Power transactions and trends

Global power and utilities mergers and acquisitions

2012 review and 2013 outlook

Ernst & Young
Quality In Everything We Do

Contents

Doing the right deal in power and utilities

Doing the right deal right can make a power and utility business more competitive and profitable. Clients turn to Ernst & Young's Transactions Advisory Services professionals for advice and support through the life cycle of a transaction, from early stage to execution and post-deal activities. Whether the transaction involves acquisitions, alliances, joint ventures, sales, divestitures or securitizations, we help clients do the right deal at the right price. We help to determine the true value of an asset, set up the business and tax structure, optimize their position in the regulated revenue and pricing environments, and execute the deal. We combine proven practices and consistent methodologies with fresh thinking, giving the advice our clients need to make informed decisions, potentially reduce risks and achieve successful outcomes.

Methodology

Power transactions and trends: Global power and utilities mergers and acquisitions, 2012 review and 2013 outlook

This Ernst & Young study examines transactions and market trends in the global power and utilities sector in 2012 and discusses the outlook for 2013.

About the study

The data is primarily sourced from Mergermarket. This data has been supplemented with ThomsonONE.com, Factiva and Capital IQ. Unless otherwise stated, all values are in US dollars.

Approach to evaluating transactions

- Deals include transactions between companies in the three power and utilities (P&U) subsectors (generation; transmission & distribution (T&D); and renewables), P&U companies acquiring businesses in other sectors, and non-P&U companies acquiring P&U companies.
- Private equity (PE) deal activity includes both full- and partial-stake transactions and was analyzed based on acquisitions by firms classified as PE, alternative investment management groups, certain commercial banks, investment banks, venture capital groups and other similar entities.
- Equity investments are included (corporate and PE).
- Only disclosed deal values (as per Mergermarket) are used in all value analyses.
- As used in this report, the total "value" refers to the aggregate value of deals with disclosed values for the period under discussion. Deal value is taken as the sum of the consideration paid by the acquirer for the equity stake in the target plus the value of the net debt in the target, where applicable.
- Geography and segment classifications have been made considering the acquired "target" and are subjective.

Introduction

Deal landscape transforms in a pivotal year

Welcome to the 2012 final-quarter edition of *Power transactions and trends*, Ernst & Young's analysis of global mergers and acquisitions (M&A) in power and utilities. This year-end publication reviews the key trends of 2012 and looks forward to what we can expect in 2013. We feature an exclusive interview with Hubert Sueur, Director of Investments, M&A and Equity Financing at Veolia Environmental Services, and Ernst & Young's Area Power & Utilities Transaction Leaders share insights on local markets.

For global power and utilities, 2012 was a year of transformation in the deal-making environment. Decade-low natural gas prices in North America, aggressive European environmental regulations, continued Eurozone economic uncertainty and over-leveraged balance sheets at some of the larger European players all contributed to a tougher landscape.

Transaction activity for the year fell below 2011 levels. Total transaction value came in at US$120.4b (2011: US$144.7b) and deal volume registered 306 (2011: 359). The year started with a bang, including several big-ticket deals in Q1 and Q2, the largest of which was the GDF SUEZ US$9.5b[1] bid for the remainder of International Power in March (driven by an appetite for investing in emerging economies). By contrast, the second half of 2012 witnessed tight deal-making, underpinned by continued global economic weakness and a number of regional issues impacting the appetite to transact.

Divestment and privatization programs in Europe emerged as the strongest contributor to 2012 deal activity, with utilities busy restructuring and optimizing their portfolios. In the Americas, decade-low natural gas prices took a toll on profit margins from generation portfolios, pushing companies to reduce their exposure to competitive generation. Brazil emerged as the key M&A destination in Latin America: foreign investors showed considerable interest as they looked to expand in emerging markets, with a specific focus on wind assets.

The last 12 months also saw the rise of financial buyers, with several PE, infrastructure and pension funds coming to the fore and acquiring assets, headlined by E.ON SE's US$3.7b sale of Open Grid Europe to a consortium of financial buyers. While premiums for regulated assets remained healthy, we saw a valuation standoff for unregulated/merchant assets, with both buyers and sellers unwilling to make a compromise.

Asian investors, particularly from China, Japan and South Asian countries, remained active in securing fuel supplies and broadening their footprint through both domestic and foreign acquisitions. Chinese state-owned companies and Middle Eastern and other sovereign wealth funds progressed further with geographical expansion, snapping up assets primarily in Europe and Latin America.

Although the global economy continues to face many challenges that have impacted the power and utility sector, there is a lot to look forward to in 2013. We hope this report will provide some useful perspectives as readers look for signs of transition and adapt their own decision-making. If you have any questions or comments, please talk to your usual Ernst & Young contact or any of our report authors on page 32.

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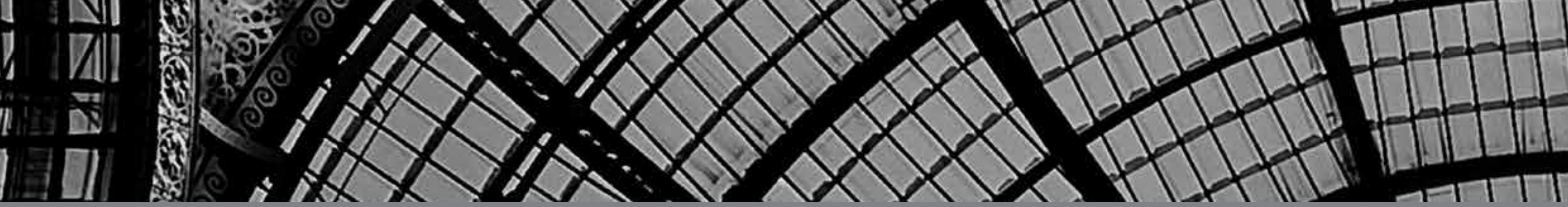
1 GDF SUEZ revised the offer to US$10.9b in April 2012.



Executive

In 2012 the Eurozone crisis and decade-low US natural gas prices pushed companies to restructure asset portfolios. In 2013, regional issues will drive a robust transaction market that is expected to outperform 2012.

Deal activity declines in 2012, financial buyers turn aggressive

Deal value in 2012 fell US$24.3b lower than 2011, primarily due to the weak macro environment, which prompted buyers to focus on lower-risk transactions and internal cost reduction programs. Despite this, the year witnessed several big-ticket transactions, primarily led by European utilities looking to optimize asset portfolios. Owners of European regulated assets such as RWE AG, Eni SpA and state-run companies divested assets, either to fund-type investors or Asian trade, in an effort to reduce balance sheet debt and free up capital for deployment in emerging markets. Consolidation in the US utility market marked a new milestone with the completion of several big mergers, including approval of the Exelon/Constellation Energy merger. Financial buyer deal value reached a two-year high, contributing 31% to the total value in 2012, driven by a desire to secure predictable cash flows in a volatile equity and macro environment. Read more in *2012: a year in review*, page 10.

Veolia's successful divestment strategy and future outlook — a conversation with Hubert Sueur, Director of Investments, M&A and Equity Financing at Veolia Environmental Services

In an exclusive interview for this report, Hubert Sueur stresses the importance of quality of assets and meticulous planning in making Veolia's divestment program a success. He throws light on the growing dominance of financial buyers – driven by the need to secure predictable cash flows – in the last 12 to 18 months, with several PE and infrastructure funds at the head of the queue for Veolia's divestments. While successfully completing divestment plans will be the company's key focus through 2013, continued investment in new and emerging markets may be the focus from 2014. Read about *Veolia's formula for transaction success* on page 14.

summary

Regional issues drive transaction trends

Specific country and regional trends drove transaction activity in 2012. The price collapse in the EU CO_2 market and cheap coal exported from the US made gas-fired power plants unprofitable in many parts of Europe, running at negative spark spreads and often running simply because of take or pay agreements with gas providers. Price signals for the near term are very weak, and this is reflected in the financing market. Latin America remained buoyant, with Brazil attracting several foreign investors. The UK remained one of Europe's most attractive markets, with its regulated power, gas and water sectors offering reasonable returns in a volatile environment. A number of cash-rich financial buyers entered the country in search of safe and stable returns, pushing deal values up. In the German market, the country's nuclear phase-out decision and switch to renewables influenced transaction activity. For in-depth insight from our power and utilities leaders in key locations, see *Perspectives on the ground*, page 18.

Expect a robust transaction environment predicted in 2013

Despite the challenges of a weak global economy, we anticipate a robust transaction environment in 2013, with investors favoring the yield of regulated assets over the volatility of other sectors and artificially low government bond yields. As debt pressures still hang over many European utilities and US utilities seek to rebalance their holding in favor of regulated businesses, further divestments will continue to create transaction opportunities. The capital will come from Asia and pension funds and will be dominated by a range of financial buyers. Brazil will emerge as a focus country for deal-making, underpinned by investment opportunities in renewables and a stronger domestic market. Look for increased activity in Indonesia, Mexico and Turkey. Read about the *2013 transaction outlook* on page 30.

Executive summary

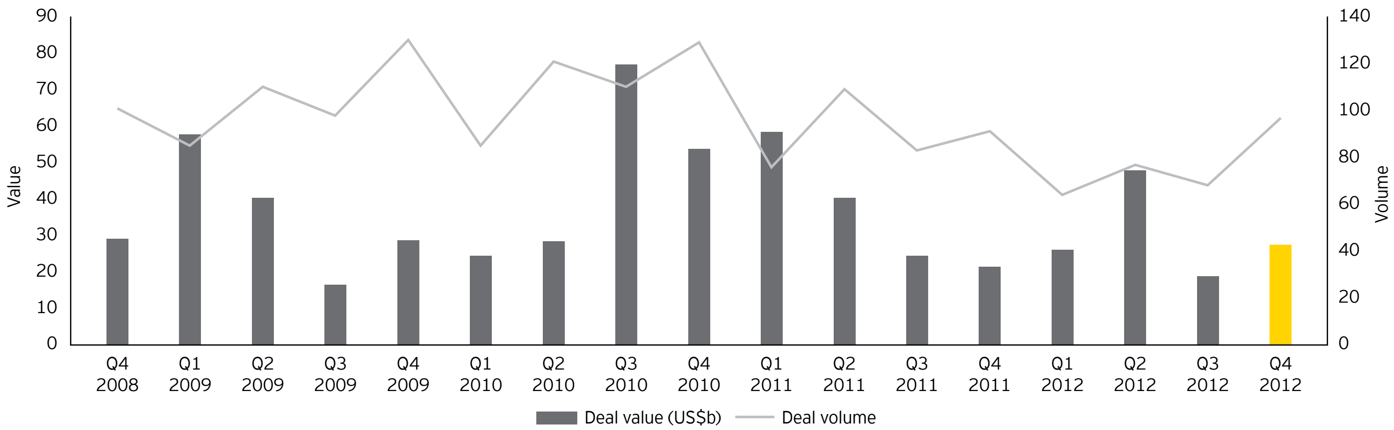
Charting the fundamentals

Continued global diversion in natural gas prices, a collapse of the European Union Allowance (EUA) spot price and rising US coal exports to Europe were key issues that shaped the 2012 deal market

Deal value and volume evolution

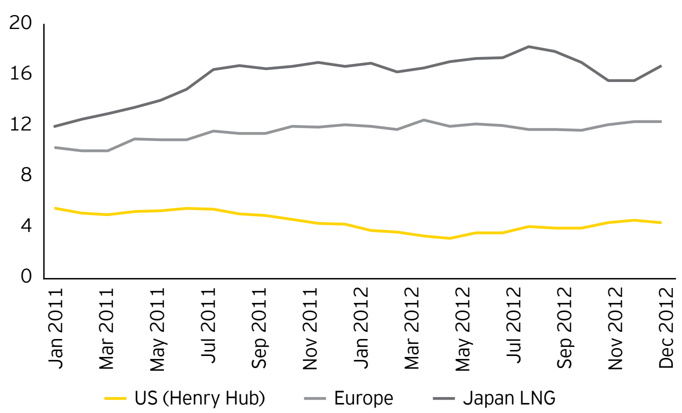
- Last year proved to be robust, despite not living up to the highs of the end of 2010 and the start of 2011, a period that was dominated by mega-mergers (including Duke-Progress for US$26b in Q1 2011). Volume and value uptick in Q4 2012 provides momentum for 2013.

