(77.6)
Other costs	(160.0)	(159.2)	(155.1)	(139.4)	(152.8)	(202.5)	(209.9)	(226.5)	(248.6)
EBITDA	563.7	595.3	636.1	701.4	780.8	885.6	932.3	1 013.6	1 070.6
% Change	17.8%	5.6%	6.9%	10.3%	11.3%	13.4%	5.3%	8.7%	5.6%
Depreciation	(184.9)	(187.7)	(203.1)	(216.6)	(249.9)	(299.6)	(320.8)	(337.4)	(349.7)
EBITA	378.8	407.6	433.0	484.8	530.9	586.0	611.5	676.2	720.9
% Change	13.8%	7.6%	6.2%	12.0%	9.5%	10.4%	4.4%	10.6%	6.6%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	378.8	407.6	433.0	484.8	530.9	586.0	611.5	676.2	720.9
Net financial items	(47.0)	(57.6)	(67.0)	(61.2)	(58.6)	(65.6)	(108.8)	(121.3)	(127.2)
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax	(115.3)	(112.4)	(107.2)	(125.4)	(138.8)	(155.7)	(150.8)	(166.5)	(178.1)
Associates [contribution]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	216.5	237.6	258.8	298.2	333.5	364.7	351.8	388.4	415.6
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net attributable profit [loss]	216.5	237.6	258.8	298.2	333.5	364.7	351.8	388.4	415.6
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net attrib. profit [loss], restated	216.5	237.6	258.8	298.2	333.5	364.7	351.8	388.4	415.6
% Change	13.4%	9.7%	8.9%	15.2%	11.8%	9.4%	-3.5%	10.4%	7.0%
Cash flow	401.4	425.3	461.9	514.8	583.4	664.3	672.7	725.8	765.3
Balance Sheet									
Shareholders' equity [group share]	1 235.2	1 343.9	1 440.4	1 581.3	1 736.2	1 861.6	1 976.4	2 118.5	2 262.2
Minority interests	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net debt [cash]	1 771.7	1 942.7	2 351.3	2 904.0	3 175.3	3 442.6	3 813.2	4 012.3	4 192.3
Gearing [%]	143.4	144.6	163.2	183.6	182.9	184.9	192.9	189.4	185.3
Per Share Data (at 3/10/2012)									
EPS before goodwill	0.91	1.00	1.08	1.25	1.40	1.53	1.47	1.63	1.74
EPS, reported	0.91	1.00	1.08	1.25	1.40	1.53	1.47	1.63	1.74
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	0.47	0.60	0.65	0.75	0.84	0.99	1.03	1.14	1.22
Cash flow per share	1.68	1.78	1.94	2.16	2.44	2.78	2.82	3.04	3.21
Book value per share	4.7	5.0	5.4	5.9	6.4	6.8	7.3	7.7	8.3
No. of shares, adjusted	238.700	238.700	238.700	238.700	238.700	238.700	238.700	238.700	238.700
Latest price	17.62	19.99	15.56	15.43	14.92	14.29	16.02	16.02	16.02
Market capitalisation	4 205.9	4 771.6	3 714.2	3 681.9	3 560.2	3 411.0	3 822.8	3 822.8	3 822.8
Enterprise value	5 977.6	6 714.3	6 065.5	6 586.0	6 735.5	6 853.6	7 636.0	7 835.1	8 015.1
Valuation									
P/E	19.4	20.1	14.4	12.3	10.7	9.4	10.9	9.8	9.2
P/E before goodwill	19.4	20.1	14.4	12.3	10.7	9.4	10.9	9.8	9.2
P/CF	10.5	11.2	8.0	7.2	6.1	5.1	5.7	5.3	5.0
Attrib. FCF yield [%]	NS	NS	NS	NS	NS	NS	NS	1.2	2.4
P/BV	3.7	4.0	2.9	2.6	2.3	2.1	2.2	2.1	1.9
Enterprise value / Op CE	2.0	2.0	1.6	1.5	1.4	1.3	1.3	1.3	1.2
Yield [%]	2.7	3.0	4.2	4.9	5.6	6.9	6.4	7.1	7.6
EV/EBITDA, restated	10.6	11.3	9.5	9.4	8.6	7.7	8.2	7.7	7.5
EV/EBITA, restated	15.8	16.5	14.0	13.6	12.7	11.7	12.5	11.6	11.1
EV/Sales	7.68	8.22	7.05	7.31	6.73	5.93	6.30	5.96	5.74
EV/Debt-adjusted cash flow	13.8	14.5	11.9	11.8	10.8	9.7	10.2	9.7	9.4
Return [%]									
Pre-tax ROCE	12.6	12.4	11.4	10.8	10.8	11.0	10.5	11.0	11.1
ROE [%]	19.2	19.4	19.7	20.8	21.2	21.7	19.5	20.2	20.2
ROE, restated	19.2	19.4	19.7	20.8	21.2	21.7	19.5	20.2	20.2

UTILITIES

E.ON

Stay cautious

■ Investment case

Compared with RWE, E.ON's business mix is more diversified in terms of both its operating profile (electricity vs gas) and its regional spread. However, its regional diversification in particular has come at a high cost. Subsequent to its market entry in southern Europe through the acquisition of Endesa/Enel assets in 2008 for EUR11.5bn, E.ON impaired assets of EUR6.5bn, reflecting the substantial decline in profitability. Furthermore, its market entry into Russia has yet to deliver returns high enough to cover its cost of capital. According to our estimates, the group's post-tax ROCE in Russia will be below 7% in 2013E, which raises the question of further potential impairments. In this context, investors are also sceptical on E.ON's recent entry into the Brazilian market, where it plans to build up to 20GW of generation capacity in the long term in a 50:50 joint venture with MPX.

■ Gas-to-renewables exposure

The company has one of the largest mid and downstream gas businesses in Europe. This is increasingly being transformed into an optimising function in the context of the company's other businesses, last not least power generation and renewables.

Due to its high level of dependence on gas business, E.ON has suffered substantially in recent years as a result of the decoupling of the gas price from the oil price (negative oil-to-gas spread), which has been driven by both the decline in gas consumption and by the discovery of unconventional gas fields.

Meanwhile, E.ON has renegotiated most of its gas supply contracts so that either the price formulas for its gas purchases now include a spot gas price instead of being tied to the oil price, or the starting point for the oil price development in the formulas has been altered. However, a substantial number of these solutions are based on so-called quick fixes, some of which will expire in autumn this year and will need to be renegotiated once again.

In its 2013 guidance management assumes the company will record no further losses with any of its gas supply contracts.

■ Valuation and rating

Looking at consensus, we find it striking that the market has yet to price in the EPS-dilutive impact of assets disposals totalling around EUR6bn (EUR3bn of which have recently been achieved through the sale of the gas transmission grid).

On our estimates, E.ON is trading broadly on par with its peers across virtually all multiples, with the exception of P/B where it offers a >30% discount. As long as there is a risk of a cut in the company's medium-term guidance, potentially driven by asset disposals, a decline in commodity prices or the impact of the gas-to-oil spread, and as long as this is not reflected in consensus, we would advise investors to remain cautious on E.ON.

Sebastian KAUFFMANN

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Rating	3/Underperform
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Target price (6 months)	-9.2% EUR17.00
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Price (03/10/2012)	EUR18.72
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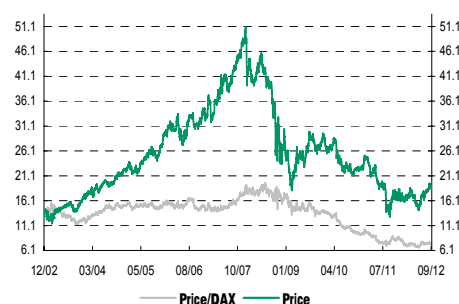
Reuters: EONGn.DE Bloomberg: EOAN GR

Stock data

Market capitalisation	EUR35,661m
Free float	EUR35,661m
Enterprise value	EUR69,704m
No. of shares, adjusted	1,905m
Daily volume	EUR139m

Performances

	1 month	3 months	12 months
Absolute perf.	1.1%	8.9%	15.5%
Relative perf.	-3.1%	-2.2%	-15.2%



Shareholders

Free Float 100.0%

	2011	2012E	2013E	2014E
P/E (x)	12.7	8.0	11.0	10.6
EV/EBITDA (x)	6.8	6.4	6.6	6.5
Attrib. FCF yield (%)	NS	8.7	5.5	4.8
Net debt/EBITDA (x)	2.8	1.9	1.9	1.9
Yield (%)	6.0	5.9	5.9	5.9
ROCE after tax (%)	4.4	8.0	5.9	5.8
EV/Capital empl. (x)	0.8	0.9	0.9	0.9

