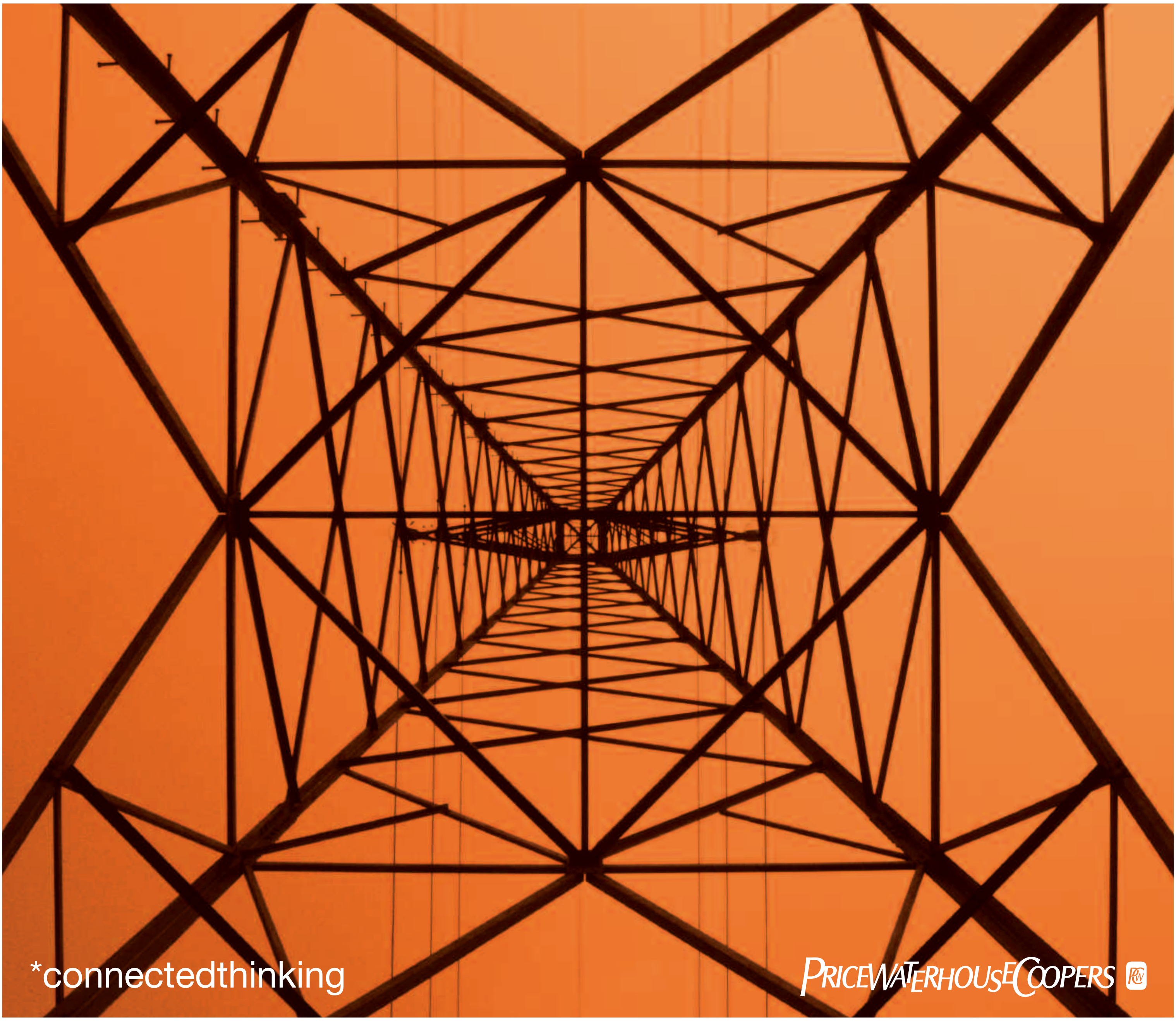
Industries
Energy, Utilities & Mining

Power Deals*

2007 Annual Review

Mergers and acquisitions activity within the global electricity and gas market



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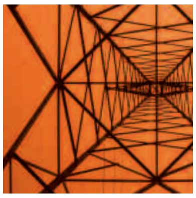
Contents

Methodology and terminology

Power Deals includes analysis of all global cross-border and domestic electrical and gas deal activity. We use the terms ‘power utilities sector’, ‘power utilities’ and ‘power deals’ to cover activity in both the gas utilities and electricity utilities sectors (see detailed coverage below). The analysis is based on published transactions from the Dealogic ‘M&A Global’ database, December 2007. Analysis encompasses announced deals, including those pending financial and legal closure and those which are completed. Deal values are the consideration value announced or reported including any assumption of debt and liabilities. Figures relate to actual stake purchased and are not multiplied up to 100%. Throughout the report, both for 2007 and for 2006, we classify the Russian Federation in a geographic category in its own right and define Asia Pacific as excluding the Russian Federation. The analysed sectors referring to North American Industry Classification System (NAICS) include: electric power generation; electric power transmission, control and distribution; natural gas distribution; natural gas transmission; gas transmission and distribution. The term ‘power’ used throughout the report defines these categorised sectors. All presented numbers of deals are inclusive of those deals with no reported value. A full list of transactions throughout 2007 is available by visiting the *Power Deals* website at www.pwc.com/powerdeals.

Introduction 01



The year 2007 saw a continued remarkable expansion in the total number and value of deals in the power utilities sector (electricity and gas) worldwide. A 25% increase put the total power deal value of US$372.5bn nearly nine times above the US$43bn recorded just four years earlier in 2003. Records continue to be set in the sector for the total number and value of deals and for the size of individual deals.

There was little sign of the sector pausing for breath in 2007. There were fewer mega-deals, reflecting the complexity of getting really huge deals over the political and regulatory hurdles, but this was more than compensated by a rise in mid-size deal numbers. There was no clear evidence of a fall-off in deal activity in the second half of the year as the credit crisis broke. Indeed, 57% of all power sector deals, 441 of the total 768 deals, came in the second half.

Strong deal momentum characterised all the major markets and, with the restructuring of the Russian electricity sector, 2007 marked the year when deals in the Russian Federation made a significant impact on the worldwide totals. Thus, for the first time, *Power Deals 2007* includes a specific section on the Russian deals and we separate them out from the wider Asia Pacific totals where they featured in previous editions.