Figure 1. Deal value and volume (Q4 2008–Q4 2012)



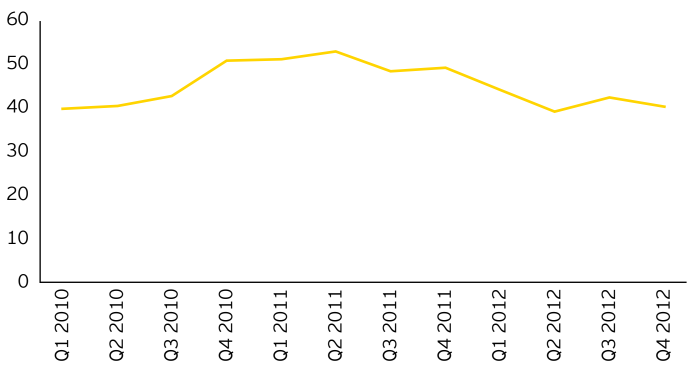
Source: Ernst & Young analysis based on Mergermarket database

Figure 2. Natural gas prices (US$/mmbtu)



Source: World Bank

Figure 3. Quarterly average price for base-load power at EPEX Spot — Germany (€/MWh)



Source: EEX

Natural gas prices

- Gas prices in the US rose to US$3.54/mmbtu in November 2012, after falling to a low of US$1.95/mmbtu in April 2012. LNG import prices in Japan continue to rise after the Fukushima disaster.

EPEX German spot prices

- A rise in renewable power generation drove a reduction in German spot prices from €50/MWh levels in 2011 to €40-€42/MWh levels at the end of 2012.

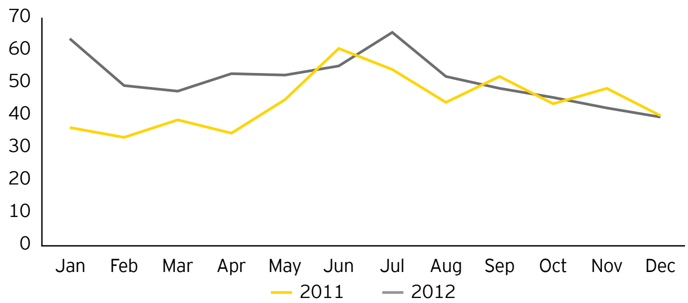
PJM West (United States)

- The PJM West (US) power prices stabilized at US$40/MWh at the end of 2012 from US$64/MWh in early 2011, on the back of continued downward natural gas prices.

EUA prices (Europe)

- Carbon prices have hit record lows in 2012 and lost over four-fifths of their value since 2008 as a result of falling power demand in European economies, creating sizable oversupply of allowances.

Figure 4. Wholesale day-ahead electricity prices – PJM West (US$/MWh)

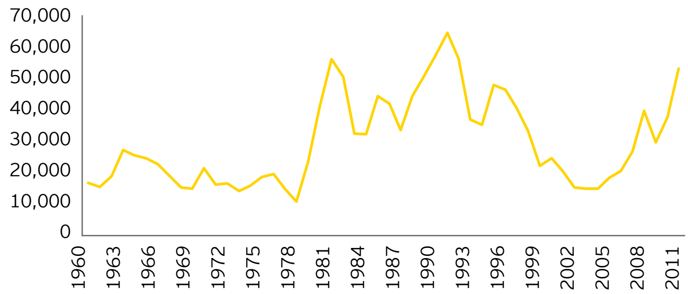


Source: EIA

Figure 5. EUA spot price, €/tCO_2

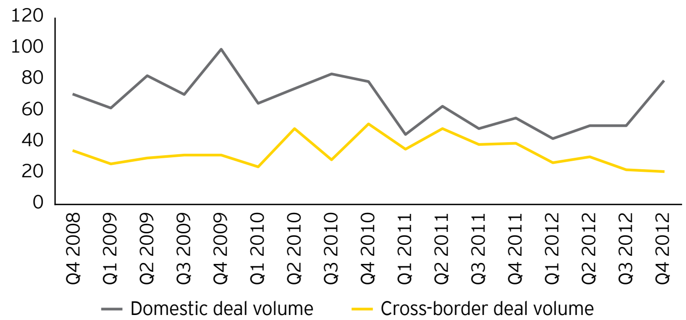
Source: BlueNext EUA statistics

Figure 6. US coal exports to Europe (thousand short tons)



Source: EIA

Figure 7. Global domestic vs. cross-border deal volume (Q4 2008–Q4 2012)



Source: Ernst & Young analysis based on Mergermarket database

US coal exports to Europe

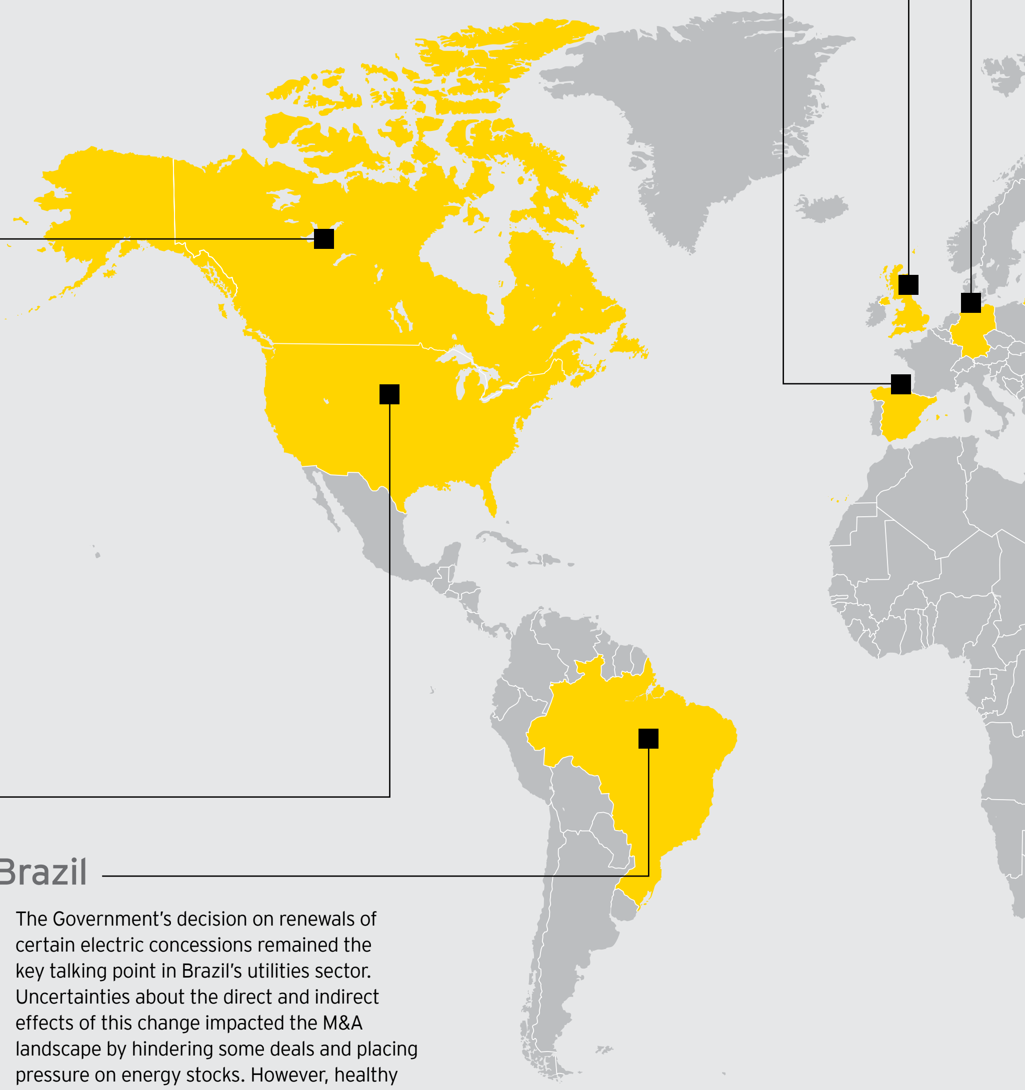
- US coal is finding its way to Europe as cheap and abundant natural gas reduces US demand; depressed EUA prices make coal-fired generation attractive. Exports have increased from 20 million tons in 2006 to over 50 million tons in 2011.

Domestic vs. cross-border

- Domestic deals dominate the P&U transaction landscape primarily driven by small/medium players that are looking to exploit domestic opportunities. In addition, privatization programs in countries such as Turkey and renewable energy deals within Canada and Europe led to a significant spike in domestic deals.
- A majority of the cross-border transactions are dominated by large/global utilities and financial investors that are looking to draw synergies through optimizing global portfolio of assets and diversifying footprint.

Executive summary

Mapping transaction trends worldwide



Spain

- Uncertainty caused by Government plans to reform the power and utilities sector led to delays on the progress of transactions in 2012. A significant number of transactions could, therefore, be announced in early 2013.
- While some Spanish players have already made announcements on their strategy (e.g., Iberdrola announced a US$6.5b divestment plan to reduce its leverage ratios and focus on core activities and markets), others are awaiting further clarity (e.g., GDF SUEZ has announced that it will exit the Spanish market if it is not satisfied with the outcome of the proposed Government changes).

Canada

- Canadian utilities have an appetite to deploy capital and continue to grow rate base through targeted acquisitions. Change is afoot in many Canadian jurisdictions as cost-of-service regulatory models are beginning to give way to performance-based regulation. This introduces uncertainty into M&A pricing models. There is increased diligence as acquirers examine patterns from historical rate setting and re-basing and speculate about future revenue calculations and available returns.
- The sector is experiencing much longer cycles from asset identification to transaction closing. We expect competition to increase in 2013, providing impetus for greenfield and brownfield development (as opposed to growth via acquisition). However, high-quality rate base or contracted assets will remain in demand, with an emphasis on greater geographic diversification inside North America and internationally.

United States

- Portfolio optimization continued to be the key theme in 2012, with utilities seeking to either increase their investments in regulated businesses or decrease their investments in competitive generation. Continuing weak power prices are the principal reason that utilities are seeking to rebalance their portfolios. Regulated operations with after-tax returns on equity above 10% provide a more attractive option than competitive generation that has been challenged to provide similar returns. Although we expect a fair number of generation asset sales, the sector might witness blockbuster mergers: joining forces enables utilities to better align portfolios.
- New EPA actions will continue to have a significant impact on the sector with rules such as the MATS rule, which will require plants to be shut down. With the extension of production tax credits (PTCs) we can expect to see continued investments similar to what was experienced in 2012. Solar is likely to witness greater investments, driven by state and national incentives. Look for more consolidation in the solar space, led by large utilities.

Brazil

- The Government's decision on renewals of certain electric concessions remained the key talking point in Brazil's utilities sector. Uncertainties about the direct and indirect effects of this change impacted the M&A landscape by hindering some deals and placing pressure on energy stocks. However, healthy economic growth and infrastructure investment made Brazil Latin America's most active M&A destination. According to the Brazilian Government, the renewal may be accepted by 60% of the generation contracts and 100% of the transmission lines.
- We expect additional international investors to enter the market in 2013 and beyond, with most of the capital flowing from Europe and Asia and a higher proportion of sovereign wealth and infrastructure funds investing. The wind energy market, which is projected to see significant growth under the new 10-year energy plan, is likely to continue to attract a number of investors.

