

# European infrastructure: themes and opportunities

## Infrastructure research note

November 2011

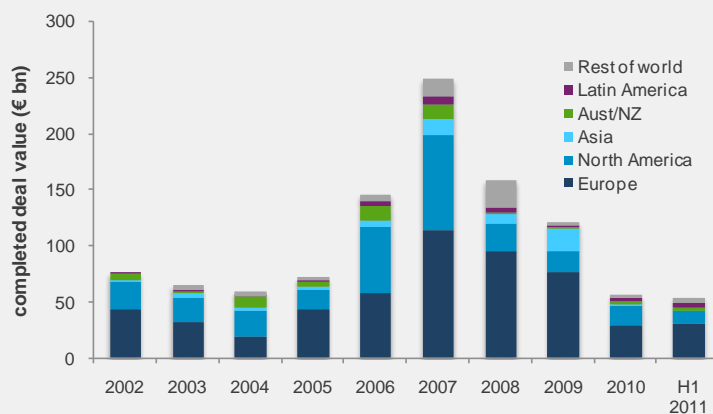
- Europe has traditionally been the centre of the infrastructure investment universe
- While political and economic factors will weigh on the sector in the medium term, there is also a silver lining for infrastructure investors
- We identify four key themes unfolding in the European infrastructure market which offer attractive investment opportunities

### Europe in context

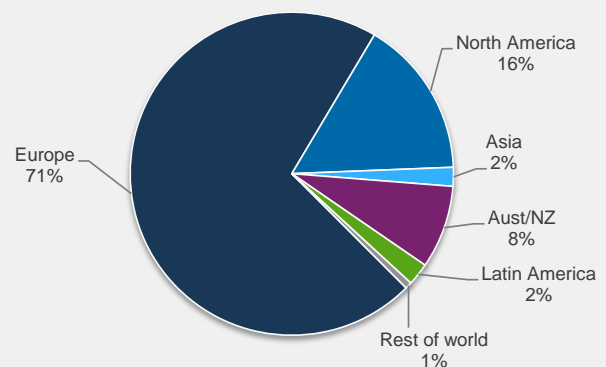
This report identifies drivers of infrastructure deal flow in Europe over the medium term. It focuses particularly on 'core' infrastructure opportunities, which are attractive to institutional investors such as infrastructure funds and pension funds.

Over the past decade, Europe has been the dominant region for infrastructure deal activity (Figure 1). The attractiveness of the region is even more evident when considering assets acquired by institutional investors (Figure 2). Although deal activity has steadily declined from the levels reached prior to the global financial crisis, there are signs that a recovery is underway. Deal activity for the first half of 2011, for example, has almost matched the level of deal volume for 2010 as a whole.

**Figure 1: Global infrastructure deal flow**



**Figure 2: Institutional infrastructure investment by region**  
 Completed deals, 2002- H1 2011



Source: FSI Research and Bureau van Dijk

Source: FSI Research and Bureau van Dijk

This recovery is occurring in the context of a weak macroeconomic environment, suggesting that investors are able to identify and secure financing for quality infrastructure assets, which tend to be economically resilient.

We identify four key themes which are unfolding in the current environment. While some of these are driven by financing pressures, which have been exacerbated by the recent economic and financial turmoil, there are also regulatory and strategic forces at play. Each of these is presented as a vignette, with a short description, the 'science' or theory underpinning the theme, followed by recent transactional evidence in the European context.

## Electricity: vertical dis-integration

### Précis

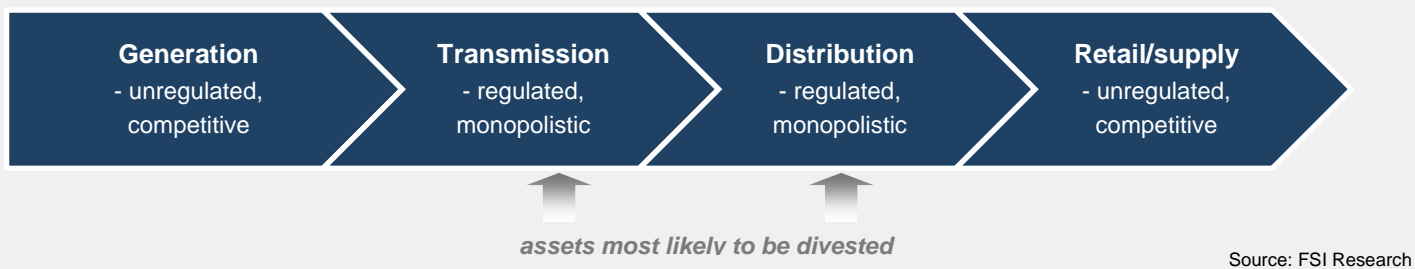
Vertically integrated energy utilities are seeking to divest their regulated transmission and distribution networks.