This report examines the rationale behind the overall trends and the key individual deals. We also highlight, in a series of deal dialogues throughout the report, some of the critical issues for companies engaging in deal activity within the sector, drawing on our global experience as an adviser to players in major deals across the sector in all key electricity and gas utilities markets.

Looking to the future, the political and regulatory context will remain key, especially in an election year in the US and Russia. The 'credit crunch' will have an impact on the value and volume of certain types of deals. Nonetheless, the prospects for continued high levels, if not record levels, of power deal activity remain strong. Deep pockets, global ambition and the basic imperatives of consolidation and non-organic growth are likely to continue to be important deal drivers. Emerging greater certainty around climate change regulation is likely to maintain the interest in renewables and, also, bring a new focus on nuclear assets.

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02 Report highlights

Power deals again reach record levels

The total value of electricity and gas deals soared to US$372.5bn in 2007, up by 25% on the record US$298.8bn set in 2006, which itself was 52% up on 2005 levels. Yet again, new single deal records were set. Enel and Acciona's move for Endesa was worth a total US$66.2bn, just above E.ON's US$66.1bn 2006 attempt to secure the same target. Kohlberg Kravis Roberts and Texas Pacific Group's US$43.8bn purchase of TXU marked the largest private equity deal on record and topped the biggest other completed power deal – Suez's US$43.1bn 2006 merger with Gaz de France.

Strong underlying deal momentum

While it was the big deals that captured the headlines, the surge in total deal values was a reflection of the strength of underlying deal activity. The total number of power deals was up 23%. Indeed, there was a falling-off in the number of mega-deals with two US$20bn plus deals in 2007 compared to four such deals in 2006. This took out US$43.7bn of year-on-year deal value but was more than offset by increases in the numbers of smaller deals.

Domestic electricity deals rule the roost

There were significant shifts in the focus of deal activity. While cross-border deals were slightly up on 2006 levels, it was domestic deals, and domestic electricity in particular, that accounted for the big increase. The total value of domestic electricity deals nearly trebled, from US$73.4bn in 2006 to US$208.8bn in 2007. Alongside this US$135.4bn leap in domestic electricity deals came a big fall in gas deals. Total gas deal values fell by a huge US$82.5bn to US$24.2bn in 2007, reflecting the absence of the gas mega-deals that we saw in 2006.

Russian power deals come of age

For the first time, the volume and total value of deals involving companies in the Russian Federation reached significant levels in worldwide terms. From comprising just 2.5% of worldwide bidder value in 2006, bids by Russian entities rose from US$7.5bn to total US$64bn or 17.2% of all deal values. Virtually all of this activity took the form of domestic deals, although much of it was 'non-mainstream' developments arising from one-off events. Target values and volume for the Russian Federation recorded similar increases and, while the vast majority of activity was by Russian entities, there were some notable cross-border moves by European companies increasing their asset base in Russia.

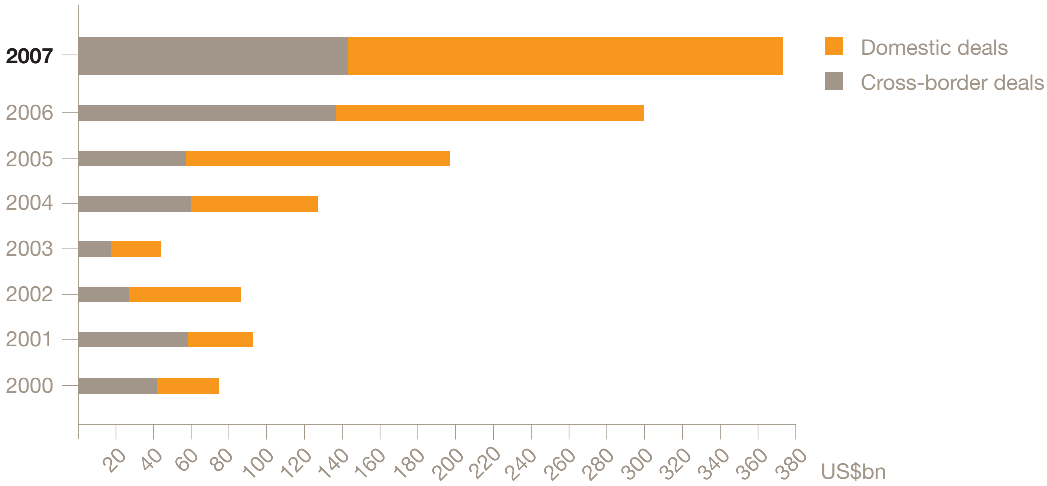
04 Deal totals: another record power surge

Unprecedented deal activity in North America, Asia Pacific, the Russian Federation and, in terms of targets South America, catapulted 2007 power deal totals to record highs. Only Europe recorded a significant year-on-year fall in deal values although, even here, deal activity was intense with deal numbers maintaining the record levels recorded in 2006. Indeed, across the board, it was an increase in deal numbers rather than deal values that drove the increases.

The surge in power deals put the total 2007 deal value of US$372.5bn nearly nine times above the US$43bn recorded just four years earlier in 2003 (Figure 1). The total number of 2007 deals in the power utilities sector was up by 23% year-on-year compared to 2006. The level of cross-border activity rose (Figure 2) but it was domestic activity that set the totals on fire. The value of domestic electricity deals nearly trebled, rising from US$73.4bn in 2006 to US$208.8bn in 2007 (Figure 3).

The US$135.4bn increase in domestic electricity deals more than offset a no less remarkable US$82.5bn fall in the value of gas deals worldwide (Figure 4). In large part, the latter is not so much a reflection of any underlying trend but, rather, the exceptional mega-gas deals transacted in 2006 when four big deals – the purchases of Gaz de France, Kinder Morgan, KeySpan and Australian Gas Light Company – dominated the top ten power deals table and accounted for US$81.9bn of value. Nonetheless, there was a 25% fall in the number of gas deals in 2007 compared with 2006. Figure 5, however, highlights the role of overall deal numbers rather than deal values in driving the totals to record levels.