United Kingdom

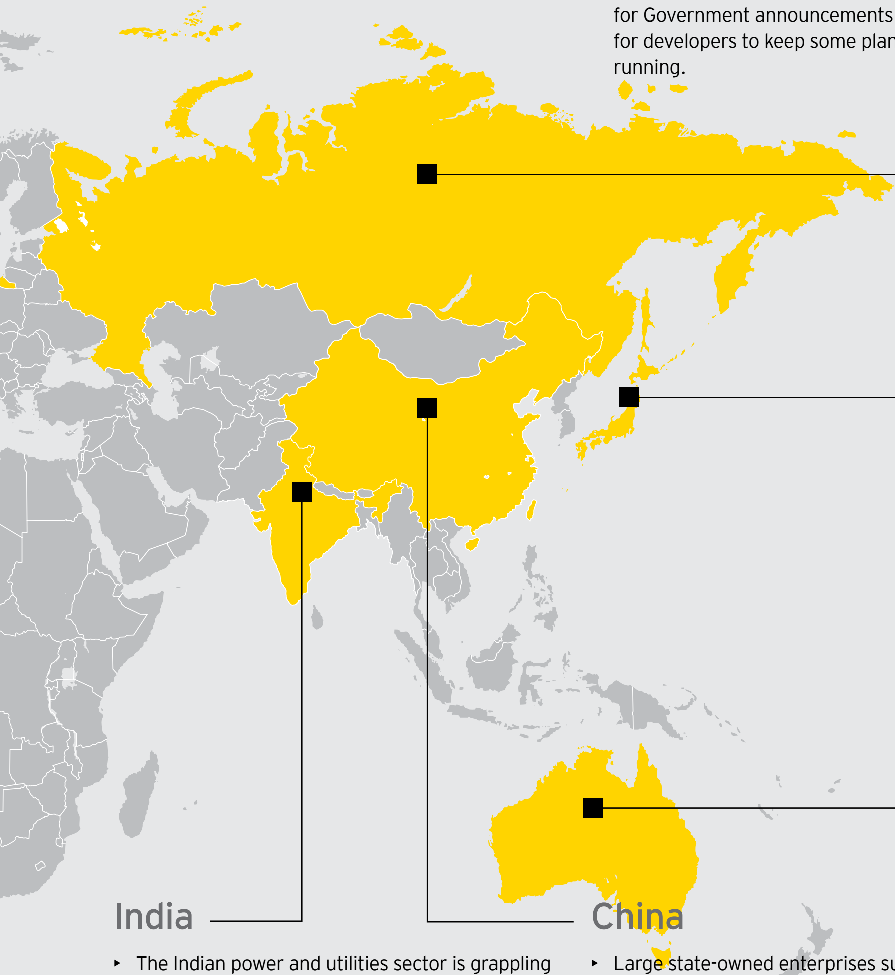
- Despite a weak macroeconomic outlook and falling valuations in the rest of the world, the UK witnessed strong bidder competition for its regulated asset divestments in 2012. Unregulated assets, particularly generation, got a sluggish reception, with investors wary in the face of regulatory, policy and market uncertainty. With continuing pressure on the balance sheets of large, vertically integrated utilities, we expect further assets to come to market in 2013, with Asian investors as front-seat buyers. Hitachi's move to acquire the Horizon new nuclear project is likely to boost the UK's nuclear revival and attract further investments into the market.

Germany

- Germany's 2012 transaction landscape remained clouded by the Government's decision to phase out nuclear power and ramp up investment in renewable generation to hit 20-20-20 targets. A number of large utilities shed assets to fund sector transformation. Additionally, a surge in subsidized renewable energy made gas-fired plants "barely profitable to operate," pushing utilities to either close or sell these assets. We expect the trend to continue in 2013 and result in a robust transaction market, with large utilities embarking on ambitious divestment programs to stay competitive. German utilities will remain active in acquiring clean-energy assets throughout Europe and in other emerging Latin American economies. Gas-fired power plants will continue to be mothballed in 2013; watch out for Government announcements on incentives for developers to keep some plants partially running.

Russia

- Russia's power market is currently depressed by low user tariffs set by the Government, high transmission tariffs and the growth of gas prices. Foreign and local investors are pessimistic, as they have no incentives to make new acquisitions and see no exit strategies for existing investments. Gazprom, Russia's largest gas and oil company, took steps to access downstream generation assets by acquiring gas-fired power plants from large European utilities. Look for this trend to grow in the coming months.



Japan

- With the Liberal Democratic Party (LDP) coming into power, the market is anticipating that it will scrap the goal of phasing out nuclear power and restart plants that were idled for safety inspections. This has already resulted in shares in electric utilities rising sharply. Investors, however, are betting on the Japanese solar market, which is anticipating investments of some US$9.6b in new solar installations in coming years. For M&A, Europe remains the favorite destination for Japanese investors in renewable energy, while Asia and the Middle East are the focus for electric and water utilities.
- In 2013, we expect M&A activity to center on renewable energy, with foreign and domestic investors looking to take advantage of Japanese solar power subsidies. In addition, with the Japanese Government now the major shareholder in TEPCO, we may witness unbundling activity, bringing regulated assets into the market and sparking increased transaction activity.

India

- The Indian power and utilities sector is grappling with two major challenges: low coal availability and the weak health of state-owned distribution companies. Both have resulted in lower deal valuations, with transactions being structured on an "earn-out" basis where premiums are linked to profitability improvements. Despite this, strong infrastructure investment needs and proposed government reforms attracted a number of foreign utilities to the market, which are currently involved in several transactions.
- In 2013, we expect the M&A market to improve, with the sector remaining fundamentally an attractive long-term destination for investors. EPC players, which have built up a sizable conventional power capacity, are likely to enter into M&A to monetize these assets. We also expect the domestic renewable sector to consolidate.

China

- Large state-owned enterprises such as State Grid Corporation of China (SGCC) continue to be active in the T&D sectors in the Americas, Europe and selected frontier markets. This is partly fueled by the development of ultra high voltage (UHV) and smart grid technology in China, which is pushing Chinese companies to acquire new technology in the global market. Privatization in certain countries and Europe's financial crisis have been key incentives for Chinese investors.
- The way transactions are structured has evolved from the usual equity-based agreement. For instance, Chinese power, infrastructure and engineering companies, active in the Southeast Asian markets, are forming joint ventures (JVs) or launching greenfield projects. However, in certain more developed markets, many transactions involve asset deals with Chinese companies bidding for concession rights.

Australia

- Despite rising concerns over energy prices, state governments remain reluctant to sell energy network assets to the private sector, leading to stalled M&A activity in 2012. However, with rising consumer resistance to energy prices, we expect generation and, in time, network assets to come to the market over the next two to four years, attracting both domestic and foreign buyers looking to raise their regulated asset portfolio. Massive energy demand in Asia-Pacific is expected to make Australia's coal assets an ideal acquisition target. India and Japan, which are currently facing significant fuel supply concerns, might emerge as buyers.

2012: a year in review

Key themes for the year: rise of financial buyers seeking secure and predictable cash flows and tough conditions in US competitive generation.

Debt burdened European utilities transform, creating opportunities for financial buyers ...

Divestments by major European utilities contributed close to 20% of Europe's total 2012 deal value and remained one of the key deal drivers for global activity. Countries such as Greece, Italy and Portugal announced asset privatizations to reduce sovereign debt. Large German utilities such as RWE divested non-core assets to invest in renewables and related infrastructure. According to VKU, a German association of public utilities, Germany needs more than €30b (US$39.3b) of investment in its local electricity distribution grids in the next two decades to ensure a successful switch from nuclear to renewable energy.[2] In addition, utilities such as E.ON undertook several divestments to fund expansion in emerging economies in a move to rebalance asset portfolios and reduce exposure to slow domestic markets. In 2012, E.ON divested over US$6b of assets[3] and acquired over US$3.9b of assets in emerging economies, including wind farms in Brazil and power firm EnerjiSA Power Generation Company in Turkey. Further, the utility entered into a partnership with Brazil-based MPX Energia[4] to jointly develop up to 11 GW of generation capacity in Brazil and Chile, tapping coal, natural gas and renewable resources.

Financial buyers – primarily sovereign wealth funds from China, and consortia of PE, infrastructure and pension funds – viewed this as an opportunity to invest in assets with predictable cash flows. This resulted in financial buyer activity surpassing corporate for the first time in the last two years (contributing 55% to the Q2 2012 total deal value). E.ON's US$3.7b sale of Open Grid Europe GmbH to a consortium led by Australia-based PE firm Macquarie and Veolia's sale of UK regulated water activities to Infracapital Partners LP for US$1.9b demonstrate growing financial buyer interest in European utility divestments. China's presence in the European market grew throughout the year with China Investment Corporation (CIC), the China-based sovereign wealth fund, acquiring an 8.68% stake in Thames Water Utilities Limited and SGCC acquiring stakes in Portuguese and Brazilian transmission assets. With SGCC announcing it would increase the value of its overseas assets by US$30b to US$50b by 2020 from the current US$8b[5], we can look for this trend to grow strong in coming years.

Table1. Global power and utilities transaction snapshot

		Number of deals		Value (US$b)	
		FY12	FY11	FY12	FY11
Global	Total	306	359	120.4	144.7
	Generation	70	60	36.1	46.3
	T&D	45	77	28.9	36.3
	Renewables	114	124	12.6	26.2
	Others	77	98	42.8	35.9
Americas	Total	88	105	29.2	69.8
	Generation	24	27	8.3	32.3
	T&D	14	32	8.6	11.3
	Renewables	32	20	5.3	5.7
	Others	18	26	7.0	20.5
Europe	Total	145	190	60.9	63.5
	Generation	19	17	17.0	11.4
	T&D	27	36	18.8	19.6
	Renewables	62	84	6.3	19.1
	Others	37	53	18.8	13.4
Asia-Pacific	Total	67	64	30.1	11.3
	Generation	24	16	10.7	2.6
	T&D	3	9	1.4	5.4
	Renewables	20	20	0.9	1.4
	Others	20	19	17.1	1.9

Source: Ernst & Young analysis based on Mergermarket data

2 "German local power grids need 30 bln euro investment – utilities," Reuters, 26 November 2012, http://in.reuters.com/article/2012/11/26/germany-power-grids-idINL5E8MQAG720121126.
3 Exclude assets where deal value has not been disclosed.
4"MPX, E.ON sign agreements on joint venture-filing," Reuters, 18 April 2012, http://in.reuters.com/article/2012/04/18/mpx-brazil-eon-idINL2E8FI25F20120418.

5 "State Grid eyes overseas investment," *Morning Whistle*, 12 November 2012, www.morningwhistle.com/html/2012/Company_Industry_1112/215268.html.

... But asset valuation gap emerges as a potential deal blocker, particularly for non-regulated assets

Last year saw a number of quality assets coming to market, and premiums were healthy in many instances (e.g., Veolia's divestment of UK water and US waste assets). This clearly reflects that, even though the market is volatile and buyers are cautious of large transactions, competition is still healthy for high-quality assets offering predictable earnings.

The buyer/seller valuation gap, emerging in the second half of the year, was more pronounced for non-regulated assets. Private utilities such as RWE faced difficulties in securing deals at the expected price; RWE is still looking for potential investors to sell its stake in regional power group Suewag,[6] after having failed discussions with buyers.

Investment in renewable energy continues

Aggressive environmental mandates and sovereign instability in Europe left utilities in an uncertain position with respect to their fuel mix. While environmental directives across the globe, particularly in Europe, pushed utilities to realign their fuel mix to focus on cleaner energy, financial and political support for renewable energy retracted in the face of economic winds. Several countries including Spain, the UK, Switzerland and Germany announced that they were halting subsidies, causing uncertainty in the minds of investors. Despite this, the renewable energy sector remained buoyant, registering 114 deals in 2012 compared with 124 in 2011; however, value halved, reflecting lower investor confidence to enter large-value transactions.

Long-term shift in North America's natural gas market

Technological advances and abundant shale gas deposits resulted in North America's natural gas prices falling over 50% in the last 12 months. This led to a rapid shift of the otherwise coal-heavy generation mix in the US toward cheap and abundant natural gas assets. Several utilities including PPL Corp., FirstEnergy and Luminant, announced they would mothball their coal-fired plants due to lower margins and volumes and tightening environmental regulations.

Low natural gas prices hit unregulated merchant generators with coal-fired power plants the hardest, with dark spreads shrinking or turning negative. The year witnessed some significant announcements in the merchant space, such as the US$4.2b NRG/GenOn Energy merger, which created the largest independent power producers (IPP) in the US, and the bankruptcy proceeding of Dynegy. Hybrid utilities have been the most active movers away from the merchant market in favor of their regulated business. Dominion Resources Inc. announcement to sell three merchant plants in Q3 2012, and AES Corp.'s sale of AES Red Oak, Ironwood and Prescott, reflected the underlying trend.