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E.ON

FY to 31/12 (EUR m)	2006	2007	2008	2009	2010	2011	2012E	2013E	2014E
Profit & Loss Account									
Sales	64 091.0	68 731.0	86 753.0	79 974.0	92 863.0	112 954.0	133 073.0	144 336.3	148 254.0
% Change	13.6%	7.2%	26.2%	-7.8%	16.1%	21.6%	17.8%	8.5%	2.7%
Staff costs	(4 529.0)	(4 597.0)	(5 130.0)	(5 158.0)	(5 281.0)	(5 947.0)	(7 075.6)	(7 750.5)	(8 039.7)
Other costs	(47 838.0)	(51 684.0)	(68 238.0)	(61 841.0)	(74 236.0)	(97 714.0)	(115 082.9)	(125 659.1)	(128 928.6)
EBITDA	11 724.0	12 450.0	13 385.0	12 975.0	13 346.0	9 293.0	10 914.5	10 926.7	11 285.7
% Change	15.0%	6.2%	7.5%	-3.1%	2.9%	-30.4%	17.4%	0.1%	3.3%
Depreciation	(3 368.0)	(3 242.0)	(3 507.0)	(3 684.0)	(3 892.0)	(3 855.0)	(3 682.3)	(3 993.8)	(4 220.6)
EBITA	8 356.0	9 208.0	9 878.0	9 291.0	9 454.0	5 438.0	7 232.2	6 932.9	7 065.1
% Change	14.6%	10.2%	7.3%	-5.9%	1.8%	-42.5%	33.0%	-4.1%	1.9%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	8 356.0	9 208.0	9 878.0	9 291.0	9 454.0	5 438.0	7 232.2	6 932.9	7 065.1
Net financial items	(1 045.0)	(960.0)	(1 835.0)	(2 201.0)	(2 257.0)	(1 776.0)	(1 450.2)	(1 595.3)	(1 536.9)
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	(1 964.0)	1 765.0	(5 588.0)	4.0	1 030.0	(4 264.0)	0.0	0.0	0.0
Tax	(40.0)	(2 613.0)	(2 108.0)	(1 748.0)	(1 887.0)	(803.0)	(1 023.5)	(1 681.3)	(1 741.4)
Associates [contribution]	775.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	6 082.0	5 635.0	5 935.0	5 346.0	5 310.0	2 859.0	4 762.5	3 656.2	3 786.8
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	(496.0)	(520.0)	(338.0)	(249.0)	(428.0)	(358.0)	(326.1)	(412.6)	(420.5)
Net attributable profit [loss]	5 586.0	5 115.0	5 597.0	5 097.0	4 882.0	2 501.0	4 436.4	3 243.6	3 366.3
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net attrib. profit [loss], restated	5 586.0	5 115.0	5 597.0	5 097.0	4 882.0	2 501.0	4 436.4	3 243.6	3 366.3
% Change	-24.6%	-8.4%	9.4%	-8.9%	-4.2%	-48.8%	77.4%	-26.9%	3.8%
Cash flow	8 073.0	8 648.0	7 658.0	9 353.0	9 159.0	6 476.0	11 515.8	9 222.5	8 613.8
Balance Sheet									
Shareholders' equity [group share]	46 251.0	49 374.0	34 484.0	40 379.0	43 595.4	35 737.0	37 722.2	38 717.3	39 835.1
Minority interests	4 994.0	5 756.0	3 960.0	3 607.0	6 408.6	3 876.0	4 202.1	4 614.7	5 035.2
Net debt [cash]	5 813.0	18 577.0	37 387.0	33 567.0	20 413.8	26 062.0	20 217.5	21 057.1	21 664.5
Gearing [%]	11.3	33.7	97.3	76.3	40.8	65.8	48.2	48.6	48.3
Per Share Data (at 3/10/2012)									
EPS before goodwill	2.83	2.62	3.01	2.68	2.56	1.31	2.33	1.70	1.77
EPS, reported	2.83	2.62	3.01	2.68	2.56	1.31	2.33	1.70	1.77
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	1.12	1.37	1.50	1.26	1.50	1.00	1.10	1.10	1.10
Cash flow per share	4.08	4.43	4.11	4.91	4.81	3.40	6.04	4.84	4.52
Book value per share	22.3	24.7	16.6	19.9	21.4	17.8	18.7	19.2	19.8
No. of shares, adjusted	1977.600	1894.870	1904.530	1905.460	1905.410	1905.470	1905.470	1905.470	1905.470
Latest price	34.43	48.54	28.44	29.23	22.94	16.67	18.72	18.72	18.72
Market capitalisation	71 158.4	91 977.0	54 164.8	55 696.6	43 700.6	31 764.2	35 660.9	35 660.9	35 660.9
Enterprise value	81 340.2	108 984.7	111 258.1	98 192.3	79 099.3	63 023.9	69 704.4	72 563.6	73 242.9
Valuation									
P/E	12.2	18.5	9.5	10.9	9.0	12.7	8.0	11.0	10.6
P/E before goodwill	12.2	18.5	9.5	10.9	9.0	12.7	8.0	11.0	10.6
P/CF	8.4	11.0	6.9	6.0	4.8	4.9	3.1	3.9	4.1
Attrib. FCF yield [%]	19.5	1.7	NS	NS	6.9	NS	8.7	5.5	4.8
P/BV	1.5	2.0	1.7	1.5	1.1	0.9	1.0	1.0	0.9
Enterprise value / Op CE	1.4	1.6	1.3	1.2	0.9	0.8	0.9	0.9	0.9
Yield [%]	3.2	2.8	5.3	4.3	6.5	6.0	5.9	5.9	5.9
EV/EBITDA, restated	6.9	8.8	8.3	7.6	5.9	6.8	6.4	6.6	6.5
EV/EBITA, restated	9.7	11.8	11.3	10.6	8.4	11.6	9.6	10.5	10.4
EV/Sales	1.27	1.59	1.28	1.23	0.85	0.56	0.52	0.50	0.49
EV/Debt-adjusted cash flow	8.2	10.9	10.9	8.8	6.9	8.9	5.2	6.6	7.1
Return [%]									
Pre-tax ROCE	14.9	13.9	12.0	11.0	10.8	6.8	9.3	8.6	8.5
ROE [%]	12.9	10.9	17.7	13.5	11.9	7.3	12.5	8.7	8.8
ROE, restated	12.9	10.9	17.7	13.5	11.9	7.3	12.5	8.7	8.8

UTILITIES

Gas Natural

Positioned to benefit from gas opportunities

■ Investment case

GAS's distinguishing feature is its notable presence in the gas value chain (networks, supply and midstream alike). In Spain, 2012 electricity network earnings will suffer from the recent review, and generation from poor hydro. Network businesses in LatAm should improve on the normalisation of gas demand in Brazil and the absence of the one-off wealth tax in Colombia (2011).

■ Gas-to-renewables exposure

Gas Natural is the dominant gas distributor in Spain with a 75% market share), a leading gas distributor in LatAm, and a top three LNG operator in the Atlantic basin. On the gas supply side, it has a 30bcm portfolio of which c.65% in LNG form, and it is the leading Spanish supplier. EBITDA from gas activities amounts to 54% of the group total (20% from supply, the rest from distribution including 14% from LatAm distribution). The company has delivered positive earnings surprises in the last couple of quarters, explained by a better than expected performance of the gas supply business, where it has taken advantage of lucrative international supply opportunities.

■ Valuation and rating

Our TP is EUR12.50 (37% upside). We value the core Spanish gas and electricity networks with a DCF methodology. Spanish generation is valued using a mix of DCF and EV/MW, which yields a EUR0.42m/MW average valuation (CCGT-based mix). The rest of the units are mostly valued at c.6x EBITDA.

Rating 2/Outperform

Target price (6 months) +8.7% **EUR12.50**
Price (03/10/2012) **EUR11.50**

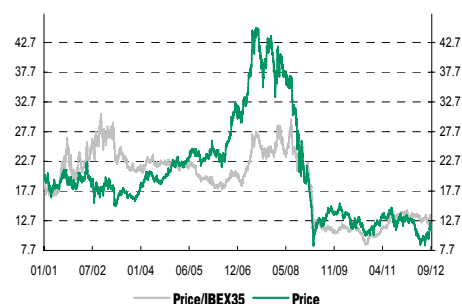
 Reuters: **GAS.MC** Bloomberg: **GAS SM**

Stock data

Market capitalisation	EUR11,644m
Free float	EUR48,55m
Enterprise value	EUR31,328m
No. of shares, adjusted	1,013m
Daily volume	EUR18m

Performances

	1 month	3 months	12 months
Absolute perf.	16.2%	14.2%	-9.3%
Relative perf.	10.4%	5.3%	-3.2%



Shareholders

Free Float 41.7%, Criteria Caixa Corp 35.3%, Repsol 30.0%, Catalunya Caixa 3.0%

	2011	2012E	2013E	2014E
P/E (x)	9.6	9.8	9.8	8.9
EV/EBITDA (x)	7.1	6.6	5.9	5.5
Attrib. FCF yield (%)	17.8	23.5	20.1	21.4
Net debt/EBITDA (x)	3.7	3.2	2.9	2.5
Yield (%)	6.3	7.4	7.7	7.8
ROCE after tax (%)	6.2	6.6	6.8	7.3
EV/Capital empl. (x)	1.0	1.0	0.9	0.9

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Disclosures available on www.cheuvreux.com