Figure 1: **All electricity and gas deals by value**



Source: PricewaterhouseCoopers, *Power Deals 2007 Annual Review*

Figure 2: **Cross-border and domestic electricity and gas deals**

	2006 Number	2006 Value	2006 % number	2006 % value	2007 Number	2007 Value	2007 % number	2007 % value
Domestic	421	US$162.8bn	68%	54%	530	US$229.9bn	69%	62%
Cross-border	202	US$136.0bn	32%	46%	238	US$142.6bn	31%	38%
Total	**623**	**US$298.8bn**	**100%**	**100%**	**768**	**US$372.5bn**	**100%**	**100%**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

Figure 3: **The rise and dominance of domestic electricity deals**

2006		2007		Increase in 2007	
Number	Value	Number	Value	% number	% value
347	US$73.4bn	464	US$208.8bn	34%	184%

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

The geographic spread of activity was symptomatic of the imperatives driving deal-making in the sector as companies seek to secure assets and scale. High commodity prices continued to boost company balance sheets and cash flows, underpinning the ability of companies to look actively for deals. The rise in power deals also reflected increases in all-sector global M&A activity but, unlike other sectors, there was no clear evidence of a fall-off in deal activity in the second half of the year as the credit crisis broke. Indeed, the number of final quarter deals in 2007 was 73% up on the final quarter of 2006 and final quarter total value was 21% up (see Figure 6).

Figure 4: **The fall in gas deals**

2006		2007		Change in 2007	
Number	Value	Number	Value	% number	% value
119	US$106.7bn	89	US$24.2bn	-25%	-77%

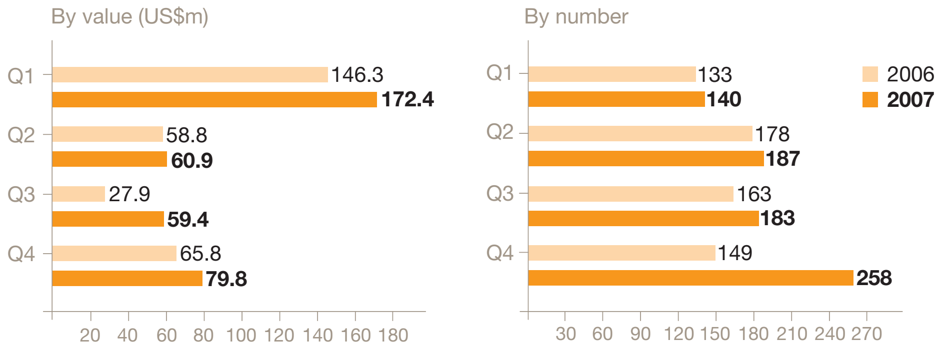
Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

Figure 5: **Average value and number of power deals – 2003-2007**

	2003	2004	2005	2006	2007
Below US$250m (Average value)	US$55m	US$60m	US$54m	US$61m	**US$57m**
Number of deals	358	386	433	523	**612**
US$250m – US$1bn (Average value)	US$462m	US$498m	US$502m	US$486m	**US$482m**
Number of deals	31	51	63	61	**102**
Above US$1bn (Average value)	US$1.9bn	US$3.7bn	US$4.8bn	US$6.4bn	**US$5.6bn**
Number of deals	9	23	31	39	**54**
Total average value	**US$175m**	**US$409m**	**US$515m**	**US$727m**	**US$669m**
Total number of deals	398	460	527	623	**768**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

Figure 6: **Quarterly tracking of power deals by value (US$m) and number of deals**



Source: PricewaterhouseCoopers, *Power Deals 2007 Annual Review*

PwC deal dialogue:

Investment to meet new demand and secure supply

The investment challenge on electricity and gas companies is immense. The sector strives to secure investments to meet its infrastructure funding needs. The successful delivery of these infrastructure projects around the world, whether it is the construction of new power stations, the maintenance of aging assets or the extension of transmission capacity, are key to meet the global energy demand and secure supply.

There is a vast global investment gap in energy supply infrastructure that needs to be met. The International Energy Agency estimates this to be US$22 trillion over the period 2006-2030 of which the power sector accounts for US$11.6 trillion. The gap is being widened all the time by higher unit costs and increasing demand in fast-growth and emerging economies. Large-scale investment is required across both networks and generation to satisfy increasing demand. Emerging economies account for over half this investment as electrification continues apace.

Trade players are investing vast sums in capital projects. This slips under the deal radar. We are increasingly seeing funds designed not to participate in corporate M&A but to actively invest in large-scale capital projects.

The PwC Energy and Utilities team has an excellent record in helping clients successfully deliver large-scale energy infrastructure projects. We are able to assist with:

- Project feasibility studies
- Country and market risk issues
- Commercial contract negotiations
- Financial structuring
- Non-recourse finance strategy
- Deal closure and post-deal services

06 Deal makers: the 2007 power players

Two big deals – for Endesa in Europe and TXU in the US – caught the spotlight in 2007 but the year was also noteworthy for the appearance of Russian companies in the top ten table for the first time. Indeed, the Russian Federation did not just feature in a single deal but in five of the top ten deals, reflecting the current phase of fairly unique domestic restructuring and European interest in Russian assets (Figure 7).

The table-topping purchase of Endesa by Enel and Acciona was the third act in the long-running consolidation story around Endesa. The pursuit of Endesa has been fought out against a backdrop of intense political and regulatory scrutiny, including a fair dose of energy nationalism and resistance. Act two was E.ON's 2006 bid for Endesa but the Enel move proved more palatable to Spanish interests, coming as it did in concert with Acciona. Ironically, E.ON's bid was, in part, made possible by legal delays stalling the momentum of an earlier Gas Natural bid for Endesa (act one in the trilogy). A further final act will come with various divestments to E.ON once Enel and Acciona gain control of Endesa. These transactions will make E.ON the number four player in the Spanish and Italian power markets and the third largest electricity generator in France.

Figure 7: **Top Ten – Cross-border and domestic electricty and gas deals 2007**
(Please refer to the Deal places section, pages 8 to 15, for more insights on the listed deals)