Table 2. Top 10 global power and utilities deals in 2012

Announced	Target	Target country	Bidder	Bidder country	Disclosed value (US$m)	EBITDA multiple	Segment
21 May 12	Tokyo Electric Power Co Inc (75.7% stake)[7]	Japan	Nuclear Damage Compensation Facilitation Corporation (Government)	Japan	12,600	20.2	Integrated
29 March 12	International Power	UK	GDF SUEZ SA	France	9,500[8]	NA	Generation
6 May 12	Edison International SpA	Italy	Electricite de France SA	France	7,582[9]	9.7	Integrated
30 May 12	Snam SpA (30% stake)	Italy	Cassa Depositi e Prestiti spa	Italy	4,362	8.7	T&D
22 July 12	GenOn Energy	USA	NRG Energy, Inc.	USA	4,166	6.9	Generation
3 December 12	EnerjiSA Power Generation Company (50% stake)	Turkey	E.ON SE	Germany	3,917	NA	Integrated
16 May 12	Open Grid Europe GmbH	Germany	Consortium led by Macquarie Group Limited	United Arab Emirates, Canada, Australia, Germany	3,696	7.2	T&D
7 December 12	Endesa Spain (Cono Sur Electricity assets)	Chile	Enersis SA	Chile	3,590	NA	Integrated
25 July 12	Wales & West Utilities Limited	UK	Cheung Kong Infrastructure Holdings Limited, Power Assets Holdings Limited, Li Ka Shing Foundation Limited, Cheung Kong (Holdings) Limited	Hong Kong SAR, China	3,034	14.3	T&D
7 March 12	Tanjong Energy Holdings Sdn Bhd	Malaysia	1Malaysia Development	Malaysia	2,816	NA	Generation

Source: Ernst & Young analysis based on Mergermarket data

6 "Possible buyers walk away from a deal to buy RWE's stake in Suewag," Financial News, 23 August 2012, www.financial-news.co.uk/7125/2012/08/possible-buyers-walk-away-from-a-deal-to-buy-rwes-stake-in-suewag.

7 The deal represents the capital injection by Nuclear Damage Compensation Facilitation Corporation, the Japan-based principal financing company that will become the majority owner of TEPCO.

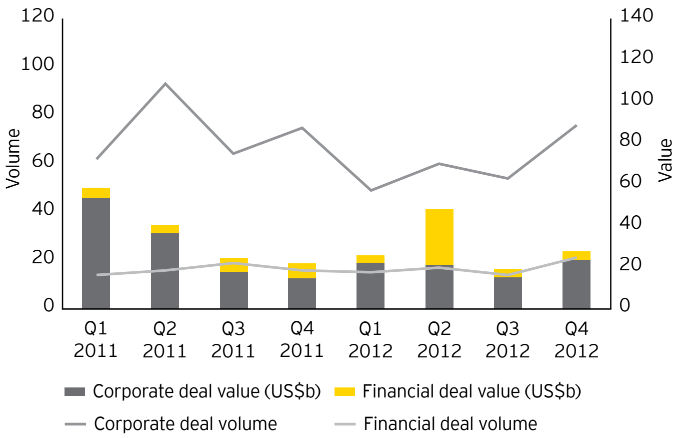
8 GDF SUEZ revised the offer to US$10.9b in April 2012.

9 The total deal value represents a component of net debt of US$5.2b, cash consideration of US$1.2b (EDF acquired 19.36% of Edison's outstanding shares at €0.89 per share), and US$1.1b that EDF paid to acquire Delmi's 30% stake in Edison.

2012 transaction volume and value

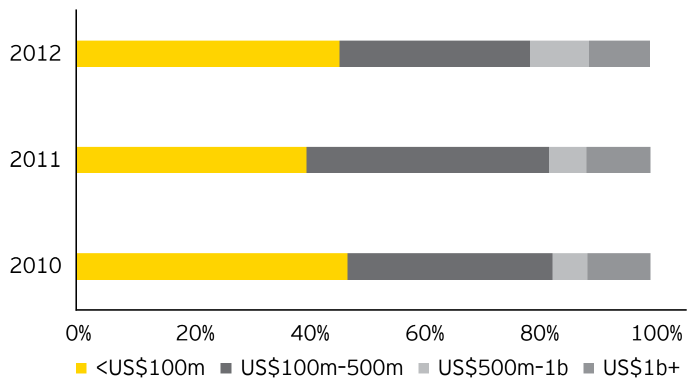
Financial buyers pounce on opportunities. Volume and value remain depressed by economic uncertainty, limiting big ticket deals.

Figure 8. Corporate vs. financial deal activity



Source: Ernst & Young analysis based on Mergermarket data

Figure 9. Aggregate number of announced deals by disclosed deal size 2012 versus 2011 and 2010



Source: Ernst & Young analysis based on Mergermarket data

Financial buyers enter the billion-dollar club

Financial deal activity reached new peaks in 2012, with deal value rising to US$37.9b compared with US$22.5b in 2011. Although volumes remained flat, the year saw seven billion-dollar-plus financial buyer transactions, contributing significantly to total deal value. With European utilities looking to generate capital through divestments, financial buyers viewed this as the right time to shore up their regulated asset portfolio, offering more stable cash flows. In addition to the large PE, infrastructure and pension funds, the year witnessed consortia of financial buyers participating in large-value transactions, such as E.ON's Open Grid sale to a consortium of investment banks, pension funds and asset management firms led by Australia's Macquarie Group Ltd. This provides bidders with a competitive edge, as consortia can field a more experienced team, larger resources and broader technical expertise.

The second quarter contributed 40% to 2012 total deal value, with participation from a large community of financial buyers, including Infracapital Partners LP, BNP Paribas Clean Energy Partners GP Ltd. and Macquarie, primarily due to a number of regulated/quality assets coming into the market. However, the second half of the year remained light on financial activity, with deal value declining 74% in H2 2012 compared with H1. This was driven by the delays in European utilities' divestment plans and privatization programs (e.g., Greece), which kept investors on the sidelines.

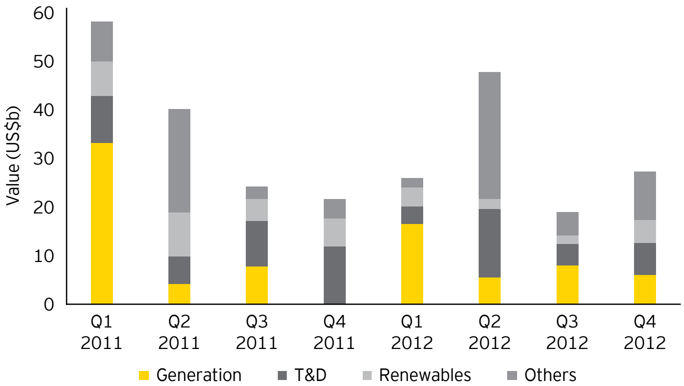
Robust first-half activity keeps average deal value healthy

Average deal value for 2012 remained in line with 2011 at US$552m. While the most deal activity occurred in the first quarter of 2011 (contributing close to 40% of total deal value), the second quarter of 2012 pushed average deal value up, with the most billion-dollar-plus transactions (eight total). H2 2012 was the major drag for 2012 average deal value, with a higher concentration of deals under US$100m. This reflected the greater emphasis on renewable transactions, which tend to be of lower value. Declining global economic confidence, coupled with Eurozone uncertainty, emerged as the key barrier to getting billion-dollar deals done, and this is likely to have an impact into 2013.

2012 segment focus

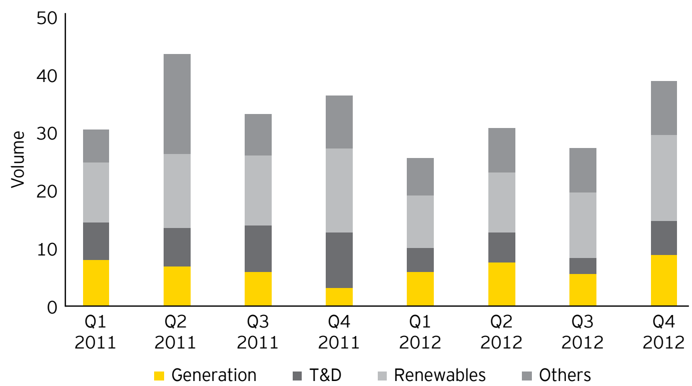
Americas dominates generation deal activity; Europe leads T&D

Figure 10. Segment contribution to total deal value: Q1 2011–Q4 2012



Source: Ernst & Young analysis based on Mergermarket data
Note: Others include integrated, water and waste management utilities, and energy services

Figure 11. Segment contribution to total deal volume: Q1 2011–Q4 2012



Source: Ernst & Young analysis based on Mergermarket data
Note: Others include integrated, water and waste management utilities, and energy services

Generation: preference for natural gas in the US and coal assets in Asia-Pacific drives deal activity

Generation M&A activity remained robust in 2012, with deal volume rising 16.7% over 2011, but deal value declined 22%. Among several US generation deals throughout the year, Q1 and Q2 deals reflected the alignment of portfolios toward natural gas through opportunistic acquisitions, such as the US$392m acquisition of a 600 MW natural gas plant from Riverside Energy Center LLC by Wisconsin Power & Light Co. (WPL). In the second half of the year, financial buyers showed significant interest in merchant generation. Several hybrid and merchant players, including Calpine and Dominion, relinquished their non-core assets to financial players. Chinese players were active in Asia-Pacific, acquiring thermal generation (primarily coal) in a move to meet base-load demand. There was a trend toward backward integration, with state-owned utilities in countries such as Indonesia and Thailand acquiring coal mines.

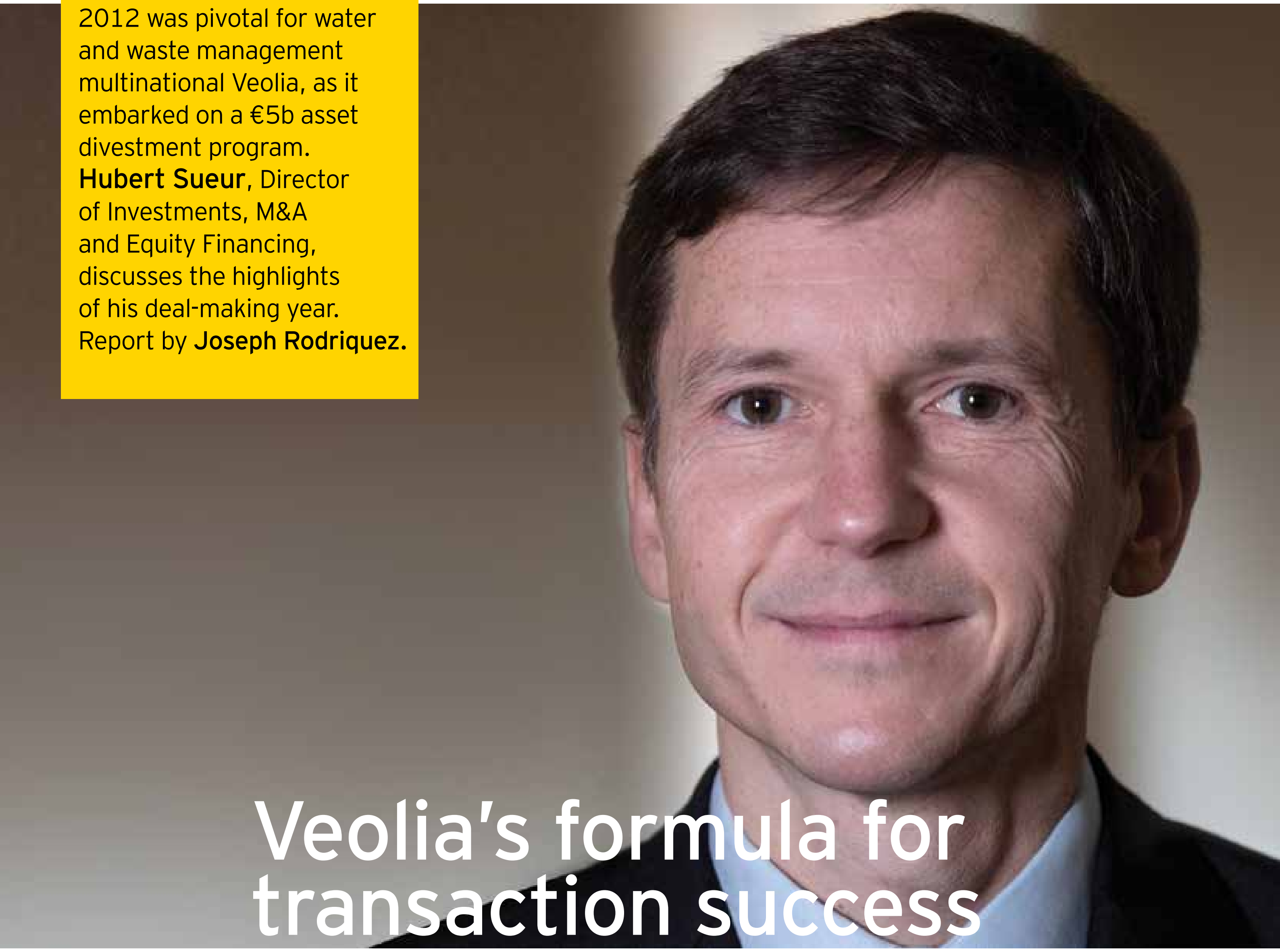
Transmission and distribution: European divestments and privatization programs continue to attract investors

Europe was the most active region for T&D deal activity in 2012, contributing 65% to total T&D deal value. In addition to unbundling mandates, the need to invest capital in renewables in Germany, and reduce high debt burdens in other EU countries, pushed utilities to divest T&D assets. Similarly, privatization programs in European countries such as Turkey, Portugal, the Czech Republic and Ireland attracted both domestic and cross-border players looking to invest in lower-risk assets. SGCC's acquisition of a 25% stake in REN, the Portugal-based natural gas and electricity transmission utility, reflected this trend.