Gas Natural

FY to 31/12 (EUR m)	2006	2007	2008	2009	2010	2011	2012E	2013E	2014E
Profit & Loss Account									
Sales	10 348.3	10 093.0	13 639.0	15 073.0	19 888.0	21 339.0	21 552.4	21 983.4	22 642.9
% Change	21.4%	-2.5%	35.1%	10.5%	31.9%	7.3%	1.0%	2.0%	3.0%
Staff costs	(277.1)	(307.9)	(338.0)	(600.0)	(798.0)	(858.0)	(853.9)	(876.0)	(892.3)
Other costs	(8 158.8)	(7 508.5)	(10 737.0)	(10 550.0)	(14 613.0)	(15 836.0)	(15 968.4)	(16 297.9)	(16 766.3)
EBITDA	1 912.4	2 276.6	2 564.0	3 923.0	4 477.0	4 645.0	4 730.1	4 809.5	4 984.3
% Change	25.9%	19.0%	12.6%	53.0%	14.1%	3.8%	1.8%	1.7%	3.6%
Depreciation	(649.3)	(709.6)	(770.0)	(1 528.0)	(1 954.0)	(1 965.0)	(2 007.2)	(2 050.8)	(2 098.7)
EBITA	1 263.1	1 567.0	1 794.0	2 395.0	2 523.0	2 680.0	2 722.9	2 758.7	2 885.6
% Change	30.4%	24.1%	14.5%	33.5%	5.3%	6.2%	1.6%	1.3%	4.6%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	1 263.1	1 567.0	1 794.0	2 395.0	2 523.0	2 680.0	2 722.9	2 758.7	2 885.6
Net financial items	(267.0)	(224.3)	(270.0)	(814.0)	(1 059.0)	(934.0)	(889.9)	(884.6)	(820.5)
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	230.3	64.3	14.0	151.0	414.0	269.2	20.0	0.0	0.0
Tax	(302.5)	(359.0)	(379.0)	(440.0)	(468.0)	(496.0)	(465.2)	(461.7)	(518.6)
Associates [contribution]	5.0	7.6	6.0	59.0	5.0	7.0	7.7	8.5	9.3
Discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	928.9	1 055.6	1 172.0	1 351.0	1 415.0	1 526.2	1 395.5	1 420.7	1 555.8
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	(74.4)	(97.1)	(115.0)	(156.0)	(214.0)	(201.0)	(217.1)	(234.4)	(253.2)
Net attributable profit [loss]	854.5	958.5	1 057.0	1 195.0	1 201.0	1 325.2	1 178.4	1 186.3	1 302.6
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	(195.8)	(54.7)	(11.9)	(114.8)	(311.6)	0.0	0.0	0.0	0.0
Net attrib. profit [loss], restated	658.7	903.8	1 057.0	1 195.0	1 201.0	1 325.2	1 178.4	1 186.3	1 302.6
% Change	23.3%	37.2%	17.0%	13.1%	0.5%	10.3%	-11.1%	0.7%	9.8%
Cash flow	1 578.2	1 473.5	1 915.0	2 669.0	2 950.0	3 215.0	3 375.0	3 463.1	3 645.2
Balance Sheet									
Shareholders' equity [group share]	5 652.2	6 070.4	6 376.0	10 681.0	11 384.0	12 792.0	13 349.4	13 671.8	14 084.6
Minority interests	344.1	357.2	345.0	1 496.0	1 590.0	1 649.0	1 866.1	2 100.5	2 353.7
Net debt [cash]	3 091.3	3 927.1	4 913.0	20 916.0	19 102.0	17 294.0	15 202.9	13 986.7	12 636.7
Gearing [%]	51.6	61.1	73.1	171.8	147.2	119.8	99.9	88.7	76.9
Per Share Data (at 3/10/2012)									
EPS before goodwill	1.47	2.02	2.36	1.30	1.30	1.39	1.17	1.17	1.29
EPS, reported	1.91	2.14	2.36	1.30	1.30	1.39	1.17	1.17	1.29
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	0.99	1.16	1.48	0.79	0.81	0.83	0.85	0.88	0.90
Cash flow per share	3.52	3.29	4.28	2.90	3.20	3.36	3.35	3.42	3.60
Book value per share	11.6	12.4	12.8	10.8	11.5	12.1	12.3	12.6	13.0
No. of shares, adjusted	447.800	447.800	447.800	921.800	921.800	991.700	1013.000	1013.000	1013.000
Latest price	29.99	40.02	19.29	15.09	11.49	13.27	11.50	11.50	11.50
Market capitalisation	13 429.5	17 921.0	8 638.1	13 905.4	10 591.5	13 154.9	11 644.4	11 644.4	11 644.4
Enterprise value	16 830.8	21 548.1	20 551.1	35 721.4	33 493.5	32 948.9	31 328.6	28 431.1	27 281.1
Valuation									
P/E	20.4	19.8	8.2	11.6	8.8	9.6	9.8	9.8	8.9
P/E before goodwill	20.4	19.8	8.2	11.6	8.8	9.6	9.8	9.8	8.9
P/CF	8.5	12.2	4.5	5.2	3.6	3.9	3.4	3.4	3.2
Attrib. FCF yield [%]	5.5	NS	16.8	6.3	1.1	17.8	23.5	20.1	21.4
P/BV	2.6	3.2	1.5	1.4	1.0	1.1	0.9	0.9	0.9
Enterprise value / Op CE	1.8	2.0	2.2	1.0	1.0	1.0	1.0	0.9	0.9
Yield [%]	3.3	2.9	7.7	5.2	7.1	6.3	7.4	7.7	7.8
EV/EBITDA, restated	8.8	9.5	8.0	9.1	7.5	7.1	6.6	5.9	5.5
EV/EBITA, restated	13.3	13.8	11.5	14.9	13.3	12.3	11.5	10.3	9.5
EV/Sales	1.63	2.14	1.51	2.37	1.68	1.54	1.45	1.29	1.21
EV/Debt-adjusted cash flow	9.5	13.1	9.7	10.9	8.9	8.4	7.8	6.9	6.4
Return [%]									
Pre-tax ROCE	13.3	14.5	19.1	7.0	7.4	8.3	8.8	9.1	9.8
ROE [%]	16.4	17.1	18.1	11.9	11.1	10.9	9.2	9.1	9.7
ROE, restated	12.4	16.1	18.1	11.9	11.1	10.9	9.2	9.1	9.7

UTILITIES

Iberdrola

Premium rating evaporated

■ Investment case

Iberdrola's distinguishing features are its below-average reliance on Spain and significant exposure to the North Atlantic. In Spain, 2012 network earnings will suffer from the recent review, and generation from poor hydro. Network businesses abroad should see steady growth, supported by visible regulatory frameworks. Renewables should bounce back on capacity additions after a difficult 2011. Our estimates for 2012-13E are 8% below consensus at EPS level. Regarding the Round II measures to tackle the tariff deficit, if we assume a nuclear tax and an adjustment of renewable revenues, Iberdrola could see an additional negative earnings impact of between 5% and 8%. If the solution comes instead in the form of an increased network fee (to EUR5/MWh), which we see as likely, the additional earnings risk for Endesa would be c.8% (partly offset by lower "bono social" payments). The end of the "ACS drama" (good from a capital allocation risk standpoint) implies an increase in the overhang risk perception.

■ Gas-to-renewables exposure

Iberdrola is Spain's largest independent integrated utility and the largest global renewables generator. Around 70% of its EBITDA comes from regulated and quasi-regulated activities (including 21% of EBITDA from global renewables generation). The company is not involved in gas distribution and its gas supply exposure is negligible. It is involved in CCGT generation, with 5900MW in Spain, 1900MW in the UK, 5000MW in Mexico, and 500MW in Brazil. The Spanish CCGT business suffers from low load factors (c.20%), having been crowded out by renewables and subsidised domestic coal. UK CCGTs profitability has been abysmal given an expensive gas supply, but old gas contracts are winding down and profitability is gradually improving. The Mexican CCGT base gives decent and stable returns, mostly linked to the availability of the plants.

■ Valuation & rating

Our TP of EUR4.59 implies 36% upside. We use a DCF for Spanish distribution (19% of EV), which implies an EV/EBITDA of 8.3x on adjusted earnings. For the UK and US networks (17% of EV), we use a RAB premium of 20%. Spanish generation is valued at an average of EUR0.65m/MW. Renewables are valued assuming a negative IRR-WACC of 1.2% for the existing portfolio.