No.	Value of transaction (US$m)	Date announced	Target name	Target nation	Acquirer name	Acquirer nation
1	66,223	27 Feb 07	Endesa SA* US$5.435m 27 Feb 07 Endesa SA (9.99%) US$3.820m 01 Mar 07 Endesa SA (7%) US$2.731m 01 Mar 07 Endesa SA (5.005%) US$1.611m 12 Mar 07 Endesa SA (2.975%) US$52.626m 02 Apr 07 Endesa SA (46.05%)	Spain	ENEL SpA; Acciona SA	Italy and Spain
2	43,797	26 Feb 07	TXU Corp	United States	Kohlberg Kravis Roberts & Co - KKR (IBO); Texas Pacific Group; Goldman Sachs Capital Partners	United States
3	15,250	27 Jul 07	Federal Grid Co OAO (29.624%)* US$13.250m 27 Jul 07 Federal Grid Co OAO (29.624%) US$2.000m 27 Jul 07 Federal Grid Co OAO (12%)	Russian Federation	Unified Energy System of Russia RAO-UES	Russian Federation
4	12,553	30 Mar 07	Alinta Ltd	Australia	Babcock & Brown Infrastructure Ltd - BBI; Babcock & Brown Wind Partners Ltd; Babcock & Brown Power; Singapore Power Ltd	Australia
5	8,420	15 Sep 07	OGK-4 OAO (100%)* US$5.775m 15 Sep 07 OGK-4 OAO (69.34%) US$2.645m 15 Nov 07 OGK-4 OAO (30.66%)	Russian Federation	E.ON AG	Germany
6	8,020	15 Feb 07	Mosenergo OAO (86.2%)* US$2.310m 15 Feb 07 Mosenergo OAO (28.931%) US$678m 07 Aug 07 Mosenergo OAO (7.174%) US$5.032m 29 Aug 07 Mosenergo OAO (50.1%)	Russian Federation	Gazprom OAO	Russian Federation
7	7,808	26 Jun 07	Energy East Corp	United States	Iberdrola SA	Spain
8	6,794	26 Oct 07	Puget Energy Inc* US$6.494m 26 Oct 07 Puget Energy Inc US$300m 26 Oct 07 Puget Energy Inc	United States	Macquarie Infrastructure Partners; Macquarie-FSS Infrastructure Trust; Alberta Investment Management; Canada Pension Plan Investment Board; Macquarie Bank Ltd; British Columbia Investment Management Corp	United States
9	6,770	26 Oct 07	Vladimirenergo OAO (51%)	Russian Federation	Unified Energy System of Russia RAO-UES	Russian Federation
10	6,253	06 Jun 07	OGK-5 OAO (100%)* US$1.517m 06 Jun 07 OGK-5 OAO (25.03%) US$281m 22 Jun 07 OGK-5 OAO (4.96%) US$433m 25 Oct 07 OGK-5 OAO (7.15%) US$4.022m 15 Nov 07 OGK-5 OAO (62.85%)	Russian Federation	ENEL SpA	Italy

* These entries summarise the acquisitions and are listed below the respective target name (in chronological order)

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*, based on published transactions from the Dealogic 'M&A Global' database, December 2007.

Figure 8: **The five most active bidders** (excluding top ten deals listed in Figure 7)

Rank	Bidder	Number of deals	Total value US$m
1	Unified Energy System of Russia RAO-UES	24	12,336
2	E.ON AG	8	9,171
3	Gazprom OAO	6	6,951
4	AEM SpA	3	5,876
5	Norilsk Nickel OAO	6	5,078

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*, based on published transactions from the Dealogic 'M&A Global' database, December 2007.

Across the Atlantic, TXU, one of America's biggest utilities, agreed a US$43.8bn takeover by a private equity consortium (led by Kohlberg Kravis Roberts, Texas Pacific Group and including Goldman Sachs, Morgan Stanley, Citigroup and Lehman Brothers) in what was reported at the time as "the largest private equity deal on record" (source: Financial Times, *26 February 2007*) although it has since been eclipsed by the US$49bn purchase of Canadian telecoms group BCE (Financial Times, *12 September 2007*). Announced before the credit crunch intensified, completion of the deal nonetheless had to take place against the background of unfolding financial market disruption. The bid was noteworthy not just for its record size and highly leveraged structure, typical of private equity deals, but also the way in which environmental concerns came on to the deal agenda. TXU had planned to build 11 coal-fired power plants. In the run-up to the deal, KKR and TPG gained the backing of environmental groups by agreeing to scrap plans to construct eight of the 11 plants. They also pledged to support a reduction in carbon dioxide emissions to 1990 levels by 2020.

Two of the five deals for Russian assets featured moves by European companies, E.ON and Enel, as the restructuring of Russia's electricity sector gathered pace with the break-up and privatisation of the UES electricity monopoly. The biggest single Russian deal, however, was the US$15.3bn share placement of the Federal Grid Company. This deal is, in reality, a purchase of additional shares by two existing shareholders. Similarly the ninth deal in Figure 7 was a share swap rather than mainstream deal activity. These developments were just the tip of the iceberg of the extensive Russian restructuring, as shown in Figure 8 where Russian companies occupy three places in the top five most active bidders table and account for 36 of the 55 deals (see The Russian Federation section on page 13 for more detail).

Worldwide, the appetite of infrastructure funds for power assets continued undiminished during 2007. As Figure 9 shows, the value of deals involving infrastructure funds rose 60% from US$52bn to US$83.4bn and accounted for over a fifth of all power deal bids. It should be noted that the presence of consortiums means that these figures slightly overstate the rise in infrastructure fund activity. The largest deal involving an infrastructure fund, for example, was a corporate utility/infrastructure hybrid with Singapore Power International accounting for over 50% of the deal value, alongside Babcock & Brown, in the US$12.5bn purchase of Alinta. Elsewhere in the top ten table, Macquarie infrastructure players combined with Canadian financial and pension entities in the US$6.8bn bid for Puget Energy (for more see later sections on North America and Asia Pacific).

Figure 9: **Infrastructure investment fund bidder activity (US$bn)**

	2003	2004	2005	2006	**2007**
Infrastructure investment funds	17.01	43.01	27.59	52.03	83.38
Utilities	26.02	80.64	168.67	246.81	289.15
Total	43.04	123.64	196.25	298.84	372.53
Infrastructure investment funds	40%	35%	14%	17%	22%
Utilities	60%	65%	86%	83%	78%

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

PwC deal dialogue:

Understanding the value of carbon

The range of market opportunities, regulatory contexts and actual operational circumstances facing utility companies is incredibly diverse. A key challenge is devising carbon strategies that both reflect a company's current situation and secure maximum potential for the future.

Carbon trading and carbon value is a hot topic as the climate change issue remains high on the political agenda. Global developments on carbon policy during 2007 included the UN 'Bali roadmap' that sets an agenda to try and reach a post-Kyoto treaty; the election of a new administration in Australia which moved immediately to ratify Kyoto; and, new commitments in Europe to reduce emissions significantly by 2020. In the markets, the EU Emissions Trading Scheme (EU-ETS) remained the centre of the action with around 1,600 million tonnes traded in 2007, an increase of over 80% on the previous year and representing a value of around €28 billion.