Renewables environmental mandates spur M&A, maintaining high deal volumes

Renewable energy deals remained prominent in 2012, accounting for 37.3% of total deal volume — in line with 2011. Although realigning the fuel mix remained a common theme globally, aggressive regulation in Europe prompted significant investment into new renewable generation. Once operational, these assets attracted interest from utilities and financial buyers who found greater value in buying operational plants than investing in plant construction. However, we are seeing companies such as E.ON take on construction risk and invest earlier on. Wind asset deals made up the largest M&A share, with 60% of total renewable deal value in 2012. Prominent deals included Canada-based Algonquin Power & Utilities Corp.'s US$888m acquisition of a 51% stake in four wind farm projects in the US, and Japan-based Marubeni Corp.'s acquisition of UK-based Seajacks International Ltd. for US$850m.

2012 was pivotal for water and waste management multinational Veolia, as it embarked on a €5b asset divestment program. **Hubert Sueur**, Director of Investments, M&A and Equity Financing, discusses the highlights of his deal-making year. Report by **Joseph Rodriquez.**



Veolia's formula for transaction success

Hubert Sueur

Director of Investments,
M&A and Equity Financing
Veolia

Hubert Sueur took up his current role at Veolia in 2010, following five years as Special Advisor to the company's Head of Financial Operations. Previous experience includes five years as Director of Investments at Dalkia (Veolia's Energy Services division) and seven years in Research & Development, Portfolio Management and Structured & Project Finance at Crédit Commercial de France (now HSBC).

Q Your ongoing €5b (US$6.46b) asset disposal program has delivered strong results this year.[10] To what do you attribute your success?

A There were several contributing factors. First, good preparation: after we published our mid-2011 accounts we spent six months preparing meticulously for the launch of the divestment program. At the beginning of January 2012, the UK regulated water and US solid-waste divestment processes started in parallel. For three months, two dedicated and highly committed teams put all their energy into ensuring the process would run smoothly. This included understanding who the buyers were likely to be and gathering and preparing information to suit their needs: a detailed business plan, vendor due diligence, information memorandum, comprehensive data room and so on.

10 Veolia sold 90% of its UK regulated water business to Rift Acquisitions Ltd., an entity formed by Prudential plc's Infracapital Partners and Morgan Stanley Infrastructure Partners for US$1.93b (representing 11.7x EBITDA multiple/30% RAB premium). In July, Veolia announced it had sold US waste business to infrastructure fund Highstar Capital for US$1.9b (representing 9x EBITDA multiple). In addition, Veolia announced the deconsolidation of its transport JV, Transdev and Berlinerwasser debt.

Second, we knew we were divesting what could be considered as "quality assets," so we took a careful approach to catching the attention of the market. There was strong interest from investment funds to secure the UK asset – a £1.2b business – which was the last remaining regulated water asset owned by a corporation. For the US asset – a US$1.9b business – there were several US infrastructure funds interested with significant capacity to invest. We were also getting exploratory calls from bankers and various investors (including Japanese) trying to find out what else we might have for sale and which countries we might exit.

Third, to maximize value, we avoided entering into any bilateral discussions with a single buyer. We told everyone: "There's a process, and we're happy for you to participate." A competitive process is the best way to achieve a good market price.

Finally, timing was also important. The first half of 2012 proved brighter than the second, and we found investors keen to come forward. The market for high-yield bonds was open, and they provided the financing for the buyers.

To sum up, we had the right ingredients in place for success: an experienced and committed team, a robust preparation phase, quality assets, a clear strategy aimed at maximizing value and good timing.

Q What changes have you observed in the buyer profile?

A We have definitely seen the profile change since we started our first divestment plan at the end of 2008. At that time, a lot of corporates – strategic players – were still buying our assets. But the balance has changed and for the last 18 months we have seen much more activity from PE and infrastructure funds. They have gravitated toward the investment opportunities offered by environmental infrastructure and are keen to put their money into not-too-risky assets with predictable cash flows.

Corporates are not coming forward as active buyers in such numbers because many of them are currently focused more on cutting capex and reducing costs.

Q Have you seen any signs of a buyer versus seller "valuation gap"?

A I do not think you can say there is a valuation gap across the board. There are the good or "attractive" assets, and then there are the more difficult ones – often those with more unpredictable cash flows. For the good assets, buyers will pay a good price. For the more difficult ones, sellers may be too optimistic on valuations. To avoid that valuation gap, the best solution is to create a competitive process.

You hear people say that there is pressure on valuations and on EBITDA multiples. But our two recent divestments show that is not always the case. The UK regulated water business we sold was valued on a basis of 11.7 times EBITDA; the US solid waste business, 9 times EBITDA — very high multiples.

However, we are aware that for smaller assets it may be difficult to create the same competitive tension, so there could be more pressure on valuations.

Q Nearly 70% of your revenue comes from Europe. Given the region's continued economic uncertainty, will you be changing that balance?

A We have exited some European countries — including Switzerland, Norway and Estonia. The point has been to exit either non-strategic activities or countries where we are not a market leader.

France is our core market: we have a strong presence and strong market share. We have divested some non-strategic assets, but we won't be divesting any core business activities there, i.e., water, waste and energy services. We are the leader in the water business. Obviously there are some downward pressures on prices, but we are still in the lead. The waste business faces different challenges: we have more industrial clients, and the exposure to GDP growth and industrial production is higher than for water. But, on the other hand, waste is less exposed to the remunicipalization of contracts.

Q How will Veolia manage future capex spending to enter new markets and high-growth regions?

A We invest around €3b (US$3.87b) a year on maintenance and growth capex.

The 2010–2011 divestment plan was executed with a view to reinvest the proceeds of the sales: we wanted to optimize our portfolio of assets, exit some and invest in others. In this way, for example, we were able to purchase the Warsaw district heating network in Poland 18 months ago.

We can still take advantage of opportunities, but we are very strict about profitability. Any capex needs to have a high internal rate of return (IRR) and a relatively short payback to be eligible and get the approval of our investment committee.

We are currently seeing more opportunities in the energy services business than in water.

We invested heavily in the Chinese water market from 1999 up to 2009 and are now focusing on moving up the J-curve. We are still investing in energy services in Eastern Europe, in industrial contracts in the water business in North America, and in waste-to-energy plants under private finance initiatives (PFIs) in the UK.

Apart from these opportunities, which can be considered as internal growth, as they involve gaining new contracts, we are not looking at external growth through acquisitions: we keep the radar on, but we are not active.

Q How might European economic trends impact the rest of your divestment program? And what is your level of confidence in emerging markets, such as China and India?

A Signs of economic slowdown are everywhere and 2013 will be a difficult year for the European economy. But Europe cannot be considered as a single uniform economy. Veolia has strong businesses in the Czech Republic, Poland and Slovakia, so we are still benefiting from some economic growth in the region. On the other hand, the economic difficulties encountered in Southern Europe led Veolia to launch some divestments in that region: for example, we undertook divestments in Italy.

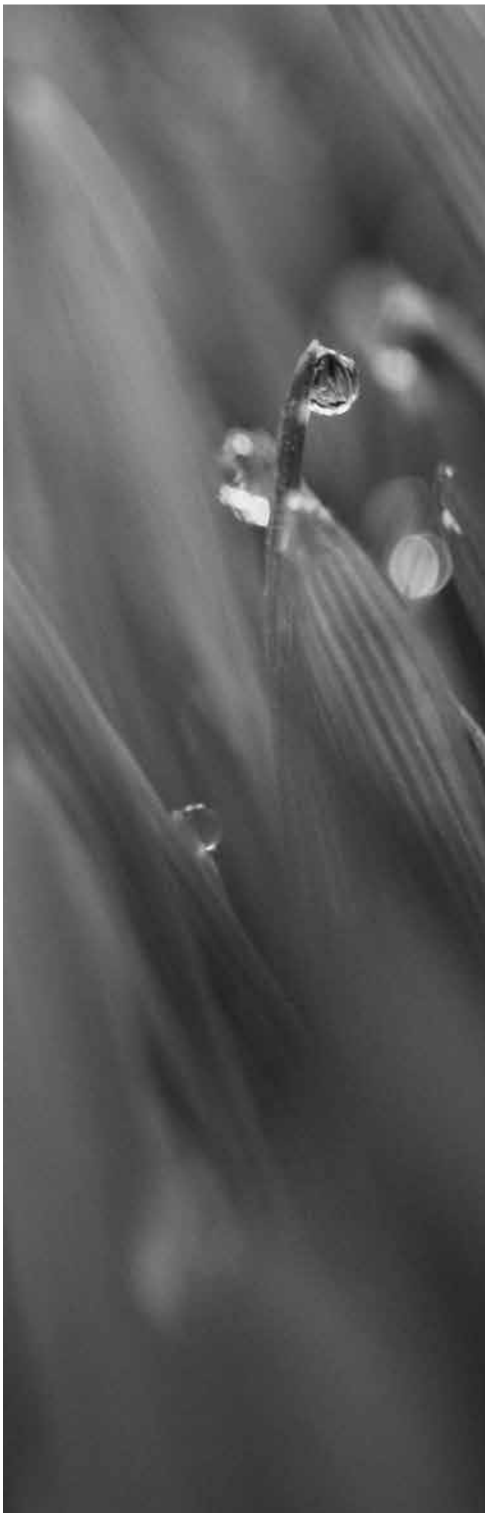
The emerging markets – in particular Latin America and China – are where we expect to see growth. Despite undergoing its own economic slowdown, China still has 7.5% GDP growth, much higher than Europe. Veolia is mainly involved in China via water and waste businesses. We also have a strong footprint in Australia (also maintaining much higher economic growth than Europe) and in Latin America through a joint venture.

From an M&A standpoint, it is also important to know whether debt will be available for investors. Although PE and infrastructure funds look for lower gearings, they still rely on the ready availability of debt at reasonable prices. A debt crisis could obviously have a negative impact on M&A activity. But at present, we are not seeing this. Interest rates are still very low. Weighted average cost of capital for investors is still around the same levels we saw in the times when abundant debt and high leveraging were commonplace.

Q As you rebalance the portfolio and deleverage, what is the biggest challenge for you in 2013?

A For the moment, 100% of our energy as an M&A team is focused on making the current divestment plan a success: we want to do that by the end of 2013 and reduce our net debt to €12b (US$15.5b).

From 2014 onward, with the new Veolia in place and restored financial flexibility, Veolia will have regained the capability to invest in our core markets and strategic geographies. I can't comment too far into the future, but I believe Veolia will then take the route of more proactive, focused investment and acquisition activity.