José PORTA

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Rating 1/Selected List

Target price (6 months) **+23.1% EUR4.59**

Price (03/10/2012) **EUR3.73**

Reuters: **IBE.MC** Bloomberg: **IBE SM**

Stock data

Market capitalisation	EUR22,638m
Free float	EUR13,763m
Enterprise value	EUR53,440m
No. of shares, adjusted	6,068m
Daily volume	EUR95m

Performances

	1 month	3 months	12 months
Absolute perf.	16.0%	-0.5%	-25.1%
Relative perf.	10.2%	-8.2%	-20.1%



Shareholders

Free Float 60.8%, Acs 15.0%, Qatar Holdings 8.4%, Bbk 5.4%, Bankia 5.2%, Other Saving Banks 1.6%, Cajas Castilla-Leon 1.6%, Unicaja 1.4%, Caja Murcia 0.6%

	2011	2012E	2013E	2014E
P/E (x)	10.1	8.8	8.8	8.1
EV/EBITDA (x)	8.5	6.9	6.4	6.1
Attrib. FCF yield (%)	NS	7.9	10.7	1.8
Net debt/EBITDA (x)	4.1	3.9	3.5	3.3
Yield (%)	6.8	8.8	8.8	8.8
ROCE after tax (%)	5.8	5.5	5.8	6.2
EV/Capital empl. (x)	1.0	0.8	0.8	0.8

Disclosures available on www.cheuvreux.com

Iberdrola

FY to 31/12 (EUR m)	2006	2007	2008	2009	2010	2011	2012E	2013E	2014E
Profit & Loss Account									
Sales	11 017.4	17 468.0	25 196.1	25 891.9	30 431.0	31 648.0	33 482.8	34 831.1	36 500.6
% Change	-6.5%	58.5%	44.2%	2.8%	17.5%	4.0%	5.8%	4.0%	4.8%
Staff costs	1 173.7	(1 455.1)	(1 842.5)	(2 161.4)	(2 158.7)	(2 151.5)	(2 194.5)	(2 238.4)	(2 283.2)
Other costs	(8 301.4)	(10 474.6)	(16 941.2)	(16 915.2)	(20 744.3)	(21 846.2)	(23 513.4)	(24 554.2)	(25 595.6)
EBITDA	3 889.7	5 538.3	6 412.4	6 815.3	7 528.0	7 650.3	7 774.9	8 038.5	8 621.8
% Change	15.2%	42.4%	15.8%	6.3%	10.5%	1.6%	1.6%	3.4%	7.3%
Depreciation	(1 235.2)	(1 840.7)	(2 150.9)	(2 306.1)	(2 698.2)	(3 145.4)	(2 857.5)	(2 955.9)	(3 060.0)
EBITA	2 654.5	3 697.6	4 261.5	4 509.2	4 829.8	4 504.9	4 917.4	5 082.6	5 561.8
% Change	17.3%	39.3%	15.3%	5.8%	7.1%	-6.7%	9.2%	3.4%	9.4%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	2 654.5	3 697.6	4 261.5	4 509.2	4 829.8	4 504.9	4 917.4	5 082.6	5 561.8
Net financial items	(519.0)	(900.9)	(1 026.1)	(1 109.4)	(1 288.9)	(1 061.9)	(1 395.2)	(1 462.4)	(1 549.3)
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	181.6	261.7	555.2	225.3	271.8	45.8	50.0	50.0	50.0
Tax	(695.3)	(702.8)	(895.3)	(718.8)	(899.3)	(549.2)	(972.6)	(999.9)	(1 106.7)
Associates [contribution]	69.1	40.4	73.4	32.4	27.4	(34.5)	30.0	33.0	36.3
Discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	1 690.9	2 396.0	2 968.7	2 938.7	2 940.8	2 905.1	2 629.7	2 703.3	2 992.2
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	(30.6)	(42.3)	(108.1)	(114.4)	(70.8)	(100.7)	(50.0)	(51.4)	(56.9)
Net attributable profit [loss]	1 660.3	2 353.7	2 860.6	2 824.3	2 870.0	2 804.4	2 579.7	2 651.9	2 935.3
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	(154.4)	(261.7)	(555.2)	(225.3)	(271.8)	(45.8)	(50.0)	(50.0)	(50.0)
Net attrib. profit [loss], restated	1 505.9	2 092.0	2 305.4	2 599.0	2 598.2	2 758.6	2 529.7	2 601.9	2 885.3
% Change	17.4%	38.9%	10.2%	12.7%	0.0%	6.2%	-8.3%	2.9%	10.9%
Cash flow	2 722.4	3 213.2	3 697.9	4 058.3	4 496.8	4 881.2	4 369.5	4 507.2	4 864.5
Balance Sheet									
Shareholders' equity [group share]	10 418.2	25 537.2	23 363.6	26 637.0	29 079.0	32 887.9	34 402.7	35 963.4	37 774.7
Minority interests	148.8	2 294.5	2 344.5	2 393.0	2 584.0	319.9	369.9	421.3	478.2
Net debt [cash]	13 358.8	22 249.4	28 816.6	28 429.2	30 014.1	31 705.8	30 302.7	28 192.8	28 143.7
Gearing [%]	126.4	79.9	112.1	97.9	94.8	95.5	87.1	77.5	73.6
Per Share Data (at 3/10/2012)									
EPS before goodwill	0.42	0.47	0.46	0.51	0.49	0.48	0.43	0.43	0.46
EPS, reported	0.46	0.52	0.57	0.55	0.54	0.49	0.43	0.43	0.47
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	0.27	0.27	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Cash flow per share	0.76	0.71	0.74	0.79	0.84	0.85	0.74	0.74	0.77
Book value per share	2.6	4.8	4.3	4.7	5.0	5.3	5.3	5.4	5.6
No. of shares, adjusted	3606.200	4993.740	5002.320	5252.320	5483.840	5882.490	6067.520	6246.000	6413.390
Latest price	8.28	10.40	6.54	6.67	5.77	4.84	3.73	3.73	3.73
Market capitalisation	29 859.3	51 934.5	32 715.0	35 032.8	31 630.6	28 465.4	22 637.8	23 303.8	23 928.4
Enterprise value	40 537.3	73 483.9	72 531.6	62 598.0	64 644.7	65 171.2	53 440.5	51 796.6	52 272.1
Valuation									
P/E	19.8	22.4	14.2	13.1	11.8	10.1	8.8	8.8	8.1
P/E before goodwill	19.8	22.4	14.2	13.1	11.8	10.1	8.8	8.8	8.1
P/CF	11.0	14.6	8.8	8.4	6.8	5.7	5.1	5.1	4.8
Attrib. FCF yield [%]	NS	1.0	12.4	NS	NS	NS	7.9	10.7	1.8
P/BV	3.2	2.1	1.5	1.4	1.2	0.9	0.7	0.7	0.7
Enterprise value / Op CE	1.9	1.6	1.4	1.1	1.0	1.0	0.8	0.8	0.8
Yield [%]	3.3	2.6	5.0	4.9	5.7	6.8	8.8	8.8	8.8
EV/EBITDA, restated	10.4	13.3	11.3	9.2	8.6	8.5	6.9	6.4	6.1
EV/EBITA, restated	15.3	19.9	17.0	13.9	13.4	14.5	10.9	10.2	9.4
EV/Sales	3.68	4.21	2.88	2.42	2.12	2.06	1.60	1.49	1.43
EV/Debt-adjusted cash flow	13.1	18.8	16.2	12.7	11.8	11.3	9.9	9.3	8.7
Return [%]									
Pre-tax ROCE	12.2	7.8	8.3	7.8	7.8	6.9	7.6	8.0	8.5
ROE [%]	17.3	9.7	13.0	11.2	10.4	8.9	7.8	7.7	8.1
ROE, restated	15.6	8.5	10.4	10.3	9.4	8.8	7.6	7.5	7.9

UTILITIES

National Grid

Already appreciated

■ Investment case

National Grid has outperformed the utilities index by ~10% year to date on the back of its very safe risk profile. We fully acknowledge the stable regulatory framework in UK and the progressive turnaround of the US business, but on the other hand we believe that these factors are already priced in and that the market is anticipating a very positive outcome of the regulatory review in the UK, although Ofgem's first proposals were not completely satisfactory.

■ Gas-to-renewables exposure

National Grid owns and operates the gas and electricity transmission grids in the UK, four out of eight regional gas distribution networks and one LNG terminal. In the US, it owns and operates electricity transmission facilities in New York, Massachusetts, Rhode Island, and Vermont and gas distribution networks providing services to around 3.5m customers across the Northeastern US. National Grid has a huge investment plan (>GBP20bn for next 5Y), mainly driven by capex requirements in UK transmission, due to ambitious carbon targets, changing gas sources and ageing assets. The EBIT breakdown is as follows: 1) geographically, the US accounts for 40% and the UK 60%; 2) by business area, transmission accounts for 27%, gas distribution 37% and electricity distribution & generation 32%.

■ Valuation

We confirm our 3/Underperform rating, due to modest upside and the unattractive valuation vs Southern European networks (>20% premium to RAB vs no premium for Italian players and 9x EV/EBITDA vs <7x for Spanish names). While we appreciate the stable UK regulation to date and the need for investments to fuel future growth, we note that the stock has massively outperformed the sector, despite the fact that the initial proposals by the regulator (Ofgem) were not fully satisfactory.