Carbon prices provide a signal for both operational and infrastructure investment decisions. There are clearly commodities/hedging plays for the trading desks of the large European utilities, but wider questions arise on the embedded value or risk around carbon within the asset portfolio. These issues require careful evaluation during bid approach and evaluation. In particular, the messages on the regulatory horizon for climate policy coming out of Brussels are likely to impact upon overall business and M&A strategy as an ever-constrained CO_2 future looks highly likely. A cleaner business, however, may also be more profitable. Indeed, 28% of CEOs globally think the climate change issue will benefit their business economically according to the PricewaterhouseCoopers 11th Annual Global CEO Survey.

PricewaterhouseCoopers is a leader in carbon market services. We work on both the buy and sellside and offer a full range of transaction services, including financial advice, carbon due diligence in M&A and tax structuring for carbon credit vehicles.

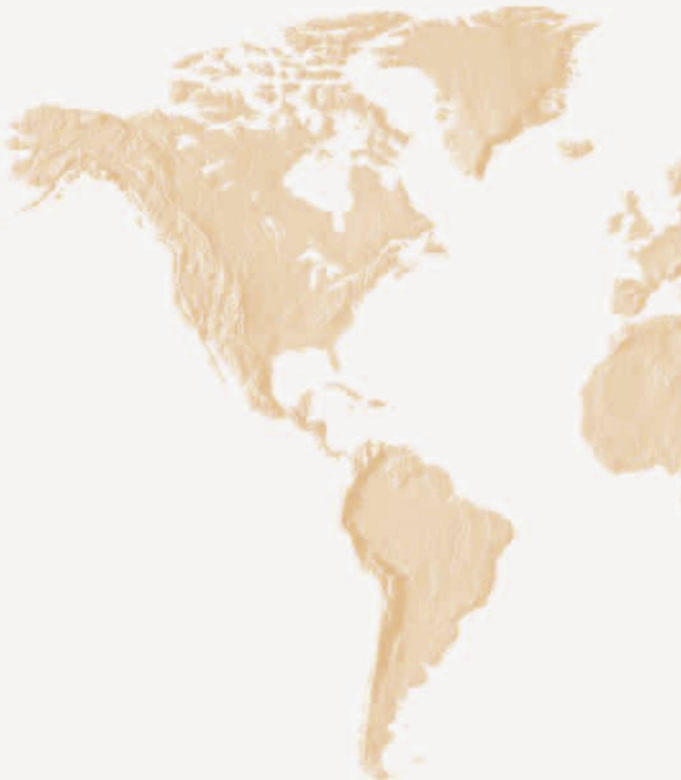
08 Deal places: a focus on markets worldwide

Figure 10a : **All electricity and gas deals by continent**

North America	2006	2007	% change
By target value of deals (US$bn)	71.1	95.2	+34%
By bidder value of deals (US$bn)	54.5	87.5	+61%
Number of deals			
By target	115	133	+16%
By bidder	127	146	+15%

South & Central America	2006	2007	% change
By target value of deals (US$bn)	9.6	10.8	+13%
By bidder value of deals (US$bn)	5.3	4.6	-14%
Number of deals			
By target	75	76	+1%
By bidder	49	41	-16%

Africa	2006	2007	% change
By target value of deals (US$bn)	0.15	0.49	+219%
By bidder value of deals (US$bn)	0.1	0.41	+253%
Number of deals			
By target	3	2	-33%
By bidder	2	1	-50%

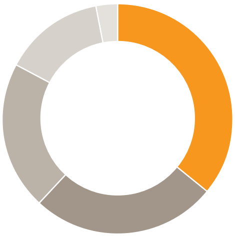


Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

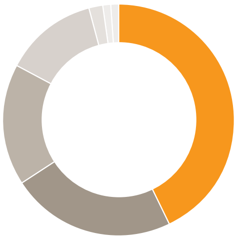
Europe remains the location for the greatest amount of deal activity but the geographical spread of deals was shared more evenly in 2007 across the main continents. Indeed, with a year-on-year fall in Europe, it was these other continents that drove the overall totals upward. Alongside the big rise in Russian activity, there were significant increases in both the number and total value of deals in North America and Asia Pacific.

Figure 10b: **All transactions by continent by value of transactions – 2007 (total US$372.5bn)**
(2006 percentages shown in parenthesis)

By target



By bidder



Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

Europe	2006	2007	% change
By target value of deals (US$bn)	173.2	**135.3**	-22%
By bidder value of deals (US$bn)	190.6	**159.1**	-17%
Number of deals			
By target	224	**233**	**+4%**
By bidder	233	**242**	**+4%**

Russian Federation	2006	2007	% change
By target value of deals (US$bn)	8.9	**79.5**	+793%
By bidder value of deals (US$bn)	7.5	**64**	+757%
Number of deals			
By target	52	**88**	**+69%**
By bidder	54	**82**	**+52%**

Asia Pacific	2006	2007	% change
By target value of deals (US$bn)	34.7	**50.4**	+45%
By bidder value of deals (US$bn)	40.9	**47.6**	+16%
Number of deals			
By target	151	**239**	**+58%**
By bidder	154	**238**	**+55%**

The result is a narrowing of the chasm that had opened up between Europe and North American players in terms of their level of transactions. In 2006, European players moved for US$190.6bn worth of targets as against US$54.5bn by their North American counterparts. In 2007, this US$136.1bn chasm had halved to a US$71.6bn gap. Nonetheless, the respective levels of activity remain a long way from the situation in 2004 when North American bids and targets outstripped those in Europe.

In Asia Pacific, the competition for assets intensified with the total value of targets rising 45% from US$34.7bn to US$50.4bn and bidder numbers up from 154 to 238. Away from the main markets, the attraction of South American assets rose although the buying activity of South American entities themselves remained constrained. The increase in activity in Africa was attributable to three deals involving North African companies, most notably the Abu Dhabi National Energy Company's purchase of Moroccan wind farm assets and Algerian company Sonatrach's purchase of Energias de Portugal.

10 Deal places: North America

North American bid activity revived following a lull in 2006. However, the headline 61% increase overstates the underlying year on year story for corporate utility companies. The bid totals in both years were inflated by big moves by financial players – the US$21.6bn infrastructure fund bid led by GS Capital for Kinder Morgan in 2006 and the US$43.8bn private equity move by KKR, Texas Pacific and Goldman Sachs for TXU in 2007. Excluding these two mega-deals, bids by North American entities rose 33% from US$32.9bn in 2006 to US$43.7bn in 2007.