Joseph Rodriquez

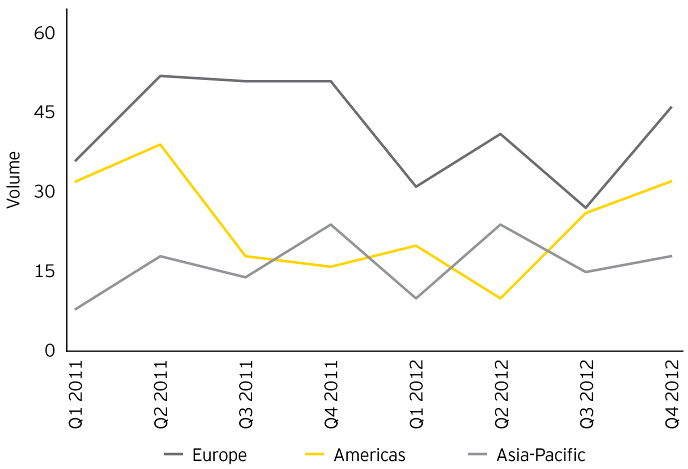
Global Power & Utilities Sector Resident, Transactions

New York, US

Perspectives on the ground

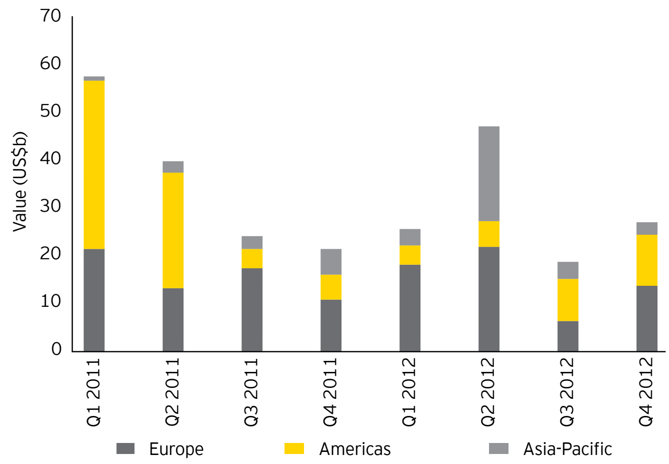
Despite the impact of broad macro themes, today's transaction drivers are localized, reflecting varying regulation and evolution within each region. Below, we present a regional overview of 2012 transactions. In the following pages, Ernst & Young Power & Utilities Transaction Leaders share their insights on deal-making in their local markets.

Figure 12. Regional deal volume, Q1 2011-Q4 2012

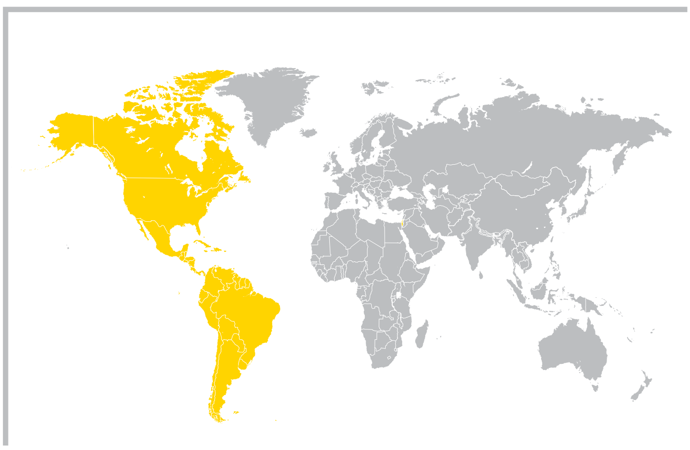


Source: Ernst & Young analysis based on Mergermarket data

Figure 13. Regional deal value, US$b, Q1 2011-Q4 2012



Source: Ernst & Young analysis based on Mergermarket data



Americas

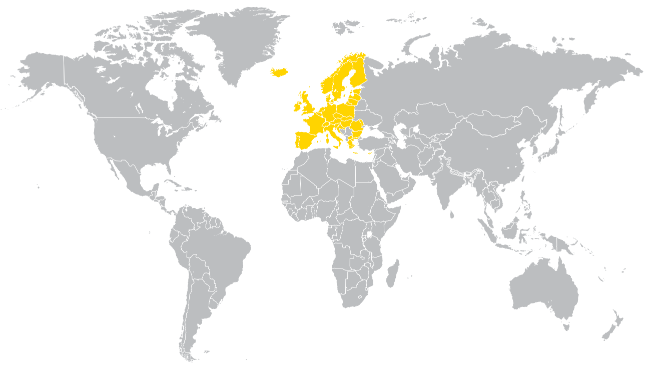
Deal value and volume declined 58.2% and 16.2%, respectively, compared with 2011. This was primarily due to the US$25.8b Duke-Progress merger in Q1 2011 and the US$10.4b Exelon/Constellation Energy transaction in Q2 2011, which distort comparison. Depressed natural gas prices prompted some market players to hold on to generation assets, hoping current prices would rise. Falling margins pushed several merchants and hybrid utilities including Dominion, PPL Corp., FirstEnergy and GenOn Energy to exit the merchant market in favor of redeploying capital into their regulated businesses. Consequently, the US became one of the most active countries for generation deals. Financial players emerged as the most logical buyers of these assets.

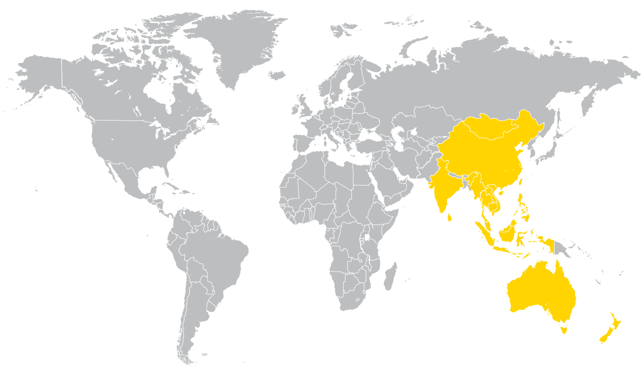
Canada became an active cross-border participant, acquiring several assets in the US, with a focus on geographical expansion and renewable build-out. Several infrastructure and asset management funds participated in large-value deals such as Fiera Axium Infrastructure Inc.'s US$1.2b acquisition of 60% stake in the 680 MW Canadian renewable portfolio from GDF SUEZ. Brazil continued to entice foreign investors due to strong economic growth and significant energy infrastructure investment needs. In 2012, the country hosted 12 deals with a cumulative value of US$8b.

Europe

Europe can be divided into three parts: Eastern Europe, which is still demonstrating relatively robust economic activity; Western Europe and the UK, which are in economic malaise; and Southern Europe, which is on life support. Despite this, Europe contributed close to 50% of global deal volume and value in 2012. A number of utilities divested non-core assets throughout the year to strengthen core businesses and expand in emerging markets. Verbund, Austria's leading utility, sold its 50% interest in Turkey-based EnerjiSA Power Generation Company to E.ON for US$3.9b, in return for E.ON's interest in eight hydroelectric power plants in Germany. Large utilities including Veolia, Iberdrola SA, E.ON and RWE featured in the majority of big-ticket divestments and together contributed over US$11b to total deal value. The region continued to be the focus for renewable energy transactions, with wind the most active segment. While subsidy cut announcements curtailed some activity, momentum was maintained as utilities struggled to balance capital allocation and portfolio management while complying with aggressive environmental mandates.

RWE and E.ON announced the sale of their interests in new nuclear in the UK, threatening Britain's nuclear plans. Japanese technology group Hitachi eased nerves by acquiring Horizon Nuclear Power Ltd. for US$1.1b. Chinese investors are continuously stepping up investments in European nuclear markets and are likely to be involved in up to five nuclear reactors being built at a total cost of £35b[11] (US$56.46b) in the UK.





Asia-Pacific

Large-value transactions in China and Australia took the 2012 deal value to US$30.1b compared with US$11.3b in 2011. A consortium of pension and infrastructure funds led by Canada-based Ontario Teachers' Pension Plan acquired Australia-based Sydney Desalination Plant for US$2.3b, and a number of Chinese power companies, such as Beijing Jingneng Thermal Power Co., Ltd. and Zhengzhou Coal Industry & Electric Power Co. Ltd., were active in acquiring domestic thermal generation assets.

Similar trends were present in other South Asian countries including Malaysia, Thailand and Indonesia, where the need to meet base-load demand shifted M&A focus to securing fuel supplies. In terms of outbound M&A activity, Europe (primarily the UK) remained the favorite destination for Asian investors, driven by favorable regulatory policies and availability of high-quality assets. With the Chinese Government pushing a strong mandate to diversify and expand globally, we anticipate several more transactions by Chinese players in the coming months.

11 "China in talks to build five new reactors in UK-paper," Reuters, 21 July 2012, http://in.reuters.com/article/2012/07/21/nuclear-britain-china-idINL6E8IKHDI20120721.

Perspectives on the ground

United Kingdom

A new breed of buyer emerged, enticed by stable, predictable and regulated cash flows and earnings from the UK's regulated sector. We expect to see further transactions in this space.

New buyers pursue UK targets

Last year saw important changes in UK M&A, with continued uncertainty over policy reform and the emergence of a new breed of buyer, hungry for regulated assets. Report by Tony Ward and Ian Whitlock

European utilities and asset owners – including several in the UK – plowed ahead with aggressive divestment programs in 2012 to strengthen their balance sheets. Some assets proved easier to sell than others. Regulated assets, such as Veolia's UK water business and Wales & West Utilities' gas distribution business, kept bidders interested and premiums healthy. Unregulated assets, particularly generation, got a sluggish reception, with investors wary in the face of regulatory, policy and market uncertainty.

This has highlighted a growing valuation gap between buyers and sellers, stalling some M&A activity – both in the generation sector and wherever regulated, subsidized or predictable asset cash flows weren't present. One of the year's most interesting deals was the sale of the Horizon nuclear development business by joint owners RWE and E.ON to Hitachi Ltd., concluded in November 2012 for £695m (US$1,102m). As a result, Hitachi will be developing its boiling water reactor, a newcomer to the UK, in Wales and the southwest of England.

Meanwhile, integrated utilities continue to look for bolt-on oil and gas upstream opportunities in the North Sea and elsewhere to support their generation, trading and retail requirements. The large oil and gas majors have sold mature oil and gas fields that are nearing the end of their lives, and these have provided useful acquisitions for companies looking to hedge their fuel positions.

New breed of buyer attracted by predictable cash flows

Sovereign wealth funds, infrastructure funds, pension funds and other financial investors, as well as outbound deal-makers from Asia, were enticed by predictable cash flows and earnings from the UK's regulated power, gas and water sectors. Reasonably secure post-tax returns in the region of 5% far outweigh returns from alternative investment options.

Timetables also coincided: cash-constrained vertically integrated utilities brought assets acquired a number of years ago back to market, allowing cash-rich financial buyers to pick up substantial assets at full, but fair, values. This has given financial buyers the opportunity to prove they can drive value and performance improvements out of regulated utility acquisitions.

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EMEIA Power & Utilities
Transactions Leader
Birmingham, United Kingdom

Ian Whitlock
Partner, Ernst & Young UK
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London, United Kingdom

Opportunities to acquire UK generating assets increasingly tempt new groups of buyers, although as always, valuation is the key. Their motivations vary: some believe these assets currently offer real value compared with their potential price in the medium term, some want to secure demand points for a given technology or fuel, and some are using generation as a platform for market entry or a hedge to an existing supply business.

The signs are that a wider diversity of businesses is looking to enter the UK market, or at least build from an initial toehold further along the UK's energy value chain. Norwegian-owned Statoil announced shares in seven exploration licenses on Britain's Continental Shelf. Danish company DONG Energy grew its investment footprint in UK wind farms.

As 2012 closed there was also a glimmer of optimism in the gas-fired generation market as two CCGTs (Baglan Bay and EdF's Sutton Bridge) were sold to consortia led by Macquarie.

Partial equity sell-downs: watch out for more

Outright sales were not the only form of transaction in 2012. Buyers, notably Middle Eastern and Asian acquirers, are increasingly content to take significant minority stakes rather than pursue full equity buyouts.

The first direct outbound investment in UK infrastructure came in January 2012, when China Investment Corporation (CIC) took an 8.68% stake in Thames Water. Iberdrola is currently looking to sell a significant minority stake in its ScottishPower Electricity Networks businesses.

Partial equity sell-downs help to spread financial burden and risk across investment partners. EDF Energy, for instance, which sold a 20% share in its nuclear business to Centrica plc in 2009, is reported to be looking to sell a further minority stake, and Hitachi stated, as it acquired Horizon, that they would also be looking for equity partners.

Need for clarity on policy

Publication of the long-awaited Energy Bill[12] is expected to deliver a period of stability in policy, as well as a clear incentive to support lower-carbon generation, energy efficiency and security of supply.

The Electricity Market Reform (EMR) process aims to address specific challenges of the non-regulated market and supports the case for investment in this sector by clarifying the Government's position. Structures and incentives are designed to encourage further investment in low-carbon generation and recognize the value of capacity, not just energy.

A key element of the EMR is the introduction contract-for-difference mechanism to replace existing renewable support mechanisms from 2017 and give long-term price certainty to other low-carbon, capital-intensive technologies such as nuclear. It will set a long-term guaranteed strike price for renewable, nuclear and clean coal production, insulating generators, operators and retailers against price fluctuation and stabilizing returns for investors.

Those changes, along with the announcement of the UK's gas strategy consultation and the Government's decision to allow fracking to recommence, signal a growing recognition of the role all major fuel types will need to play in the UK market.