Rating 3/Underperform

Target price (6 months) -0.1% 700p

Price (03/10/2012) 701p

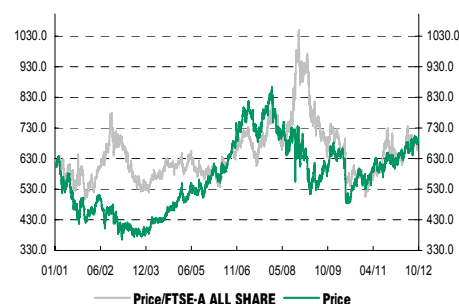
 Reuters: **NG.L** Bloomberg: **NG/ LN**

Stock data

Market capitalisation	GBP24,991m
Free float	GBP24,991m
Enterprise value	GBP48,457m
No. of shares, adjusted	3,565m
Daily volume	GBP54m

Performances

	1 month	3 months	12 months
Absolute perf.	2.0%	3.2%	9.5%
Relative perf.	0.5%	0.1%	-5.3%



Shareholders

Free Float 100.0%

	11/12	12/13E	13/14E	14/15E
P/E (x)	12.3	12.8	11.9	11.5
EV/EBITDA (x)	9.4	9.3	8.9	8.8
Attrib. FCF yield (%)	2.0	2.3	NS	NS
Net debt/EBITDA (x)	4.1	4.0	4.0	4.1
Yield (%)	6.2	5.8	6.1	6.3
ROCE after tax (%)	7.2	6.6	6.6	6.4
EV/Capital empl. (x)	1.2	1.2	1.1	1.1

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 Disclosures available on www.cheuvreux.com

National Grid

FY to 31/3 (GBP m)	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13E	2013/14E	2014/15E
Profit & Loss Account									
Sales	8 537.4	8 625.7	15 687.0	14 007.0	14 343.0	13 832.0	13 906.7	14 453.0	14 891.7
% Change	-2.6%	1.0%	81.9%	-10.7%	2.4%	-3.6%	0.5%	3.9%	3.0%
Staff costs	(1 096.6)	(1 123.9)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other costs	(4 258.4)	(4 302.8)	(11 645.0)	(9 698.0)	(9 498.0)	(9 055.0)	(8 671.2)	(8 797.3)	(8 911.1)
EBITDA	3 182.4	3 199.0	4 042.0	4 309.0	4 845.0	4 777.0	5 235.5	5 655.7	5 980.6
% Change	-1.7%	0.5%	26.4%	6.6%	12.4%	-1.4%	9.6%	8.0%	5.7%
Depreciation	(1 103.5)	(1 123.6)	(1 127.0)	(1 188.0)	(1 245.0)	(1 282.0)	(1 394.9)	(1 514.9)	(1 669.3)
EBITA	2 078.9	2 075.4	2 915.0	3 121.0	3 600.0	3 495.0	3 840.6	4 140.8	4 311.3
% Change	-3.2%	-0.2%	40.5%	7.1%	15.3%	-2.9%	9.9%	7.8%	4.1%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	2 078.9	2 075.4	2 915.0	3 121.0	3 600.0	3 495.0	3 840.6	4 140.8	4 311.3
Net financial items	(543.4)	(524.8)	(1 234.0)	(1 108.0)	(1 128.0)	(987.0)	(1 057.0)	(1 150.0)	(1 200.0)
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	30.0	30.0	(292.0)	172.0	145.0	44.0	0.0	0.0	0.0
Tax	(462.9)	(467.5)	(472.0)	(804.0)	(461.0)	(521.0)	(837.2)	(899.3)	(935.5)
Associates [contribution]	7.4	7.6	5.0	8.0	7.0	7.0	7.0	7.0	7.0
Discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	1 110.0	1 120.8	947.0	1 389.0	2 163.0	2 038.0	1 953.4	2 098.5	2 182.8
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	1.0	1.0	(3.0)	(3.0)	(4.0)	(2.0)	(2.0)	(4.0)	(4.0)
Net attributable profit [loss]	1 111.0	1 121.8	944.0	1 386.0	2 159.0	2 036.0	1 951.4	2 094.5	2 178.8
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	(30.0)	(30.0)	331.0	32.0	(412.0)	(208.0)	0.0	0.0	0.0
Net attrib. profit [loss], restated	1 081.0	1 091.8	1 275.0	1 418.0	1 747.0	1 828.0	1 951.4	2 094.5	2 178.8
% Change	6.9%	1.0%	16.8%	11.2%	23.2%	4.6%	6.8%	7.3%	4.0%
Cash flow	2 176.1	2 206.8	4 042.0	4 309.0	3 717.0	3 790.0	4 178.5	4 505.7	4 780.6
Balance Sheet									
Shareholders' equity [group share]	(391.8)	(329.5)	3 970.0	4 199.0	9 060.0	9 239.0	9 789.4	10 426.7	11 090.2
Minority interests	32.0	32.0	14.0	12.0	9.0	7.0	8.0	9.0	10.0
Net debt [cash]	11 153.3	10 772.8	22 673.0	22 139.0	18 731.0	19 597.0	20 718.6	22 598.9	24 752.6
Gearing [%]	NS	NS	NS	NS	206.5	212.0	211.5	216.6	223.0
Per Share Data (at 3/10/2012)									
EPS before goodwill	0.40	0.40	0.45	0.50	0.52	0.51	0.55	0.59	0.61
EPS, reported	0.41	0.42	0.33	0.48	0.64	0.57	0.55	0.59	0.61
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	0.27	0.29	0.32	0.37	0.38	0.39	0.41	0.43	0.44
Cash flow per share	0.81	0.82	1.41	1.51	1.10	1.06	1.17	1.26	1.34
Book value per share	(0.4)	(0.4)	1.1	1.1	2.3	2.2	2.3	2.5	2.7
No. of shares, adjusted	2705.000	2705.000	2864.000	2864.000	3378.000	3565.000	3565.000	3565.000	3565.000
Latest price	6.63	7.50	6.15	6.11	5.53	6.31	7.01	7.01	7.01
Market capitalisation	17 934.2	20 287.5	17 616.5	17 499.0	18 680.3	22 477.3	24 990.7	24 990.7	24 990.7
Enterprise value	29 142.5	31 124.8	43 186.4	42 426.8	39 581.0	44 797.4	48 457.7	50 338.0	52 491.7
Valuation									
P/E	16.6	18.6	13.8	12.3	10.7	12.3	12.8	11.9	11.5
P/E before goodwill	16.6	18.6	13.8	12.3	10.7	12.3	12.8	11.9	11.5
P/CF	8.2	9.2	4.4	4.1	5.0	5.9	6.0	5.5	5.2
Attrib. FCF yield [%]	5.2	5.5	22.7	9.2	3.9	2.0	2.3	NS	NS
P/BV	NS	NS	5.8	5.6	2.4	2.9	3.0	2.8	2.6
Enterprise value / Op CE	1.9	2.1	1.2	1.2	1.1	1.2	1.2	1.1	1.1
Yield [%]	4.1	3.9	5.2	6.0	6.8	6.2	5.8	6.1	6.3
EV/EBITDA, restated	9.2	9.7	10.7	9.8	8.2	9.4	9.3	8.9	8.8
EV/EBITA, restated	14.0	15.0	14.8	13.6	11.0	12.8	12.6	12.2	12.2
EV/Sales	3.41	3.61	2.75	3.03	2.76	3.24	3.48	3.48	3.53
EV/Debt-adjusted cash flow	11.4	12.1	8.9	8.4	8.5	9.7	9.8	9.4	9.3
Return [%]									
Pre-tax ROCE	13.8	14.1	8.1	8.6	9.7	9.0	9.4	9.4	9.1
ROE [%]	NS	NS	27.0	39.5	27.1	24.8	22.1	22.3	21.8
ROE, restated	NS	NS	38.3	40.6	21.3	22.0	22.1	22.3	21.8

OIL & GAS

Royal Dutch Shell

Good visibility, strong gas portfolio

■ Investment case

Shell offers good visibility. We like: 1) its superior production growth (production target of 4mboe/d in 2017-18, ie CAGR of 3.2-3.7%); 2) the strong increase in operating CF over 2012-15E (CFFO +30-50% over 2012-15 vs 2008-11 depending on oil price at USD80 or at USD100/b); 3) its attractive and well-balanced E&P portfolio; 4) the ongoing restructuring of its downstream activity; 5) its sound balance sheet with low gearing (8.1% at end Q2-12); and 6) the high dividend yield of 5.1% and the good visibility on dividends. Shell is the most defensive stock of our oil & gas universe as it only needs a USD80/b to cover its capex and dividend. This is why we believe there will be room for a dividend increase in the coming years. Shell also offers the best combination of leading organic RRR and F&D costs trends. In our view, the group has one of the best pipelines of organic reinvestment opportunities.

■ Gas exposure

At 58% of proven reserves at end-2011, Shell's exposure to natural gas is the highest among the oil & gas majors. It benefits from a leading position in the LNG value chain thanks to 20Mt p.a. of onstream capacity and an additional 8Mt p.a. under construction. Around 90% of this capacity is long-term contracted and around 80% of the portfolio is linked to the oil price. To fuel future LNG growth, the group is also assessing an additional 15Mt p.a. of future options. In the gas value chain, Shell also benefits from key proprietary technologies like gas-to-liquids with Pearl GTL in Qatar or floating LNG with Prelude in Australia. North America accounts for 11% of Shell's proven gas reserves (o/w 7% in the US and 4% in Canada). Given the low US gas prices, some currently uneconomic reserves could have to be debooked. Yet the breakeven of Shell's onshore shale and tight gas portfolio in the US is about USD3/mbtu on an NPV basis and about USD1.5/mbtu on a cash basis. On top of this, the group is working to mature new options for this gas: notably the construction of a 12Mt p.a. LNG plant in Western Canada. It has also launched a 0.3Mt p.a. LNG unit for gas-to-transport in Canada while two similar gas-to-transport projects are under study in the US. The company is also considering gas-to-chemicals, GTL and LNG options in the US.

■ Valuation

Shell is trading in line with the other Europeans Oil & Gas majors on a P/E basis despite offering better fundamentals and a much lower cash breakeven point. Its dividend yield of 5.1% is also quite attractive. Our EUR32.50 target price offers one of the best upsides in the sector.