Regulatory uncertainty continued to overhang the market for deals. For example, the 2006 US$2.3bn bid by Babcock & Brown, the Australian infrastructure fund, for NorthWestern Corporation, was blocked in spring 2007 by the Montana Public Service Commission despite being approved by NorthWestern's shareholders. Successful power deal-making in the US continues to be a state-by-state issue. The two biggest inbound investment bids in 2007, the US$7.8bn move by Spain's Iberdrola for Energy East and the US$6.8bn planned purchase of Puget Energy by a combination of Macquarie entities and other pension and investment funds, are coming under considerable state scrutiny. For example, in the case of the Energy East transaction, Iberdrola, while gaining approval from the state regulators in Maine, still needs to clear considerable hurdles from New York State, at the time of writing.

Figure 11: **North America (by target) electricity deals**

	Domestic	Cross-border	% change compared to 2006
Value of deals	US$76.6bn	US$14.8bn	**+291%**
			Total value **US$91.5bn**
Number of deals	74	30	**+7%**
			Total number **104**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

M&A flows from foreign entities declined – down 37% to US$14.9bn in 2007 from US$23.5bn in 2006 which, in turn, was down from over US$50bn in 2004 and 2005. However, within this smaller total, there were a number of notable moves from European entities for US renewable assets, including Energias de Portugal's US$2.3bn move for Horizon Wind Energy and, later in 2007, E.ON's US$1.4bn purchase of the North American operations of Airtricity. These moves follow a number of earlier US wind farm purchases by Iberdrola who, late in 2007, raised around US$4.5bn of capital through an IPO of its renewable portfolio. Such developments will be closely followed by other utilities as they consider how they can get best value from their renewable assets. Again, the US regulatory context, both in terms of the use of tax credits and a changing focus on emissions controls in a US election year, will play an important part in company calculations.

The extent to which environmental factors are becoming a key driving force in North American power deals was highlighted by the way the cancellation of planned coal plants came on to the TXU deal table. Wood MacKenzie estimates the industry had planned to build 53 gigawatts of new coal-fired capacity by 2012. TXU has removed 13% of that already (Financial Times, *4 March 2007*). There is also significant interest on the nuclear energy front. Several power companies including NRG Energy, Exelon and Entergy are expanding their nuclear programmes and the latter has floated the possibility of an IPO for its non-regulated nuclear assets.

Electricity assets comprised 96% of the value of total North American power deal value in 2007. The total value of gas assets transacted plummeted from the US$47.8bn high in 2006, reflecting the big Kinder Morgan and KeySpan deals, to just US$3.74bn in 2007. However, the number deals with gas as a target rose from 18 to 29, reflecting increased consolidation of local gas distribution companies (LDCs). These LDCs are often the targets of financial buyers.

Figure 12: **North America (by target) gas deals**

	Domestic	Cross-border	% change compared to 2006
Value of deals	US$3.7bn	US$0.04bn	-92%
			Total value **US$3.74bn**
Number of deals	28	1	+61%
			Total number **29**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

PwC deal dialogue:

Acquisition accounting under IFRS; US GAAP staged to align with IFRS

With the move to International Financial Reporting Standards (IFRS) for many of the world's public companies and the far-reaching mandates of Sarbanes-Oxley, financial accounting has become a lot more complicated. And if the past few years are any guide, the future holds more regulations, new requirements, and an increasing compliance burden. Incorporating acquisition accounting impacts into pre-deal due diligence and post-deal implementation to maximise overall deal value is another story as well as to identify potential non-cash accretion/dilution impacts resulting from purchase accounting.

Pre-deal considerations such as the impact that acquisition accounting will have on future earnings are important for effective deal making. In the post-deal environment, performing a robust and defensible purchase price allocation is important to minimise potential surprises.

Under IFRS 3 (business combinations) goodwill is not amortised. Instead it is tested for impairment on an annual basis. Intangible assets must be identified and valued separately rather than being subsumed in goodwill. These intangible assets are amortised over their useful lives which impacts on post-acquisition financial statements – reported profits, derivative valuations as well key EPS metrics.

In the energy utilities market space we continue to see, with increasing regularity, intangibles such as customer relationships, contracts, trademarks, IP rights and licenses arising on the balance sheets of the unregulated business units. Growing numbers of renewable energy and carbon technology deals have raised fresh issues on the identification and valuation of intangible assets such as Renewable Obligation Certificates (ROCs) and Certified Emissions Reductions (CERs) etc.

Changes in accounting for business combinations under US GAAP are set to become effective in 2009 with the new standards (FAS 141R) closely aligning US GAAP with IFRS. Certain aspects of these changes may have significant impacts on the industry. Perhaps the most significant change affects the determination of transaction value for stock consideration, which will be determined at the closing date rather than at announcement date under the current standards. In addition to intangibles, the recognition of all contingencies (including gain contingencies) at fair value on the opening balance sheet will also create earnings volatility, as any subsequent changes in fair value will be recognised in earnings. Another major change relates to transaction costs which will be accounted for as a period charge instead of being capitalised as part of the purchase price.

PwC has a specialist energy and utilities industry team with deep sector knowledge and technical accounting knowledge. We can help assess the accounting considerations in a changing environment.

12 Deal places: Europe

A fall in gas deals dragged total electricity and gas deal value in Europe lower in 2007 compared to 2006 but European electricity M&A activity continued to break all the records. The number of European electricity targets in play was up by 21%, from 161 in 2006 to 195 in 2007. Target electricity values rose 12% to US$131.3bn. European bidder activity in electricity rose even more, by 21% from US$128.4bn in 2006 to US$155.5bn in 2007, with bidder numbers up from 175 to 215.

The vast majority of activity was by European corporate utility bidders as utility company consolidation continued. The only notable foreign activity came from infrastructure players, particularly Babcock & Brown who were especially active in the purchase of European wind assets. Utility company consolidation was largely at the mid-cap deal level. With the notable exception of the Enel and Acciona purchase of Endesa, the flow of European mega-deal consolidation deals, that had characterised previous years, abated as companies took stock of increasing political and regulatory attention and the difficulty of completing these huge transactions.