Outlook for 2013

Continued investment interest from Asian and sovereign wealth funds seems likely, but as new owners become increasingly satisfied with their regulated assets, fewer transaction opportunities are likely to come to market. However, pressure on the balance sheets of large, vertically integrated utilities certainly has not gone away, and the need for an exit by some of the first wave of asset acquirers will continue to feed this divestment cycle.

Further assets likely to come to market in 2013 include water and waste businesses, metering, renewable generation and electricity and gas distribution businesses.

While final delivery of the EMR proposals[13] could balance investment between regulated and unregulated assets, frustrations over low wholesale power prices and policy uncertainty could take time to wear off. Unregulated assets may not get the kick-start they need just yet.

Vertically integrated utilities will continue to look for physical gas supplies, so we expect to see further upstream oil and gas bolt-on acquisitions in the North Sea. Gas-fired electricity production will increase; more investment opportunities in early-stage gas construction projects seem likely in 2013.

12 "Energy bill published – as it happened," *The Guardian*, 29 November 2012, www.guardian.co.uk/global/blog/2012/nov/29/energy-bill-published-electricity-emissions.
13 Through the eventual 2013 Energy Act.

Perspectives on the ground

United States

Sellers feared that accepting anything too far removed from the asking price would trigger a downgrading by credit rating agencies.

Companies that preserve and improve on credit ratings will be best placed to take advantage of low-cost debt capital to fund acquisition opportunities that come to market.

Joseph Fontana
Global Transactions Power & Utilities Leader
New York, United States

Balancing act for US energy portfolios

Decade-low natural gas prices play havoc with deal-making as utilities battle to realign their competitive business. Report by Joseph Fontana

Generation businesses struggle to offload assets

Feeling the squeeze from decade-low prices for natural gas, uncertain environmental policy and economic lethargy, hybrid utilities began to rethink their operating strategies and energy mix in 2012.

Among them was Dominion, which put two coal and one gas power plants up for sale in late 2012, cementing a move to reduce its mix of competitive generation. PPL Energy took its generation assets in Montana to market, while Exelon Corporation, the largest nuclear operator in the US, said it might consider cutting dividends if power prices remained low; Wall Street jumped on this, punishing the stock. NextEra Energy Resources realigned its portfolio to hang on to a favorable credit rating, with a mix of 65% regulated assets to 35% generation assets, while EPL Oil & Gas Inc. switched to an 80% regulated asset base.

Despite sellers' resolve to rebalance portfolios, valuation gaps created bottlenecks in transaction activity. Buyers – mainly PE funds and infrastructure funds – called the shots. With little expectation of sustainably higher power prices, they wanted the assets at a discount and would not be budged. Sellers, seeking to execute on their rebalancing strategy and needing to offload assets due to adverse pressure on earnings, feared giving away their assets at too high a discount.

Although many generation asset sales are yet to be finalized, it seems sellers will be first to concede on price. Look for this to drive M&A activity in 2013.

Opportunities in T&D

While generation assets may be difficult to divest, T&D assets, with their steady cash-flow and lower risk profiles, could prove more attractive investment propositions.

The sector was hyped up before the recession by expectations of massive load growth. That fell away during the downturn, giving T&Ds breathing space. Investors have spotted that a rapid return to economic growth will be accompanied by rapid demand for power as economic output increases.

However, the challenge for T&Ds will be to build out new transmission assets — particularly in northeastern states and southern California and in regions with robust alternative energy sectors — in sufficient time to meet that surge in demand.

Policy uncertainty frustrates renewables

US policy is creating an uncertain outlook for renewables.

The production tax credit (PTC), in place since 1992 to boost investment in wind-power generation, was due to expire at the end of 2012. In last-minute fiscal cliff negotiations, the PTC was extended for another year. This is a crucial win for the wind industry, as a substantial fall-off in wind capacity — possibly as much as 70% — is probable without subsidy support.

Commercial solar, on the other hand, is propped up by significant incentives at both a state and national level. The 30% federal business energy investment tax credit (ITC) is in place until the end of 2016 and could encourage further build-out of solar portfolios in the US. Due to financing pressures, most of the activity is likely to center on distributed generation as opposed to utility scale.

Industry consolidation seems likely as the distressed economic environment leads large players to target smaller solar businesses.

Economic recovery threatens utility investment

For investors, utilities became something of a safe haven in 2012.

Amid volatile stock markets and artificially low US Treasury yields, regulated utilities benefited from lower-risk predictable cash flows. Investors sought them out as safe investments with attractive returns.

Of course, all this money rotating into utilities boosted stock prices and made M&A more expensive for would-be acquirers. And though the low-interest-rate environment made cash rather than share deals attractive, utilities' credit ratings had to be sufficiently robust to support corporate debt.

However, these good investment returns from utility stocks might not last. Rate regulation, which protected utilities during the downturn by continuing to provide utilities with the opportunity to earn allowed return on equity, may become a double-edged sword. As the US and global economy start to recover, investors will seek an exit out of safe havens and into investments delivering soaring yields much greater than rate-regulated entities can earn.

Outlook for 2013

How will utilities fare in the coming year?

More generation assets are likely to face the chop. Hybrid utilities will continue to diversify out of a sector hindered by a glut of natural gas, depressed prices, rising environmental obligations and falling returns. With no increase in natural gas prices imminent, they may accept lower prices for disposals.

The depressed forward curve for natural gas may boost merger activity in 2013 as US utilities seek to acquire regulated assets that will reduce their overall exposure to competitive generation. Blockbuster mergers can enable utilities to better realign portfolios by joining forces.

Robust credit ratings will be critical. When vying for targets, companies that preserve and improve on their credit ratings will be best placed to take advantage of low-cost debt capital to fund acquisition opportunities that come to market.

Perspectives on the ground

Germany

Government policy directs M&A investment into renewables, leading utilities to divest assets with steady lower-risk cash flows to financial buyers.

New types of buyers will continue to enter the market — either in competition with, or teaming with, utilities — to address developments in energy efficiency, smart grids, smart metering and new uses for energy.

Rainer Koenig
Partner, Ernst & Young Germany
Dusseldorf, Germany

Policy and thirst for renewables drive German transactions

In Germany, divestment of regulated businesses continued as utilities reacted to energy political moves, shoring up balance sheets against the need for major renewables investment. Report by Rainer Koenig

Government policy has dictated Germany's transaction trends in 2012 as the country phases out nuclear power, cuts carbon emissions[14] and ramps up renewable generation to hit 2020 targets.[15] The decision to transform the generation mix prompted a spate of strategic selloffs.

The experience of E.ON and RWE, the country's two dominant players, is representative. Both companies saw their market capitalization drop dramatically following the announcement of the nuclear phase-out in May 2011. With substantial investment needed to fund the continuing transformation of the sector, they have embarked on ambitious divestment programs, with E.ON aiming to raise US$18b and RWE US$11b.

The key challenge for both companies is simultaneously managing cost cutting, divestments and investment into technologically challenging renewables — primarily offshore wind — to comply with the generation portfolio mandated by government. In addition, investments in new markets are needed to reduce the dependency on profits in the home market. Earnings volatility may increase as they deleverage from a regulated earnings base and tap into new markets.

Key German transmission deals over the last two years

German utilities sell transmission asset worth US$7.6b, including:

- OGE: Gasgrid of E.ON sold to consortium led by Macquarie (US$3.7b)
- Thyssengas: RWE gas grid sold to Macquarie*
- Amprion: RWE transmission grid sold to group of insurance and pension fund investors (US$1.5b)
- Transpower: E.ON transmission grid sold to TenneT BV (US$1.3b)
- 50 Hertz: Vattenfall transmission grid sold to a consortium of Elia and an Australian pension fund (US$1.1b)

* Value not disclosed

14 Germany has set a target of 40% CO2 reduction by 2020. "German renewable energy drive brings emissions cuts success," *The Guardian*, 26 November 2012, www.guardian.co.uk/environment/2012/nov/26/german-renewable-energy-emission-co2.
15 Germany is targeting 35% generation from renewable energy sources by 2020.

Transmission grid sales net US$7.6b

Where businesses sat within the energy value chain heavily influenced transaction activity. One clear route to new cash in 2012 was the disposal of regulated transmission assets. Utilities including RWE and E.ON identified transmission grids, with their relatively low returns, as no longer core to the future of the business.

Buyers included foreign transmission system operators in the Netherlands and Belgium, as well as financial investors and infrastructure funds attracted by the predictable cash flows of the regulated sector. E.ON's sale of Open Grid Europe (the company's gas transmission grids) demonstrates the international nature of these deals: the buyers were a consortium of financial investors led by Macquarie, including an Abu Dhabi fund, a German insurance company and a British Columbian investment manager.

Distribution grid sales highly complex

In the course of 2012, several regulated distribution grids also went up for sale. These are typically regional businesses that include distribution assets and retail businesses. But selling distribution assets in Germany is more complex than selling transmission: utilities run the distribution businesses under contract with local municipalities, which in most cases must be allowed first refusal to bid.

The average ticket price of these regional distribution companies exceeds US$1b, so municipalities typically need to team up to buy them, compounding the complexity of the sales process. At the time of writing, one sale had collapsed and six were still ongoing.

Infrastructure funds and pension funds have shown interest in investing in these distribution grids, but to date the contractual situation has prevented them from entering the market. In the near future we might see these obstacles disappear.

Outlook for 2013

Germany can expect a robust transaction market in 2013. The larger players will continue to dispose of further assets. Municipalities will drive activity as they continue to buy local distribution infrastructure — as long as financing is cheap. The transmission grids that remain in the hands of utilities are also likely to be sold in the next two years, with cash-rich financial buyers such as sovereign wealth funds and infrastructure funds leading the charge.

International investors, including outbound deal-makers from Asia, are clearly important, and their influence will continue to grow. For example, they are likely to invest in offshore wind generation, once the construction phase is completed and there are reasonable expectations of returns while managing risk.

The immaturity of the regulatory environment and the technological challenges around offshore wind have been challenging, but our recent discussions with the regulator and Government bodies lead us to believe regulatory issues should be resolved by mid-2013. This will encourage investment and open up opportunities for buyers. Discrete capital investment programs to fund transmission grid connections between offshore wind farms and the mainland could become an attractive asset class in due course.

As they rebuild their generation portfolios, Germany's major energy players need clear new strategies that will take them through the next 50 years. Their decisions of what to retain and what to sell could see Germany's entire traditional value chain break up and a new model take its place, in which IPPs, infrastructure funds and consumers (including consumers owning decentralized generation assets) own the assets and separate parties manage operations, marketing and sales.

New market roles are already developing fast — for example, traders focusing solely on managing and marketing green energy and green tariffs, with no investment in assets. New types of buyers will continue to enter the market — either in competition with, or teaming with, utilities — to address developments in energy efficiency, smart grids, smart metering and new uses for energy. The new gateways they develop to the customer, and the new services they provide, are likely to drive power and utility transactions in a completely new direction.

Brazil

The new concession arrangements may pressure some companies into adjusting their return expectations by selling or buying assets.

Some distribution assets are overleveraged and unable to raise funding in the market. It's likely that we will see distressed distribution assets sparking transactions in 2013.

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Reform transforms the Brazilian energy market

Sweeping electricity market reform arrives in a conclusive year for deals. Report by Luiz Claudio Campos and Lucio Teixeira

Market reform restores certainty

This year's big story has been the Brazilian Government's action on electricity market reform. Uncertainties about the direct and indirect effects of this change have created an unsettling backdrop for the country's power markets, hindering some deals and placing pressure on energy stocks.

In the final quarter of 2012, the picture became clearer when the Government announced its decision on renewals of power concession contracts expiring between 2015 and 2017, as part of an effort to lower power costs in the country.

The new measure[16] proposes a significant reduction in the taxes and fees that have pushed Brazil's energy costs up among the highest in the world. The affected electricity concession owners have had to decide whether to renew their contracts for a new 30-year period; those who do so must agree to lower, capped tariffs. They are to be reimbursed for losses related to contract anticipation.

According to the Brazilian Government, 60% of the generation contracts and 100% of the transmission lines may accept the renewal.

The new measure gives concession owners predictable and longer future cash flows, but it obviously reduces cash generation for some important energy players, forcing them to rethink their strategy for Brazil. This may pressure some companies into adjusting their return expectations by selling or buying assets. At the same time, some assets not affected by the new rules — especially generation contracts — will look attractive to new investors. We may see M&A activity on the rise as portfolios are rebalanced.