Dominique PATRY

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Rating 1/Selected List

 Target price (6 months) **+20.5% EUR32.50**

 Price (03/10/2012) **EUR26.96**

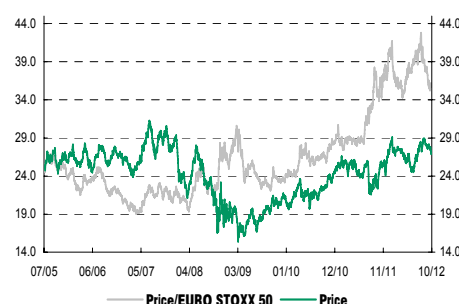
 Reuters: **RDSa.AS** Bloomberg: **RDSA NA**

Stock data

Market capitalisation	USD216,380m
Free float	USD216,380m
Enterprise value	USD204,135m
No. of shares, adjusted	6,220m
Daily volume	USD158m

Performances

	1 month	3 months	12 months
Absolute perf.	-4.0%	-0.9%	17.8%
Relative perf.	-5.1%	-7.7%	1.0%



Shareholders

Free Float 100.0%

	2011	2012E	2013E	2014E
P/E (x)	9.2	8.2	7.8	8.0
EV/EBITDA (x)	4.0	3.4	3.1	3.1
Attrib. FCF yield (%)	4.7	7.8	5.6	5.3
Net debt/EBITDA (x)	0.5	0.3	0.2	0.2
Yield (%)	3.2	5.1	5.2	5.3
ROCE after tax (%)	13.8	13.4	14.1	12.6
EV/Capital empl. (x)	1.3	1.1	1.0	0.9

 Disclosures available on www.cheuvreux.com

Royal Dutch Shell

FY to 31/12 (USD m)	2006	2007	2008	2009	2010	2011	2012E	2013E	2014E
Profit & Loss Account									
Sales	318 845.0	355 782.0	458 361.0	278 188.0	368 056.0	470 171.0	456 395.0	422 588.0	380 329.0
% Change	3.9%	11.6%	28.8%	-39.3%	32.3%	27.7%	-2.9%	-7.4%	-10.0%
Staff costs	(10 744.0)	(11 562.0)	(11 410.0)	(14 747.0)	(14 106.0)	(14 388.0)	(14 676.0)	(14 969.0)	(15 269.0)
Other costs	(256 562.0)	(300 607.0)	(399 572.0)	(233 148.0)	(315 594.0)	(398 725.0)	(382 186.0)	(341 324.0)	(300 051.0)
EBITDA	51 539.0	43 613.0	47 379.0	30 293.0	38 356.0	57 058.0	59 533.0	66 295.0	65 009.0
% Change	20.3%	-15.4%	8.6%	-36.1%	26.6%	48.8%	4.3%	11.4%	-1.9%
Depreciation	(12 615.0)	(13 180.0)	(13 656.0)	(14 458.0)	(15 595.0)	(13 228.0)	(15 473.0)	(15 991.0)	(16 339.0)
EBITA	38 924.0	30 433.0	33 723.0	15 835.0	22 761.0	43 830.0	44 060.0	50 304.0	48 670.0
% Change	26.2%	-21.8%	10.8%	-53.0%	43.7%	92.6%	0.5%	14.2%	-3.2%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	38 924.0	30 433.0	33 723.0	15 835.0	22 761.0	43 830.0	44 060.0	50 304.0	48 670.0
Net financial items	2 000.0	5 760.0	5 133.0	1 965.0	4 143.0	5 581.0	(1 249.0)	(919.0)	(893.0)
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax	(18 317.0)	(18 650.0)	(24 344.0)	(8 302.0)	(14 870.0)	(24 475.0)	0.0	0.0	0.0
Associates [contribution]	6 671.0	8 234.0	7 446.0	4 976.0	5 953.0	8 737.0	0.0	0.0	0.0
Discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	26 244.0	28 069.0	31 746.0	9 922.0	18 976.0	28 830.0	27 298.0	28 184.0	27 269.0
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	(879.0)	(505.0)	(380.0)	(118.0)	(333.0)	(205.0)	(300.0)	(300.0)	(300.0)
Net attributable profit [loss]	25 365.0	27 564.0	31 366.0	9 804.0	18 643.0	28 625.0	26 998.0	27 884.0	26 969.0
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	(491.0)	(2 259.0)	(2 956.0)	1 749.0	(570.0)	(3 938.0)	(625.0)	0.0	0.0
Net attrib. profit [loss], restated	24 874.0	25 305.0	28 410.0	11 553.0	18 073.0	24 687.0	26 373.0	27 884.0	26 969.0
% Change	15.9%	1.7%	12.3%	-59.3%	56.4%	36.6%	6.8%	5.7%	-3.3%
Cash flow	36 627.0	41 172.0	36 363.0	23 937.0	33 612.0	43 447.0	44 381.0	44 175.0	43 608.0
Balance Sheet									
Shareholders' equity [group share]	105 726.0	123 960.0	127 285.0	136 431.0	148 013.0	169 517.0	186 674.0	203 646.0	219 484.0
Minority interests	9 219.0	2 008.0	1 581.0	1 704.0	1 767.0	1 486.0	1 356.0	1 218.0	1 080.0
Net debt [cash]	6 771.0	8 443.0	8 081.0	25 314.0	30 888.0	25 883.0	15 735.0	14 910.0	14 871.0
Gearing [%]	5.9	6.7	6.3	18.3	20.6	15.1	8.4	7.3	6.7
Per Share Data (at 3/10/2012)									
EPS before goodwill	3.86	4.03	4.60	1.89	2.94	3.97	4.24	4.48	4.34
EPS, reported	3.94	4.39	5.08	1.60	3.04	4.60	4.34	4.48	4.34
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	1.31	1.46	1.59	1.75	1.63	1.18	1.79	1.82	1.86
Cash flow per share	5.69	6.55	5.89	3.91	5.48	6.98	7.14	7.10	7.01
Book value per share	15.1	18.3	19.0	20.5	22.5	26.1	28.2	30.9	33.4
No. of shares, adjusted	6440.000	6284.000	6171.000	6129.000	6139.000	6222.000	6220.000	6220.000	6220.000
Latest price	33.54	39.35	26.11	30.24	33.04	36.42	34.54	34.79	34.79
Market capitalisation	215 982.5	247 288.2	161 097.8	185 318.2	202 858.5	226 625.8	216 380.2	216 380.2	216 380.2
Enterprise value	222 716.6	233 729.2	144 595.5	184 218.0	205 288.4	226 120.9	204 135.5	203 091.3	202 833.5
Valuation									
P/E	8.7	9.8	5.7	16.0	11.2	9.2	8.2	7.8	8.0
P/E before goodwill	8.7	9.8	5.7	16.0	11.2	9.2	8.2	7.8	8.0
P/CF	5.9	6.0	4.4	7.7	6.0	5.2	4.9	4.9	5.0
Attrib. FCF yield [%]	4.1	4.1	5.7	NS	0.4	4.7	7.8	5.6	5.3
P/BV	2.2	2.2	1.4	1.5	1.5	1.4	1.2	1.1	1.0
Enterprise value / Op CE	1.8	1.7	1.1	1.1	1.2	1.3	1.1	1.0	0.9
Yield [%]	3.9	3.7	6.1	5.8	4.9	3.2	5.1	5.2	5.3
EV/EBITDA, restated	4.3	5.4	3.1	6.1	5.4	4.0	3.4	3.1	3.1
EV/EBITA, restated	5.7	7.7	4.3	11.6	9.0	5.2	4.6	4.0	4.2
EV/Sales	0.70	0.66	0.32	0.66	0.56	0.48	0.45	0.48	0.53
EV/Debt-adjusted cash flow	5.8	6.1	4.2	8.0	6.5	5.6	4.5	4.5	4.6
Return [%]									
Pre-tax ROCE	31.1	22.6	25.1	9.8	13.0	24.7	23.9	25.1	22.5
ROE [%]	27.3	25.0	28.1	7.5	13.4	18.4	15.6	14.7	13.1
ROE, restated	26.7	22.7	25.1	8.8	13.0	15.7	15.2	14.7	13.1

CAPITAL GOODS

SIEMENS AG

Improvement on the horizon

■ Investment case

Siemens has shortcomings, but they seem well priced in, while FY2013E could benefit from a more positive opex/margin story and a low comparison base. Most of the one-offs seem to be behind us, and the next few quarters could be more profitable and cash-generative than recently. Management might announce a new efficiency and cost improvement plan with its Q4 numbers. Last but not least, the share buybacks add more support.

■ Gas-to-renewables exposure

Siemens is one of the two leading gas turbine firms in the world. Gas (turbines and service) represent nearly all of the Fossil Power business (c.EUR11bn sales, c.EUR2.1bn operating profit). Siemens is strong in most regions of the world, particularly North America. Furthermore, the need for gas exploration, transport, treatment and storage will also add business in Oil & Gas (EUR5.3bn sales), Industry Automation (EUR9.3bn sales), Transportation & Logistics (EUR5.7bn sales), even though it is not possible to quantify this at this stage. In fact, the group is able to provide equipment and services at every stage of the value chain.