Figure 13: **Europe (by target) electricity deals**

	Domestic	Cross-border	% change compared to 2006
Value of deals	US$37.8bn	US$93.5bn	**+12%**
			Total value **US$131.3bn**
Number of deals	108	87	**+21%**
			Total number **195**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

Figure 14: **Europe (by target) gas deals**

	Domestic	Cross-border	% change compared to 2006
Value of deals	US$1.4bn	US$2.6bn	**-92%**
			Total value **US$4bn**
Number of deals	17	11	**+54%**
			Total number **28**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

On the acquisition front, European electricity bidders were highly active within Europe and also further afield. The most significant expansionist moves outside the continent feature in Figure 7, namely E.ON and Enel's purchases of former UES assets in Russia and Iberdrola's move for Energy East in the US. In addition there were two other smaller Iberdrola purchases in the US as well as US moves by E.ON and EdF. European activity in South America was also significant where Suez and Enel, in particular, were both active. Asia Pacific did not escape European attention either in 2007 with a number of deals from financial players, including a US$1.9bn open market purchase of Tokyo Electric Power by AXA and a number of UK-based hedge and private equity fund investments in power assets in Japan and China.

The fall in gas deals was attributable to the effect of Suez's move for Gaz de France which accounted for US$43.1bn, the vast majority of the previous year's total gas deal value. Taking that deal out of the equation, gas M&A activity by value was broadly level year on year. Interestingly, however, the typical gas deal size was much higher – excluding the Gaz de France deal, average European target gas deal size doubled from just US$70million in 2006 to US$142million in 2007. The largest European gas target was Dong Energy of Spain which was bought by E.ON in a US$997million deal. Elsewhere, around half of all European gas deals were for targets in Italy and Spain.

The restructuring of Russia's electricity sector in the quest for modernisation and investment saw the Russian Federation account for more than one in six of total power deal value in 2007. Gas deals remained insignificant – all but two of the 88 Russian targets were in the electricity sector.

The Unified Energy System (UES) reorganisation produced the vast majority of transactions in the Russian electric sector. In reality, often key aspects of this activity were purchases of additional shares by existing shareholders or share swaps rather than mainstream deal activity. The largest by size was the spin-off of the Federal Grid Company (FGC) and the transfer to it of Russian government stakes in generating companies in return for an additional share issue to the Russian government to increase its stake to 75%. This was a legal requirement before FGC can seek new investors. The plan is for FGC to sell the generating company (genco) stakes in order to finance infrastructure investment. Liberalisation of electricity prices by 2011 is widely expected to make the gencos very profitable.

Two key trends characterised deal activity – domestic consolidation and the entrance of foreign strategic investors. With regard to the latter, there were significant moves by European companies. Two of the top five largest deals involved European companies, E.ON and Enel. The largest commercial transaction was E.ON's purchase in a tender and subsequent minority buy-out of OGK-4 for a total of US$8.4bn. Enel also made a major commitment, buying 100% of OGK-5 in a series of transactions totalling US$6.3bn. In both instances, UES has expressed a desire for strategic foreign investors to participate in the market, to bring technological and management expertise as well as capital.

Figure 15: **Russian Federation (by target) electricity deals**

	Domestic	Cross-border	% change compared to 2006
Value of deals	US$63.8bn	US$15.6bn	**+813%**
			Total value **US$79.4bn**
Number of deals	77	9	**+72%**
			Total number **86**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

Figure 16: **The Russian Federation (by target) gas deals**

	Domestic	Cross-border	% change compared to 2006
Value of deals	US$0.1bn	US$0bn	**-50%**
			Total value **US$0.1bn**
Number of deals	2	0	**0%**
			Total number **2**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

On the domestic deal front, some of the energy companies see electricity as natural territory for them. Gazprom has described electricity as a 'core business'. Some of the industrial buyers appear to be motivated by wanting to have a captive customer (Siberian Coal Energy Company) or a captive supplier (Norilsk Nickel). Gazprom spent US$8bn to buy control of Mosenergo. It has also bought control stakes in OGK-2, OGK-3 and TGK-1, as well as minority stakes in TGK-11, TGK-12, and TGK-13. It also is the largest shareholder in UES after the government. Siberian Coal Energy Company is another large UES shareholder who has bought minority stakes in TGK-12 and TGK-13. Gazprom and SCEC have been in protracted negotiations about combining their electricity assets in a joint venture. Norilsk Nickel also is a substantial shareholder of UES, and has bought a control stake of OGK-3 and a minority stake in TGK-14. It has plans to spin-off its energy assets into a new holding company dedicated to the electricity sector.

There were few instances of Russian companies moving further afield although the Gazprom purchase of Natural Gas Shipping, a UK distribution company, was the second small Gazprom acquisition in the UK and reflects the company's aim of reaching downstream to end customers. The third Russian deal in the top ten again arose from the UES restructuring with Gazprom's purchase of the Moscow region's generating company, a deal notable again as an example of Gazprom moving its footprint downstream.

14 Deal places: Asia Pacific

The total value of deals for Asia Pacific assets continued to chart the ever upward path of recent years. Total 2007 target deal value rose to US$50.4bn, up from US$34.7bn in 2006. The number of deals for electricity targets rose by 23% although total target value for Asia Pacific electricity assets remained level. Gas deals accounted for the increase in total power deal value. Total gas asset target value leapt to US$16.3bn in 2007 from US$9.1bn in 2006 and US$3bn in 2005.*

The importance of gas as a strategic play reflects the context of gas in the region. In general, it is in great demand and, with an increasing regulatory focus on emissions, it is likely to become an even more valuable part of the fuel mix across the region. For the second year running, the biggest deal in the region featured Alinta. In 2006 Alinta bought AGL's infrastructure businesses for US$4.8bn. In 2007, Alinta surprised the investment community with the news that a group within the company was planning to buy and reshape it. Subsequently, its board considered both an internal restructure and an auction. The process resulted in the US$12.6bn sale of the company to a consortium comprising Singapore Power International, Babcock & Brown and three funds managed by Babcock & Brown which between them split up the national portfolio of pipelines, power plants, networks and trading businesses.

Figure 17: **Asia Pacific (by target) electricity deals**

	Domestic	Cross-border	% change compared to 2006
Value of deals	US$25.6bn	US$8.6bn	**0%**
			Total value **US$34.2bn**
Number of deals	169	45	**+23%**
			Total number **214**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

* The increase in the total value of gas deals is attributable to the single deal for Australia's Alinta. The Alinta assets were a combination of electricity and gas assets. Gas assets represented around three-quarters of Alinta's US$12.6bn value. For the purposes of this analysis we have classified the deal as gas given it represented the majority of the deal value. Taking the Alinta gas/electricity split into account would slightly raise the total value of electricity deals and slightly lower that of gas deals.

