



This report provides insight into global mergers & acquisitions (M&A) activity in the renewable energy sector. The findings are based on a survey of 500 senior executives active in the renewable energy industry worldwide. The survey and report were written in collaboration with Clean Energy pipeline, a specialist renewable energy research and data provider. Transaction data and statistics included in the report have been extracted directly from Clean Energy pipeline's databases. Clean Energy pipeline is a division of VB/Research.

The survey was conducted between January and March 2011 and was completed by five different types of respondents — corporates, financial investors, debt providers, government bodies and service providers.

The respondents included senior executives such as chairpersons, CEOs or divisional heads. Surveyed respondents were spread across Europe (30 percent), North America (30 percent) and Asia-Pacific (30 percent), with the Middle East, Africa, and South America accounting for the remainder.

To supplement the survey results, interviews were also conducted with the following senior executives:

#### **Torsten Smed**

Head of M&A at **DONG Energy**. A European utility with a substantial portfolio of offshore wind assets.

#### **Guy Auger**

COO of Eolfi, a subsidiary of Veolia Environment. From site development and financing to construction and electricity generation, Eolfi focuses on all aspects of wind and solar power across Europe and the U.S., with 500 MW in operation or under construction.

## Andy Kinsella

Executive Director and CEO, Offshore at Mainstream Renewable Power. A global developer of wind and solar projects that has a project portfolio of over 12,000 MW across four continents including 5,500 MW of offshore wind farms in Europe.

## Hans Bünting

CFO of RWE Innogy. A leading developer of renewable energy projects across Europe with 2,375 MW of capacity in operation or under construction.

#### Joost Bergsma

CEO of BNP Paribas Clean Energy Partners. An asset management business line of BNP Paribas Investment Partners that has invested in numerous European solar and wind assets.

#### Cyrille Arnould

Head of the Global Energy Efficiency and Renewable Energy Fund, **European Investment Bank (EIB)**. A provider of long-term project finance that facilitates the implementation of the EIB's wider policy objectives.

## Tom Murley

Head of Renewables at **HgCapital**. A European private equity firm with significant activities in renewable energy.

## Siobhan Smyth

Head of Renewables at **HSBC**. A provider of debt, equity and advisory services to the global renewable energy industry.

#### Javier Sobrini

Global Head of M&A Energy at Santander. A global commercial bank offering a variety of financial services to the renewable energy industry.

#### Eric Hafter

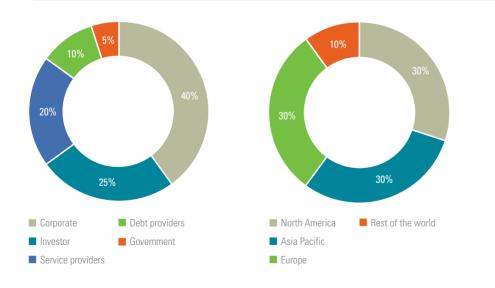
Senior Vice President, Sharp Solar Energy Solutions Group, a division of Sharp Electronics Corporation and the U.S. solar arm of the Sharp Corporation. A manufacturer of solar photovoltaic power equipment for the global market.

#### Peter Kruse

Senior Vice President of Group Communications at **Vestas**. A leading manufacturer of wind turbines for the global market.

Mergers & Acquisitions (M&A) refers to all M&A transactions (mergers, acquisitions and minority investments) as well as private equity transactions including buyouts, public-to-private deals and secondary buyouts.

This report is based on data available at the time of writing and no warranty is provided as to the accuracy of its contents.



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"These are exciting times for our sector both locally and globally - M&A activity continues to build and although still a challenging financing environment, capital is freeing up for renewable investment. Soaring oil prices have emphasized the importance of the long term hedge offered by renewables, yet the de-coupling with gas prices has stalled investment in key markets. We should not underestimate the increasingly important role of renewables in the low carbon agenda as the energy sector positions for future demand growth in the difficult context of carbon reduction targets and the uncertainty around nuclear programs".



Last year our sector was still struggling to grapple with the hangover of the worst financial crisis in living memory, but even then there was early evidence of a recovery in renewables M&A activity. Today our survey confirms this with the data showing that the number of completed M&A deals last year increased by over 70 percent - the activity growth continues in the first quarter of 2011, with a record of 141 deals announced with a value of US\$11.2bn.

As M&A activity builds, competition will increase further underpinned by a strong desire to invest. Our survey highlights the strength of this competition for limited resources with a clear expectation of increased deal multiples. In the context of this competition, uncertainty and volatility destroys investment appetite – even in those countries in the "A" list of renewable targets.