### Background

The vertically integrated model of energy utilities – where generation, transmission, distribution and supply activities are performed by a single entity – has been under pressure in Europe for some time now.

As Figure 3 highlights, there are fundamental differences between assets along various stages of the energy supply chain. For example, T&D markets are monopolistic and hence typically regulated. On the other hand, there is greater scope for competition within the generation and retail segments, which tend to be unregulated.

Figure 3: Electricity value chain



Utilities are reviewing their participation in the transmission and distribution (T&D) markets, motivated by one or more of the following reasons:

- **Regulatory directives** – the European Commission (EC) required the ‘ownership unbundling’ of vertically integrated utilities in response to the market dominance of large energy players in the European market. Some utilities have preemptorily sought to exit these assets, while others have launched asset sales in response to EU antitrust cases.
- **Financial pressure** – in the years preceding the global financial crisis, many large European utilities took advantage of favourable credit markets to finance M&A with high levels of debt. As credit conditions worsened, several utilities have turned to asset disposals as a means of improving their balance sheets.
- **Strategic repositioning** – finally, some utilities have sought to divest or reduce ownership in their regulated networks for primarily strategic reasons. For example, utilities may opt to recycle the proceeds of selling regulated networks into higher-margin generation or supply assets – which are generally seen as their ‘core’ businesses. In several instances, looming capex bills for regulated networks have also prompted a strategic review of utilities’ participation in the T&D functions.

### Market activity and opportunities

Date	Country	Sector	Asset	Stake	EV	Vendor
Mar-10	Germany	Electricity	50 Hertz	100%	€810m	Vattenfall
Jul-11	Germany	Electricity	Amprion	74.90%	€700m	RWE
Nov-10	UK	Electricity	EDF's UK electricity distribution network	100%	£5,800m	EDF
Mar-11	UK	Electricity	Central Networks	100%	£4,000m	E.ON
Potential	Finland	Electricity	Vattenfall's Finnish distribution network	100%	€1,100m*	Vattenfall
Potential	Germany	Electricity	ENBW's German transmission network	49%	€300m*	ENBW

Source: CFSGAM

### Summary

Regulated networks are among the most highly prized infrastructure assets, although close attention must be paid to regulatory risk. Given asset size, investors may need to consider partnership strategies.

## Oil and gas: inflows ahead

### Précis

Integrated oil and gas companies are exiting lower-margin regulated assets in order to focus on their core businesses.

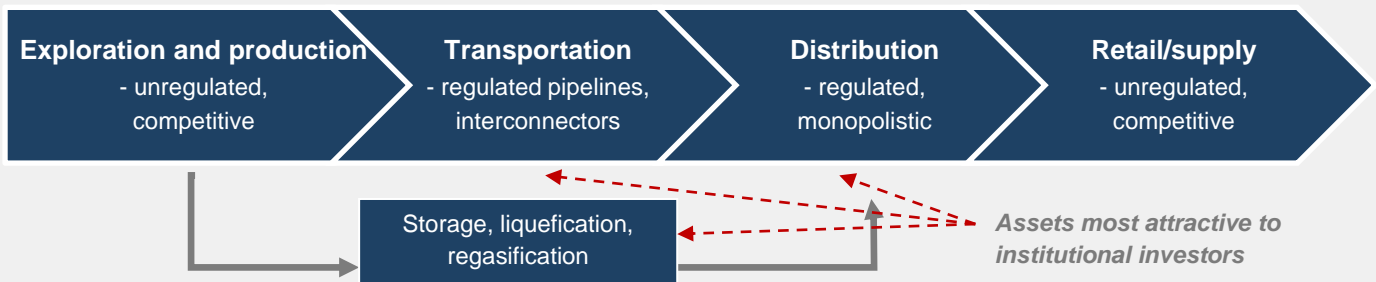
### Background

The European oil and gas industry, historically dominated by integrated majors, is experiencing a number of sub-trends, which will open up opportunities for institutional investors. These include:

- **Market competition regulation** – the transportation of oil and oil products in Europe is subject to EU competition law, while owners of gas transportation and storage facilities are required to provide non-discriminatory third party access (TPA) under the EU's Third Energy Package, which was released in 2009.<sup>1</sup>
- **Strategic role of gas** – EU gas demand is expected to grow at a CAGR of 0.6% from 2008-2035, with about three-quarters of the additional demand expected to be used for power generation. Gas-fired electricity occupies a strategically vital role in Europe's energy mix, as a low-carbon alternative to coal, a useful backup technology to renewables, and increasingly in the post-Fukushima era, as an alternative to nuclear.
- **Growth of LNG market** – In addition to the overall growth in gas demand, Europe will import a greater share of natural gas as indigenous reserves decline, becoming the world's largest gas import market by 2025 according to the IEA. Security of supply concerns will mean that the sources of imported gas are increasingly diversified, creating opportunities in Liquefied Natural Gas (LNG) infrastructure such as regasification terminals, storage and ports.