16 The new measure is known as MP 579 (Provisional Measure 579).

New routes to funding needed

Although the new concession negotiations have taken some time and caused heated debate, Brazil now has a chance to build a more sophisticated market under a more predictable, lower-return regime. And key to a sustainable domestic market is building a self-sustaining debt market to meet the country's energy and broader infrastructure needs.

Brazil is a very capex-hungry country, with investment needed not just in energy but in infrastructure across the board. The local development bank, The Brazilian Development Bank (BNDES), is currently providing most of the funding and doing a great job above and beyond what would normally be expected. But the heavy demand means more routes to finance are needed. Brazil is now trying to develop a bond market for participants to issue new debt, and the banks are trying to develop a secondary market for these bonds. In a recent development, Brazilian private commercial banks are starting to finance long-term contracts. The bond market is evolving to keep pace with demand.

Free-market generation moves up

Recent competition for Government-auctioned renewable energy production contracts has been intense, including a large number of international players vying to invest and set up bases in Brazil.

The country now has a large number of competitive renewable energy players, backed by a well-developed local supply chain. With current prices making the regulated market unattractive for generation, renewables developers are looking to set up contracts with qualified long-term off-takers to make their projects feasible in a long-term perspective. We have started to see generators sign power purchase agreements (PPAs) with off-takers outside the regulated power pool.

This opens up a potential wealth of opportunities for investment. If the right contractual basis is established, the free market can now offer investors the confidence to provide long-term project financing. We can expect this to be a growth area into next year.

Outlook for 2013

As regulation becomes clearer and important issues are resolved, foreign investors — already a strong presence in Brazilian energy — can be confident that this remains a sector with inflation-protected cash flows and predictable revenues, despite the uncertainty around concession renewals and the prevailing pressure to control energy prices and reduce returns. We expect additional international investors to enter the market in 2013 and beyond, with most of the capital flowing from Europe and Asia and a higher proportion of sovereign wealth and infrastructure funds investing.

The distribution market is highly consolidated in Brazil, but opportunities are still out there for long-term investors looking for predictable returns. However, distribution networks require significant amounts of capital expenditure, and as things stand, some of these assets are overleveraged and unable to raise funding in the market. It's therefore likely that we will see distressed distribution assets sparking transactions in 2013, as they did in 2011 and 2012.

Renewable energy transactions, especially onshore wind, featured prominently in 2012. The wind farm market is consolidating, with large players acquiring the midsize companies' portfolios. As Brazil's wind portfolio moves from construction projects to developed assets, financial investors such as pension and infrastructure funds are increasingly interested. A substantial number of operating portfolio companies will establish themselves over the next few years, which could become targets for foreign and local financial investors, or even (in restricted cases) go through IPOs. Given the current trend to reduce returns to investors in the new concessions, existing PPAs could be a target for new investment. Given the large number of renewable energy projects still under development, we can expect further changes to ownership structures in 2013, with financial investors increasing their presence.

Perspectives on the ground

Australia

Though facing criticisms from consumers over energy prices, state governments refused to be pressured into selling energy assets to the private sector.

Despite current reluctance by state governments and low transaction volumes in 2012, watch out for large government-owned assets coming to market over the next few years.

Matthew Rennie
Oceania Power & Utilities Leader
Brisbane, Australia

Transactions waiting game for Australia

Despite escalating electricity costs, governments remain wary of allowing energy network assets to go to market. But consortia of buyers, including international investors, are lining up. Report by Matt Rennie

Australian states resist federal government directive on M&A

Rising prices, growing intervention by regulators and customer price elasticity should have kick-started M&A activity in Australia's energy sector in 2012.

By moving non-core energy assets and infrastructure out of the public sector and into private ownership in the late 1990s, state governments aimed to tap into efficiencies, reduce energy costs to consumers, decrease the debts of Australian states and free up capital for more gainful investment.

However, divestment programs in the infrastructure energy sectors have been met with state-level resistance since then. Though facing criticisms from consumers over energy prices, state governments remain wary of voter and consumer concerns in relation to selling energy generation and network assets to the private sector.

While the merger of Tasmanian T&D assets got the go-ahead, and New South Wales (NSW) generation assets look certain to go to market in the medium term, divestments in the network sectors in NSW and Queensland have stalled. The premiers of both states insist that the assets will not be sold just yet. The market anticipates a two- to four-year holdup.

Buy-side appetite for deals

Despite seller opposition, there is plenty of buy-side appetite for deals. Financiers, acknowledging 10-year lows in national electricity market pool prices, are focused on future asset potential. In the interim, they seem willing to tolerate reduced rates of return.

Equipment manufacturers and operations and maintenance (O&M) businesses, suffering a decline in the number of new power station construction projects in the Asia-Pacific region, are keen to redeploy workforces into new ventures and add value to generation assets. They will be dominant parties in any bids.

However, some big names from Australia's energy industry will be missing from the bidding field. The Australian Competition and Consumer Commission restrictions on market concentration and market power may see large retailers in NSW unable to participate in the sale processes for the generators.

Filling the gap are international investors. Mainland China, Hong Kong SAR, Singapore and India are all eyeing Australian power and utility assets, particularly coal-fired power stations where they have considerable experience. Among them is state-owned China Investment Corporation (CIC), which is advancing its go-abroad strategy to fulfill China's massive need for natural resources. As a relative newcomer in the market, CIC is de-risking its investments by partnering with Australian equipment manufacturers, O&Ms and financiers.

Consortia deliver skills and capital

Transactions in the Australian market were few and far between in 2012. Though projects were initiated, many faltered at the final financing hurdle, with investors reluctant to deploy capital. Tighter debt and credit markets contributed to the angst.

However, over the next two to four years, state-owned assets will come to market. Bidders are likely to continue to operate in consortia, to spread risk and alleviate cash-flow uncertainty in assets with unpredictable forward pricing.

Finding the right local consortium partners is vital to maximize investments. The Australian national electricity rules, for instance, are over 1,500 pages long and have changed over 100 times in the last five years, while the industry itself is highly complex and bound by financial and technical obligations. For international financiers, a consortium approach to investment gives access to on-the-ground operational expertise and provides local legal, commercial and regulatory know-how to navigate these complexities.

Demand growth fuels Asia-Pacific investment

Massive international demand for energy at acceptable standards and reasonable prices is making Australia the energy hub for Asian markets. Indonesia, where more than 80 million people do not have access to electricity, and China, India and Mongolia, which are industrializing rapidly, are turning to Australia to acquire coal and technical expertise.

Japanese oil company INPEX is typical of the international companies setting up in Australia in search of energy supply security. INPEX is the majority partner in the Ichthys liquefied natural gas (LNG) project off the coast of Darwin in Western Australia. It will supply around 10% of Japan's LNG demand[17] and is one of many projects planned or under development to supply the energy-hungry growth economies.

Equipment manufacturers and O&Ms like GE, Alstom and Hitachi may enter these projects as consortium members to become dominant sellers of generation plants.

Renewables remain costly despite subsidies

Australia has an abundance of solar, wind and wave energy. The government has targeted 20% of the country's electricity to come from renewable energy sources by 2020.

Though fossil fuels will continue to dominate the energy mix, federal government interventions, by way of subsidies, are designed to attract more investment into the renewables sector, while getting consumers onboard with green energy producers. Many commentators have challenged the policy, given that Australia's renewable generation, though increasing, remains costlier than alternatives at a time when electricity prices in the country are skyrocketing for consumers.

Meanwhile, the Government is actively disincentivizing investment in coal generation, which accounts for 90% of total electricity generation in Australia, prompting concerns about future base-load shortages.

Outlook for 2013

The biggest issue for Australian consumers is the high cost of electricity, which is driving regulatory and government intervention in the energy markets. Privatization will ultimately be part of the solution to drive down prices and introduce greater private sector operational cultures and efficiencies. Despite current reluctance by state governments and low transaction volumes in 2012, watch out for large government-owned assets coming to market over the next few years.

We can also expect Chinese and Japanese asset buyers to continue to form consortia with domestic equipment manufacturers and O&Ms, taking advantage of local expertise. Over time, as these Asian investors become increasingly knowledgeable about the financial and operational demands of running plants, their footprints in Australian markets will expand.

17 "$34b Inpex project given kick-off from top,"ABC News website, 18 May 2012, www.abc.net.au/news/2012-05-18/gillard-turns-first-inpex-plant-sod/4019448.

2013 Transaction outlook

> "As global power and utility companies continue to operate in a fluid market, transaction opportunities will naturally follow. Whether the aim is to reduce debt, focus core operations or free up capital to invest in emerging markets, there will be robust activity in 2013."
>
> **Joe Fontana**
> Ernst & Young

Divestment programs and focus on renewables for Europe

Despite the preference for lower-risk and lower-value transactions, we will see billion-dollar deals coming out of European utility divestment programs, particularly on the regulated side, where there is strong buyer interest. Look for continued T&D asset sales in Germany, the UK and Western Europe and a number of assets up for sale in the troubled Southern European region. On the privatization front, Greek and Czech Republic privatizations are expected to move forward in early 2013, while the Irish Government has also announced the sale of Bord Gáis Energy. Turkey's privatization program experienced a significant boost in December 2012, and tenders for its remaining generation and T&D state-owned assets have been placed, with sales expected to be concluded in 2013.

Europe will also see a focus on renewables in 2013. Companies such as Vattenfall will continue to look for opportunities in the offshore wind market while projects are still being supported. However, it's not all good news. Some wind projects were perhaps too aggressive with revenue assumptions not stacking up and are now effectively over-leveraged. Developers who took construction risk may be able to exit, but others may not. There may be a continuing challenge in 2013 to get these projects into credit-rated financial packages, given the potential for construction, technological, operation and maintenance costs for offshore wind, as well as regulatory and political risk.

Billion-dollar mergers possible for Americas

M&A activity in the Americas will be fueled by US-based hybrid utilities exiting merchant generation assets and heightened investor interest in Latin America. We also see strong potential for billion-dollar mergers in the US as utilities seek to rebalance their portfolios and get the right mix of regulated and unregulated operations.

Fuel security a key driver of Asia-Pacific acquisitions

Within Asia-Pacific, growing fuel security issues, especially in countries such as India, Japan and China, are likely to make backward integration (securing fuel supply) more pronounced, with utilities acquiring coal mines and gas assets in both domestic and global markets. Look for a number of opportunities in Australia as a result of the pending privatization programs, with the New South Wales generators likely to be first on the block.

Three broader trends to watch: European energy policy, innovative investment approaches and nuclear moves

Energy policy is at a crossroads in Europe. There is a view that the market is not sending the right price signals to create the necessary investment. Regulators and politicians must act quickly to changing fuel mix dynamics so that efficiency and sustainability of supply thrive. The big discussion centers on the introduction of capacity markets to protect thermal generation, which is at risk from the massive amount of renewable generation coming online at near-zero marginal cost. As things stand, capacity payments are either present or in the pipeline in the five largest EU economies. Policy commitment is needed to strengthen the single energy market: otherwise there is a risk of breakdown into 27 national systems. As we have seen in Germany, where policy leads, transactions will follow.

On a brighter note, 2012 included interesting trends that are likely to recur in 2013. The Atlantic Wind Connection, a US$5b proposed transmission line connecting wind farms off the US East Coast to the mainland, backed by Google, is on track to start transmission by the end of 2017. Innovative projects and non-traditional investors will become the norm in 2013 and beyond. Demand-side management and energy efficiency continued to develop in 2012, and we predict 2013 will see a significant step-up. It is not feasible to keep pouring capital into more resources on the supply side: the sector needs to invest further in efficiency, and this will undoubtedly influence deals.

Finally, a word on nuclear: there is little doubt that nuclear power remains a tough proposition in a post-Fukushima world. However, we have seen movement. Hitachi has invested in the Horizon new nuclear project in the UK; in the US, a handful of nuclear power plants are under construction and 10 more are at the project assessment stage. Meanwhile, in Germany, it has been said that for every 1 MW of nuclear removed from the system, 5 MW of renewable generation must be added, resulting in a huge strain on the grid and requiring further investment.

"Despite continued global economic uncertainty, the ingredients are in place for a steady deal-making environment in 2013. Access to credit remains relatively strong, and there is a war chest of sovereign wealth capital ready to be put to work. The valuation gap between buyers and sellers that held up some deals in 2012 will narrow as sellers act on investor pressure to redeploy capital."

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