The survey results show that although cross-border transactions will continue, investors are intending to focus activity on their local markets – a potential concern for many countries that are hoping to secure inbound investment from the Asia-Pacific region and the USA. There is a clear message that if governments are to successfully attract new capital, they must focus on incentives and regulation mechanisms that have clarity, credibility and stability.

The conversations I am having with investors reinforce the desire for clarity and stability in evaluating investment decisions. Investors and lenders are still cautious - to attract and secure investment, the returns and risk profile must measure up against each investor's criteria and appetite for risk. Innovative structuring will be key to balancing investment requirements to

access new sources of un-tapped capital, for example increasing pension fund interest in offshore wind.

There are some clear themes and messages in this year's survey for investors, lenders and governments alike. I believe that there is a real opportunity to drive forward renewables this year and to build on the foundation for a long-term future – the challenge for all of us is to make it happen.

Andy.

**Andy Cox,** Partner, KPMG in the UK Global Head of Energy and Natural Resources for Transactions and Restructuring

Foreword

# Renewables M&A hits the acceleration pedal

Last year the number of completed M&A deals increased by over 70 percent, fuelled by a boom in sub-US\$500m transactions. Despite this dramatic jump, the majority of survey respondents worldwide believe that the number of sub-US\$500m deals will increase even further during the next 18 months.

These predictions are supported by a record number of announced deals in the first quarter of 2011. Over 140 deals totaling US\$11.2bn were announced in the first quarter of 2011, compared with a quarterly average of 96 announced deals totaling US\$5.5bn per quarter throughout the course of 2010. All in all, 2011 looks set to be another buoyant year for M&A.

Significantly, the survey data and M&A activity in the first quarter preceded the 11 March tsunami which devastated the east coast of northern Japan and caused the nuclear accident at the Fukushima plant. It will take time for the implications of Fukushima to be understood, and for the impact on existing and new nuclear plants to become clear.

# The global renewable energy market is local

Cross-border investment is not going to plug domestic renewable energy funding gaps without a step change. This will come as a disappointment to many debt-laden European countries, which were counting on a bailout from the Asia-Pacific region. The survey data is unequivocal in demonstrating clear regional investment biases. North American respondents show a strong local tendency with an overwhelming focus on placing capital in the USA (86 percent) ahead of China (40 percent), India (30 percent), the UK (21 percent) and Germany (17 percent). Asian and European investors are more internationally inclined but still have a clear preference for investing domestically or regionally. Simply put, the global renewable energy market is intrinsicaly local.

With countries increasingly dependent on their incumbent regional investor base, the importance of incentivizing home-grown investors is becoming increasingly paramount. Accordingly, debates concerning effective government policies and stimulus are unlikely to end soon.

# Government incentives still driving European M&A

Despite cuts to renewable feed-in tariffs in some of Europe's leading renewable energy markets over the course of 2010, government incentives remain an essential driver for M&A. Indeed survey respondents planning to invest in Italy (41 percent), the UK (38 percent) and Germany (29 percent) cited government incentives as their primary motivation above any other factor. In contrast market demand is the most prevalent M&A driver in many non-European countries such as the US (41 percent), China (46 percent) and India (46 percent).

Government incentives are currently affecting M&A on two fronts. On the one hand, cuts to feed-in tariffs are decreasing the attractiveness of renewable energy assets from the buyers' perspective. On the other hand, in extreme cases such as Spain, where the government announced retroactive cuts to feed-in tariffs for operational projects late last year, harsh incentive cuts are actually triggering disposals with asset owners re-adjusting portfolios in light of reduced returns. This has had a negative impact on valuations, particularly in the solar sector – total solar M&A transaction values decreased 16 percent year-onyear in 2010. In contrast, given the maturity of the sector and its associated incentives, returns in the wind sector have been more impacted by low gas prices (particularly in North America) than by regulatory change.



# China jumps up the renewable M&A country league table

Following a year of extensive renewable project developments, during which China surpassed the US in terms of total installed wind capacity, China jumped from the fifth to the second most targeted country for acquisitions in 2010.

Despite China's obvious appeal, international acquirers are struggling to find a way of accessing this burgeoning market. Domestic acquisitions currently account for almost two thirds of total M&A values in China. North America and Europe only accounted for 11 percent and 3 percent respectively of Chinese M&A in 2010.

As for last year, the USA retained its status as the most attractive market for acquisitions, targeted by 53 percent of respondents, followed by China (38 percent), India (35 percent) Germany (34 percent) and the UK (33 percent). There are no signs that the USA's position is under threat at this point.