As a result of these trends, integrated utilities will increasingly focus on the higher-margin exploration, production and retailing activities, while reducing their presence in the lower-margin transportation and storage markets. These latter assets, which are typically regulated, are attractive for institutional investors such as pension funds and infrastructure funds (Figure 4).

Figure 4: Gas supply chain



Source: FSI Research

### Market activity and opportunities

Date	Country	Sector	Asset	Stake	EV	Vendor
Dec-09	Sweden	Gas	Swedegas	100%	€200m	E.ON, Statoil, DONG Energy and Fortum
Jun-11	Italy	Gas	G6 Rete Gas	100%	€772m	GDF Suez
Jun-11	Austria	Gas	Trans Austria Gasleitung	89%	€735m	ENI
Apr-10, Jun-11, Jun-11	Norway	Gas	Gassled (gas transmission network - 3 transactions)	9.4%; 24.1%; 6.4%	n/a; €2,200m; €580m	Exxon Mobil; Statoil; Total
Sep-11	Switzerland	Gas	Transitgas	46%	€1,198m	ENI
Sep-11	Germany	Gas	TENP	49%	€60m	ENI
Potential	Germany	Gas	Open Grids Europe	100%	€2,000-3,000m	E.ON

Source: CFSGAM

### Summary

Shifts in the oil and gas industry are making it more accessible and attractive for institutional investors. Gas transportation, in particular, is set to be a high-growth market.

<sup>1</sup> Some EU nations are classed as 'developing' and therefore do not have to adhere to TPA rules. Single-asset exemptions are also common.

**Privatisations: the age of austerity**

**Précis**

Cash-strapped federal, state and municipal governments are looking to privatise state-owned assets to reduce public debt burdens.

**Background**

The European sovereign debt crisis, which first flared up in 2010, placed a number of economies, including Greece, Spain, Portugal, Ireland, Italy and the UK under scrutiny.

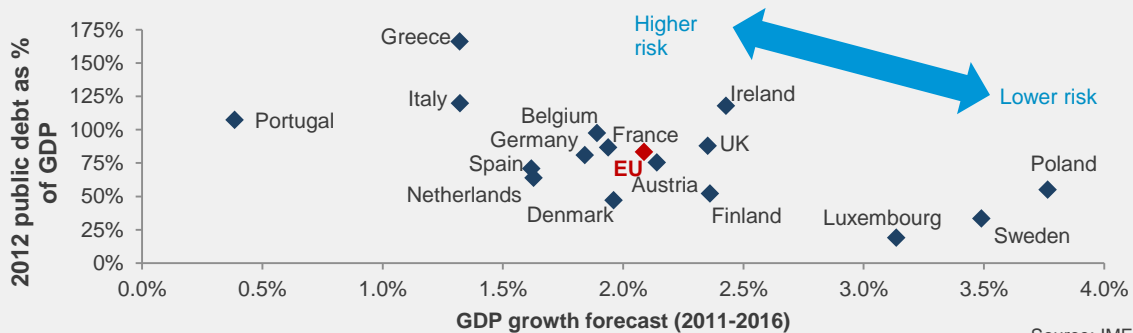
Not only have these countries accumulated high levels of public debt, but their problem is compounded by policy inflexibility, which hampers their ability to stimulate economic growth and thereby reduce their debt-to-GDP ratios. For example, due to the common currency and interest rate within the Eurozone, member states are unable to use domestic monetary policy or rely on a depreciating exchange rate to boost growth. Figure 5 presents European economies according to their public finances and growth prospects

Consequently, governments are looking at other ways to improve their finances. One option being considered is privatising assets and using the proceeds to reduce debt, with infrastructure assets among those up for sale.

Greece's privatisation programme, which is currently underway, includes infrastructure assets such as ports, airports, water and gas utilities, motorways and a rail operator. The assets are expected to be progressively readied and sold from 2011 to 2015. The Greek privatisations are expected to be mirrored in several of the other indebted countries such as Spain, Ireland and Portugal.

Finally, in addition to national governments, heavily indebted state and municipal governments are also expected to explore the divestment of assets. Governments at all levels are also likely to explore alternative procurement mechanisms within the Public Private Partnership (PPP) space, opening further potential opportunities for investors.