■ Valuation

Siemens shares are still attractive: the discount to Capital Goods Europe now stands at c.12% on average, and Siemens is still trading in the lower part of its historical valuation bands. Our DCF valuation points to EUR85 currently, while peers' multiples are on the rise with the most recent stockmarket rebound. Siemens is also this year executing a share buyback programme of EUR3bn, of which EUR1.1bn has already been done. The programme represents an EPS accretion of c.4.5%(E). For shareholders, this combines with a rich dividend yield of 3.8%.

Rating 2/Outperform

Target price (6 months) +2.3% **EUR81.00**
Price (03/10/2012) **EUR79.18**

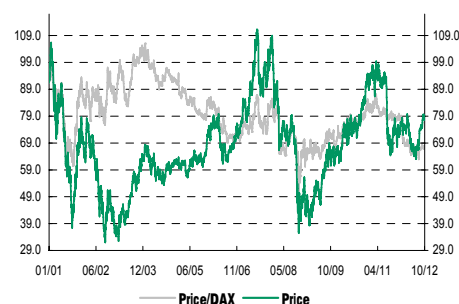
 Reuters: **SIEGn.DE** Bloomberg: **SIE GR**

Stock data

Market capitalisation	EUR68,100m
Free float	EUR64,014m
Enterprise value	EUR77,309m
No. of shares, adjusted	877m
Daily volume	EUR304m

Performances

	1 month	3 months	12 months
Absolute perf.	4.5%	17.4%	18.1%
Relative perf.	0.1%	5.4%	-13.3%



Shareholders

Free Float 94.0%, Siemens Family 6.0%

	10/11	11/12E	12/13E	13/14E
P/E (x)	12.5	11.4	11.7	10.5
EV/EBITDA (x)	6.7	7.6	7.1	6.5
Attrib. FCF yield (%)	6.1	3.9	7.2	7.6
Net debt/EBITDA (x)	0.8	1.0	1.0	0.8
Yield (%)	4.1	3.9	3.8	4.2
ROCE after tax (%)	18.0	14.1	14.7	15.1
EV/Capital empl. (x)	2.1	2.1	2.0	1.9

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 Disclosures available on www.cheuvreux.com

SIEMENS AG

FY to 30/9 (EUR m)	2006	2007	2008	2009	2010	2011	2012E	2013E	2014E
Profit & Loss Account									
Sales	66 487.0	72 448.0	77 327.0	76 651.0	75 978.0	73 515.0	78 641.0	78 329.0	80 256.0
% Change	2.1%	9.0%	6.7%	-0.9%	-0.9%	-3.2%	7.0%	-0.4%	2.5%
Staff costs	(22 790.0)	(22 525.0)	(25 646.0)	(24 669.0)	(25 678.0)	(23 198.0)	(24 580.0)	(24 247.0)	(24 603.0)
Other costs	(37 819.0)	(41 171.0)	(45 976.0)	(42 764.0)	(40 266.0)	(39 721.0)	(43 954.0)	(43 262.0)	(44 214.0)
EBITDA	5 878.0	8 752.0	5 705.0	9 218.0	10 034.0	10 596.0	10 107.0	10 820.0	11 439.0
% Change	-14.7%	48.9%	-34.8%	61.6%	8.9%	5.6%	-4.6%	7.1%	5.7%
Depreciation	(3 118.0)	(3 751.0)	(3 213.0)	(2 871.0)	(4 118.0)	(2 638.0)	(2 674.0)	(2 781.0)	(2 849.0)
EBITA	2 760.0	5 001.0	2 492.0	6 347.0	5 916.0	7 958.0	7 433.0	8 039.0	8 590.0
% Change	-17.9%	81.2%	-50.2%	154.7%	-6.8%	34.5%	-6.6%	8.2%	6.9%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	2 760.0	5 001.0	2 492.0	6 347.0	5 916.0	7 958.0	7 433.0	8 039.0	8 590.0
Net financial items	254.0	(8.0)	122.0	(510.0)	(65.0)	491.0	147.0	(195.0)	25.0
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	703.0	129.0	4 027.0	40.0	(44.0)	(690.0)	(240.0)	200.0	300.0
Tax	(776.0)	(1 192.0)	(1 015.0)	(1 434.0)	(1 699.0)	(2 231.0)	(2 155.0)	(2 413.0)	(2 686.0)
Associates [contribution]	404.0	108.0	260.0	(1 946.0)	(40.0)	793.0	(300.0)	200.0	250.0
Discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	3 345.0	4 038.0	5 886.0	2 497.0	4 068.0	6 321.0	4 886.0	5 831.0	6 479.0
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	(210.0)	(232.0)	(161.0)	(205.0)	(169.0)	(176.0)	(140.0)	(160.0)	(180.0)
Net attributable profit [loss]	3 135.0	3 806.0	5 725.0	2 292.0	3 899.0	6 145.0	4 746.0	5 671.0	6 299.0
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	(540.0)	(70.0)	(4 022.0)	205.0	169.0	(1 000.0)	1 250.0	170.0	190.0
Net attrib. profit [loss], restated	2 595.0	3 736.0	1 703.0	2 497.0	4 068.0	5 145.0	5 996.0	5 671.0	6 299.0
% Change	3.8%	44.0%	-54.4%	46.6%	62.9%	26.5%	16.5%	-5.4%	11.1%
Cash flow	6 226.0	8 034.0	3 597.0	7 079.0	8 361.0	8 924.0	6 895.0	8 030.0	8 719.0
Balance Sheet									
Shareholders' equity [group share]	25 573.0	28 996.0	26 774.0	26 646.0	28 346.0	31 530.0	32 556.0	32 570.0	36 214.0
Minority interests	702.0	631.0	606.0	641.0	750.0	626.0	766.0	926.0	1 106.0
Net debt [cash]	4 487.0	11 299.0	11 989.0	11 785.0	8 177.0	8 543.0	10 517.0	11 260.0	8 719.0
Gearing [%]	17.1	38.1	43.8	43.2	28.1	26.6	31.6	33.6	23.4
Per Share Data (at 3/10/2012)									
EPS before goodwill	2.77	4.00	1.90	2.86	4.64	5.89	6.83	6.79	7.55
EPS, reported	3.34	4.07	6.39	2.63	4.44	7.04	5.41	6.79	7.55
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	1.45	1.60	1.60	1.60	2.70	3.00	3.00	3.00	3.30
Cash flow per share	6.64	8.59	4.01	8.12	9.53	10.22	7.86	9.62	10.44
Book value per share	25.8	29.4	28.3	29.0	29.6	33.1	34.1	36.0	40.1
No. of shares, adjusted	937.600	935.200	896.298	871.747	877.480	873.098	877.466	834.886	834.886
Latest price	75.14	108.86	52.68	64.21	92.70	73.94	79.18	79.18	79.18
Market capitalisation	70 451.3	101 805.9	47 217.0	55 974.9	81 342.4	64 556.9	68 100.1	66 106.3	66 106.3
Enterprise value	78 054.2	112 269.0	56 739.5	66 182.3	90 839.8	71 235.4	77 309.7	76 288.6	73 958.1
Valuation									
P/E	27.1	27.3	27.7	22.4	20.0	12.5	11.4	11.7	10.5
P/E before goodwill	27.1	27.3	27.7	22.4	20.0	12.5	11.4	11.7	10.5
P/CF	11.3	12.7	13.1	7.9	9.7	7.2	9.9	8.2	7.6
Attrib. FCF yield [%]	NS	0.1	8.4	4.5	7.7	6.1	3.9	7.2	7.6
P/BV	2.9	3.7	1.9	2.2	3.1	2.2	2.3	2.2	2.0
Enterprise value / Op CE	2.3	3.8	1.7	2.0	2.6	2.1	2.1	2.0	1.9
Yield [%]	1.9	1.5	3.0	2.5	2.9	4.1	3.9	3.8	4.2
EV/EBITDA, restated	13.3	12.8	9.9	7.2	9.1	6.7	7.6	7.1	6.5
EV/EBITA, restated	28.3	22.4	22.8	10.4	15.4	9.0	10.4	9.5	8.6
EV/Sales	1.17	1.55	0.73	0.86	1.20	0.97	0.98	0.97	0.92
EV/Debt-adjusted cash flow	12.6	13.7	15.9	8.8	10.5	8.2	11.1	9.1	8.3
Return [%]									
Pre-tax ROCE	8.2	17.0	7.5	18.8	16.8	23.8	20.1	21.0	21.6
ROE [%]	13.1	14.0	23.9	9.0	14.8	21.6	15.7	19.1	19.1
ROE, restated	10.7	13.8	6.6	9.8	15.5	17.8	20.3	19.1	19.1

UTILITIES

SNAM

SNAM

■ Investment case

The National Energy Policy to 2020 mainly focuses on the progressive reduction of Italian gas prices, which are still 30% above European levels. The main way to achieve this goal is to encourage new investment in LNG terminals, pipelines and storage. Therefore we believe the government will adopt a supportive approach towards gas infrastructure. Moreover, European Energy Policy promotes ownership unbundling, regulatory harmonisation and market liquidity. As Italy is located at the crossroads between Europe and North Africa and Snam is one of the biggest independent network operators, we believe it is set to play a leading role in the European gas market. We estimate that the company could tap into at least EUR1bn of potential firepower without jeopardising its risk profile or credit rating.