The region covers a diverse range of countries and market situations. The move towards consolidation of fragmented markets that is evident in Europe and North America is taking hold in Asia but its momentum is as yet inconsistent. All parts of the region, though, are power hungry and this, together with strong economic growth in countries such as China, is a key driver of deals. Much of the deal-making in the region is by Australian entities, both power utilities seeking domestic deals and Australia-based infrastructure players making moves internationally. This single country accounted for US$19.4bn (41%) of all Asia Pacific power deal bidder value in 2007 compared to US$20.7bn (50%) in 2006. Behind Australia, Chinese and Japanese bidders accounted for US$10.4bn (22%) and US$3.2bn (7%) of deal activity in 2007. These compare with US$7.7bn (19%) and US$3.4bn (8%) respectively in 2006.

All but one of the moves by Chinese bidders were for assets in China. The interest of foreign bidders in Chinese power assets has grown, although it remains at modest levels in the context of all Chinese power M&A. In 2007 there were 13 bids from foreign entities (from outside China and Hong Kong) for Chinese power targets compared to just three in 2006. The value of these foreign bids rose from US$0.23bn in 2006 to US$0.65bn in 2007. The 13 bids were split fairly evenly between Asian and non-Asian (North American and European) players but the biggest one by far was from South Korea with the US$0.46bn bid by the Korea Electric Power Corporation for a 34% share in the Gemeng International Energy Group

Figure 18: **Asia Pacific (by target) gas deals**

	Domestic	Cross-border	% change compared to 2006
Value of deals	US$15.9bn	US$0.35bn	**+74%**
			Total value **US$16.3bn**
Number of deals	17	8	**-11%**
			Total number **25**

Source: PricewaterhouseCoopers, *Power Deals Annual Review 2007*

PwC deal dialogue:

Procurement strategies – collaborative versus risk transfer

The well publicised failure of recent risk transfer partnerships to adequately meet project objectives has highlighted the pitfalls associated with risk abrogation and abandonment. Energy and utility companies need to assess and understand *a priori* their specific objectives and requirements to avoid adopting an ill-fitting strategy that leads to ineffective delivery.

The business environment is increasingly competitive and the need for improved upfront planning for investment in the sector is even more important than ever. A key part of this is developing the right procurement strategy.

Energy and utility players partnering in investments need to carefully consider the range of alternative strategies to ensure long-term success. “Collaborative” and “risk transfer” strategies lie at opposite ends of a spectrum defined by the level of party integration. “Collaborative approaches” involve teams that share risks whereas there is distinct autonomy between parties in a “risk transfer” approach.

The choice of strategy comes down to a lot more than price. Uncertainty, technical complexity, time horizon and the competitive environment all play a part. Where the scope of the project is likely to change and the evaluation and implementation of solutions will involve all project members the collaborative approach offers a greater ability to manage this process. Where the scope and objectives are clearly defined and it is possible to draw clear boundaries around each party’s role then the risk transfer approach can be the most effective.

The PwC practice has a leading team of sector specialists with detailed experience in all aspects of tailoring procurement strategies to the objectives, capabilities and resources of clients in the energy and utilities market space. Our team provides expert advice on project development and contract/corporate structuring, evaluation of strategic options, review and development of commercial and financing structures.

16 Looking ahead

The coming year will bring some uncertainty, not least with an election year in the US and Russia and the turmoil in the credit markets, but power sector M&A deal-makers will be mindful of continuing strong fundamentals. Many corporate players have deep pockets, investor appetite for the sector is likely to remain relatively favourable and the basic imperatives of non-organic growth and the need to secure and diversify fuel sources cannot be ignored.

Whether the record highs of previous years can be maintained is the billion dollar question. The 'credit crunch' will have an impact on the value and volume of deals. Raising debt finance to fund acquisitions is now more complex in every market because of worries about the carrying value of deals that are being purchased. Certainly mega-mega-billion dollar deals may be relatively rare. The credit crunch is likely to impact the ability of private equity players to construct deals at this level and we are less likely to see highly geared deals of the size of 2007's purchase of TXU. Similarly, the ability of infrastructure funds to achieve highly geared transactions will be reduced.

The pattern of 2007 deals already reflected the difficulty that all players face in completing such deals in the context of political and regulatory hurdles. However, it would be wrong to call the end of the big European consolidation phase and significant moves remain possible, especially at the mid-cap level. The election year is likely to prompt some pause for thought in the US but, on the other hand, there are a host of European companies with global ambitions who will be mindful of the opportunity presented by the current strong Euro. Similarly, US assets will also continue to get the attention of the Australia-based infrastructure investors and, again, dollar weakness will add to this interest.

Within the US, there is a feeling of pent-up corporate demand for transactions, especially from the non-regulated generating arms of utility companies and pure merchant companies who have had a very strong year in 2007. As always, though, much of the regulated corporate activity will depend on state by state willingness to approve transactions and the interplay between the federal and state level on key overall regulatory issues such as responses to climate change. Many of the answers to this may have to wait until after the election but, in the meantime, companies will not want to miss opportunities to satisfy Wall Street's appetite for growth. The current global financial developments will be in the background rather than the foreground in terms of much likely M&A activity. The regulated utilities in the US are not highly leveraged and most have strong current cash flows. The state Public Utility Commissions will ensure that the ratepayers are protected from perceived high leverage deals. Asset transactions which include long term contracts with credit worthy counterparties, as well as mid-size regulated corporate deals, are relatively low risk from a credit standpoint. There is still significant capital looking for a home. Fluctuating commodity prices are the bigger risk. Highly leveraged deals involving US independent power producers are among those likely to be more adversely affected by the current financial climate.

The prospects for continuing high levels of M&A in the Asia Pacific market remain strong. Outside investor interest in the region remains high with the region offering higher than average growth prospects. The trend to consolidation is still in the relatively early stages in many parts of the region and the Australian market is set for significant activity with a stream of privatisations scheduled for the next eighteen months or so. One cloud on the horizon is in China where a recent government order to freeze the power tariff, as well as selected utilities prices, is likely to present a disincentive to deal activity.

Worldwide, a stronger focus on climate change regulation will give added emphasis to utility companies' focus on the right fuel mix and moves to gain the best value from renewable and nuclear assets. Greater certainty on both overall environmental regulation and specific government stances on nuclear will reinforce the attention of deal-makers on these assets. Although the credit crunch is likely to have some short term impact, it is expected that the appetite of infrastructure funds is likely to remain relatively undiminished for renewables and other energy infrastructure into the future.

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