**Figure 5: Public debt versus economic growth for selected economies**



Source: IMF and FSI Research

**Market activity and opportunities**

Country	Sector	Asset	Stake
UK	Rail	High Speed 1	100%
Portugal	Electricity T&D	REN (Portuguese transmission network operator)	<49%
Spain	Airports	AENA (Spanish airports operator)	<49%
Greece	Ports	Piraeus and Thessaloniki ports	TBC
Portugal	Electricity/Gas T&D	Energias de Portugal	20%
Greece	Airports	Athens and regional airports	55-100%
Greece	Water	EYDAP (Athens Water and Sewage co)	61%
Greece	Water	EYATH (Thessaloniki Water and Sewage co)	74%
Greece	Gas	DEPA (gas utility)	65%
Ireland	Electricity	Electricity Supply Board	TBC
Ireland	Gas	Eirgrid	TBC
France	Airports	Regional airports	TBC

Source: CFSGAM

**Summary**

Good mix of transportation and energy opportunities, but pricing will be the key factor given economic uncertainty.

## Renewables: ramping up

### Précis

Europe’s move to a low-carbon energy mix is putting investment opportunities on the radar of institutional investors.

### Background

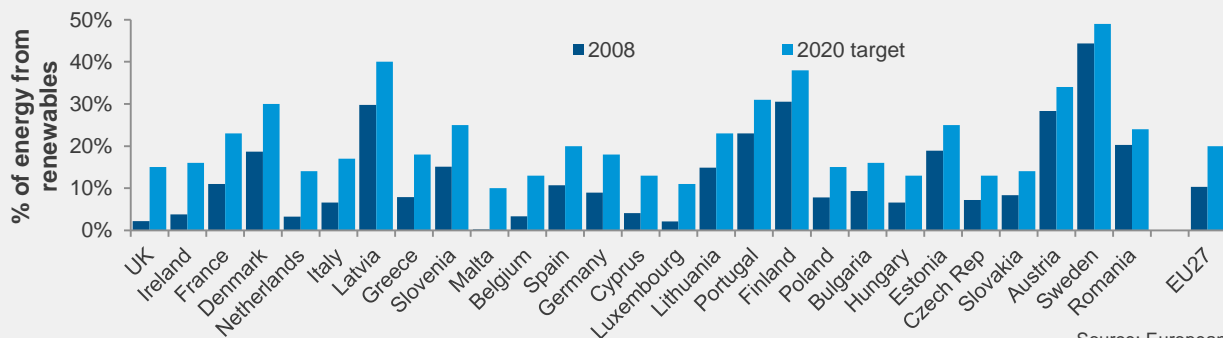
Renewable energy enjoys strong political and regulatory support across Europe, with the key initiatives being:

- **EU Renewables Directive:** introduced in 2009, this aims to increase the proportion of the EU’s energy from renewable sources to 20% by 2020. While individual member states were given national targets to support the overall EU target, they have discretion over their preferred mix of:
  - policy mechanisms, such as tax incentives, feed-in tariffs or quotas
  - renewable technologies, such as wind, solar, and biomass

Figure 6, which highlights the individual targets for EU-27 members, reveals that the level of progress has varied across countries. For instance, Romania, Sweden and Austria are far closer to meeting their renewable energy targets than the UK, Ireland and France.

- **EU Emissions Trading Scheme:** the EU’s Emissions Trading Scheme (ETS), which was introduced in 2005, is an additional tailwind for clean energy, including gas. Going forward, the ETS is expected to have more of a positive impact on low-carbon energy assets as it progressively moves toward full auctioning of permits, which will boost the effective carbon price.

Figure 6: EU-27 member state renewable energy targets



Source: European Commission

Developments such as the Spanish solar tariff regime changes serve as a reminder of regulatory risk, but have not deterred investor activity in the sector. Looking ahead, investment opportunities in assets such as solar parks and wind farms will come from developers of renewables projects seeking to offload assets in order to recycle capital. Additional ancillary opportunities will include offshore transmission links, interconnectors, storage assets, and new backup generators.

### Market activity and opportunities

Date	Country	Sector	Asset	Stake	EV	Vendor
Jul-10	France	Solar	76MW portfolio of solar PV assets	15%	n/a	EdF
Mar-11	Italy	Solar	144MW portfolio of solar PV assets	100%	€641m	Terna
Jun-11	Germany	Wind	91MW portfolio of wind farms	100%	n/a	Scan Energy
Jun-11	Germany	Wind	40MW portfolio of wind farms	100%	€43m	Arclight
Jul-11	Germany	Solar	40MW portfolio of solar parks	100%	€100m	Q-cells
Jul-11	Spain	Solar	Andasol I and II (thermosolar plants)	90%	€920-955m	ACS
Jul-11	Spain, Portugal	Hydro	17 mini-hydro plants	100%	€230m	RP Global Holding
Jul-11	Spain, Italy	Solar	168MW portfolio of solar PV assets	49%	€1,100m	T-Solar
Aug-11	Spain	Wind	Nine wind farms (~215 MW)	100%	€223m	ACS

Source: CFSGAM

### Summary

The renewables market is still evolving, with technological and regulatory risk expected to decrease, and deal size expected to increase over time. Consequently, the sector is attracting greater institutional investor interest.

For further information

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