■ Gas-to-renewables exposure

Snam is the leading domestic player in gas infrastructure, with operations all along the value chain: from gas transportation (almost all of the domestic network), to gas distribution (33% market share), gas storage (95% of total existing capacity) and regasification (running one of the two existing LNG terminals in Italy). Nearly 100% of the company's business is regulated and less than 10% of its revenues are tied to volumes, while the remaining activities are remunerated based on capacity. The company's business plan for the 2012-15 period calls for EUR6.7bn capex, 4% annual RAB growth, a 50%-55% debt/RAB target and 4% DPS growth until 2012. The next 4Y capex plan targets EUR6.7bn of investments (EUR1.3bn-1.4bn in the first few years, followed by a rapid acceleration), the bulk of which (~80%) will benefit from incentives in the form of a 2-4% extra return on top of the allowed return. Transport capex is mainly aimed at increasing system flexibility and creating the technical basis for reverse flows (basically to export gas from Italy to Europe). Italian gas demand is expected at ~1% in the next few years.

■ Valuation

On our estimates, the cost of capital (<6%) is below the asset IRR (>7%), justifying a 10% RAB premium. Therefore, we set our TP at EUR4.2 and rate the stock 2/Outperform. Good risk/reward, limited downside (stock trading close to its RAB value vs historical 10% premium) is coupled with several free options (gas distribution consolidation, further cost-cutting and international expansion). The 20% stake still in the hands of ENI represents a material overhang risk, but we feel it will not be placed below the price of the sale of the 29.9% stake to CdP (EUR3.47/share).

Francesca PEZZOLI

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Rating 2/Outperform

 Target price (6 months) **+21.0% EUR4.20**
Price (03/10/2012) EUR3.47

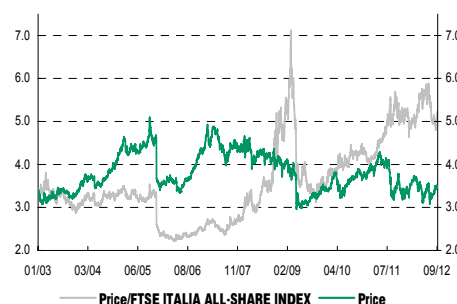
 Reuters: **SRG.MI** Bloomberg: **SRG IM**

Stock data

Market capitalisation	EUR12,385m
Free float	EUR4,706m
Enterprise value	EUR24,475m
No. of shares, adjusted	3,569m
Daily volume	EUR34m

Performances

	1 month	3 months	12 months
Absolute perf.	2.3%	0.6%	-0.2%
Relative perf.	0.6%	-5.4%	-6.7%



Shareholders

Eni 50.0%, Free Float 38.0%, Treasury Stocks 7.6%, Pictet Am 2.3%, Bank Of Italy 2.0%

	2011	2012E	2013E	2014E
P/E (x)	11.8	12.2	11.9	10.2
EV/EBITDA (x)	9.0	9.2	9.1	8.6
Attrib. FCF yield (%)	0.9	NS	NS	NS
Net debt/EBITDA (x)	4.3	4.5	4.6	4.6
Yield (%)	7.0	7.2	7.5	7.6
ROCE after tax (%)	7.7	5.0	6.2	6.5
EV/Capital empl. (x)	1.4	1.3	1.3	1.3

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SNAM

FY to 31/12 (EUR m)	2006	2007	2008	2009	2010	2011	2012E	2013E	2014E
Profit & Loss Account									
Sales	1 789.0	1 868.0	1 910.0	2 468.0	3 508.0	3 605.0	3 652.9	3 790.9	4 088.4
% Change	-0.9%	4.4%	2.2%	29.2%	42.1%	2.8%	1.3%	3.8%	7.8%
Staff costs	(118.5)	(120.2)	(122.6)	190.0	260.0	265.2	270.5	275.9	281.4
Other costs	(276.6)	(236.8)	(276.4)	(771.0)	(1 228.0)	(1 258.2)	(1 252.0)	(1 261.1)	(1 270.3)
EBITDA	1 394.0	1 511.0	1 511.0	1 887.0	2 540.0	2 612.0	2 671.3	2 805.7	3 099.6
% Change	-3.9%	8.4%	0.0%	24.9%	34.6%	2.8%	2.3%	5.0%	10.5%
Depreciation	(483.0)	(489.0)	(489.0)	(613.0)	(678.0)	(654.0)	(690.0)	(725.0)	(765.0)
EBITA	911.0	1 022.0	1 022.0	1 274.0	1 862.0	1 958.0	1 981.3	2 080.7	2 334.6
% Change	-6.6%	12.2%	0.0%	24.7%	46.2%	5.2%	1.2%	5.0%	12.2%
Goodwill amortisation before OP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non recurring operational items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBIT	911.0	1 022.0	1 022.0	1 274.0	1 862.0	1 958.0	1 981.3	2 080.7	2 334.6
Net financial items	(168.0)	(200.0)	(226.0)	(217.0)	(271.0)	(320.0)	(375.0)	(425.0)	(500.0)
Non recurring financial items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other exceptional items	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax	(297.2)	(324.7)	(266.0)	(347.0)	(532.0)	(906.0)	(699.4)	(720.7)	(735.8)
Associates [contribution]	0.0	0.0	0.0	22.0	47.0	51.0	51.0	52.0	52.0
Discontinuing activities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill amortisation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net profit [loss] before minorities	445.8	497.3	530.0	732.0	1 106.0	783.0	957.9	987.1	1 150.8
Dividend to preferred shares	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Minorities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net attributable profit [loss]	445.8	497.3	530.0	732.0	1 106.0	783.0	957.9	987.1	1 150.8
Restatement [impairment test]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Adj. for exceptional items	0.0	0.0	0.0	0.0	0.0	188.0	0.0	0.0	0.0
Net attrib. profit [loss], restated	445.8	497.3	530.0	732.0	1 106.0	971.0	957.9	987.1	1 150.8
% Change	-14.9%	11.6%	6.6%	38.1%	51.1%	-12.2%	-1.3%	3.0%	16.6%
Cash flow	990.8	895.3	1 019.0	1 605.0	1 823.0	1 567.0	1 347.9	1 412.1	1 615.8
Balance Sheet									
Shareholders' equity [group share]	4 089.4	4 089.7	4 233.3	5 703.0	5 916.0	5 792.0	5 942.9	6 090.7	6 368.7
Minority interests	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net debt [cash]	5 257.6	5 882.3	6 235.7	9 949.1	10 340.8	11 196.8	12 055.8	12 982.1	14 138.1
Gearing [%]	128.6	143.8	147.3	174.5	174.8	193.3	202.9	213.1	222.0
Per Share Data (at 3/10/2012)									
EPS before goodwill	0.24	0.28	0.30	0.29	0.33	0.29	0.28	0.29	0.34
EPS, reported	0.23	0.25	0.27	0.27	0.31	0.22	0.27	0.28	0.32
Goodwill per share	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dividend per share	0.19	0.21	0.23	0.20	0.23	0.24	0.25	0.26	0.26
Cash flow per share	0.54	0.51	0.58	0.63	0.54	0.47	0.40	0.42	0.48
Book value per share	1.9	1.9	1.9	1.4	1.4	1.4	1.4	1.4	1.5
No. of shares, adjusted	1955.000	1955.000	1955.000	3569.000	3569.000	3569.000	3569.000	3569.000	3569.000
Latest price	4.30	4.37	3.96	3.47	3.72	3.41	3.47	3.47	3.47
Market capitalisation	8 403.9	8 544.7	7 743.0	12 385.5	13 277.8	12 157.0	12 385.5	12 385.5	12 385.5
Enterprise value	13 689.5	14 455.9	14 008.7	22 365.5	23 650.6	23 386.8	24 475.3	25 402.5	26 559.6
Valuation									
P/E	17.7	15.5	13.1	12.2	11.3	11.8	12.2	11.9	10.2
P/E before goodwill	17.7	15.5	13.1	12.2	11.3	11.8	12.2	11.9	10.2
P/CF	8.0	8.6	6.8	5.5	6.9	7.3	8.7	8.3	7.2
Attrib. FCF yield [%]	4.2	2.3	0.4	5.0	2.4	0.9	NS	NS	NS
P/BV	2.3	2.3	2.1	2.5	2.6	2.5	2.5	2.4	2.3
Enterprise value / Op CE	1.4	1.4	1.3	1.4	1.4	1.4	1.3	1.3	1.3
Yield [%]	4.4	4.8	5.9	5.8	6.2	7.0	7.2	7.5	7.6
EV/EBITDA, restated	9.8	9.6	9.3	11.9	9.3	9.0	9.2	9.1	8.6
EV/EBITA, restated	15.0	14.1	13.7	17.6	12.7	11.9	12.4	12.2	11.4
EV/Sales	7.65	7.74	7.33	9.06	6.74	6.49	6.70	6.70	6.50
EV/Debt-adjusted cash flow	12.5	14.2	10.6	12.8	11.8	13.1	16.1	15.3	13.9
Return [%]									
Pre-tax ROCE	9.5	10.0	9.5	8.0	11.3	11.4	10.9	10.8	11.3
ROE [%]	11.5	12.9	13.4	13.7	20.6	14.5	17.5	17.6	19.9
ROE, restated	11.5	12.9	13.4	13.7	20.6	18.3	17.5	17.6	19.9

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