# Can pension funds release the potential of offshore wind?

The end of 2010 and start of 2011 have seen notable investments by financial investors in offshore wind, including the planned US\$1.1bn investment in Anholt (Denmark's largest offshore wind farm) by two pension funds (PensionDanmark A/S and PKA A/S) and PGGM and Ampère Equity Fund investing alongside DONG on the 367 MW Walney offshore windfarm. These are notable transactions - Anholt in particular given the size of the investment and the pre-construction stage of the project.

Encouraging as it is, this type of transaction remains unusual in the current environment. Furthermore, only 20 percent of survey respondents believe that pension funds will be active renewable energy acquirers over the course of the next 18 months. The jury is out – have we now seen the beginning of sustained investment activity by the pension fund industry or isolated deal opportunities?

## Biomass gaining ground on solar and wind

Last year surveyed respondents forecast that 2010 would be a strong year for biomass. These predictions were reflected in the actual results with biomass M&A values more than doubling year-on-year in 2010 to US\$2.2bn.

Proportionally, the sector is now gaining ground on renewable energy bulwarks solar and wind. During the course of last year M&A in the biomass sector accounted for 9 percent of all renewable energy M&A, compared with only 3 percent in 2009. Biomass looks poised to maintain this momentum in 2011, with 46 percent of survey respondents this year stating that they intend to make acquisitions in the sector, compared with 37 percent in 2010.

# Executive summary



# US\$25.6bn

# Renewable M&A deals totaled US\$25.6bn in 2010

2010 in context

2010 was an active year for renewable energy M&A. In total 446 deals were completed, representing an increase of over 70 percent on the 260 deals closed in 2009. On the flipside, an absence of larger deals depressed the total value of M&A activity. Completed renewable energy M&A deals totaled only US\$25.6bn in 2010, a 41 percent decline on the US\$43.7bn recorded in 2009. Only biomass, albeit a relatively small proportion of total M&A activity, bucked this trend with total M&A values more than doubling to US\$2.2bn.

Last year's M&A activity levels are showing no signs of cooling off. A record 141 M&A deals totaling US\$11.2bn were announced in the first quarter of the year, compared with a quarterly average of 96 deals totaling US\$5.5bn during 2010. In terms of the number of completed deals, the first quarter of 2011 also maintained the trend of an ever increasing number of smaller sub-US\$100 million deals, registering a 10 percent increase on the corresponding period last year.

Almost 100 transactions were completed in the first quarter, a number that has only been exceeded in two of the past eight quarters.

# 2011- Renewables M&A is accelerating

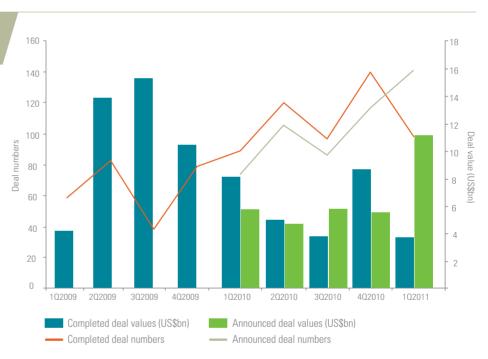
# 141

M&A deals totaling US\$11.2bn were announced in the first quarter of 2011



As shown in the table of the largest M&A transactions, the renewables sector continues to have broad appeal and is still attracting the full mix of industrials, utilities and financial acquirers worldwide. The recently announced buy-backs of minority stakes in their renewable subsidiaries by both EDF and Iberdrola is a notable new development for 2011 and this, together with a number of unsolicited approaches for other renewables businesses, further supports the boost in M&A activity evident in the first quarter deal lists.

Completed and announced renewable energy



Largest M&A transactions by deal size – July 2010 to date

Target	Country	Acquirer	Country	Sector	Date announced	Deal value (US\$m)
EDF Energies Nouvelles SA	France	Electricite de France SA	France	Wind	08/04/2011	2,218.4
Elkem AS	Norway	China National Bluestar (Group) Co. Ltd	China	Solar	26/10/2010	2,100.0
SunPower Corp.	USA	Total SA	France	Solar	03/05/2011	1,370.0
Wind farm (400 MW) - Anholt	Denmark	PensionDanmark A/S, PKA A/S	Denmark	Wind	29/03/2011	1,130.0
Rete Rinnovabile Srl	Italy	Terra Firma Capital Partners Ltd.	UK	Solar	19/10/2010	932.9
John Deere Renewables LLC	USA	Exelon Corp.	USA	Wind	31/08/2010	900.0
Grupo Guascor SL	Spain	Dresser-Rand Group Inc.	USA	Solar	03/03/2011	690.0
Wind farm (845 MW) - Shepherds Flat	USA	Itochu Corp., Sumitomo Corp., Google Inc.	Japan, USA	Wind	18/04/2011	500.0
Roth & Rau AG	Germany	Meyer Burger Technol- ogy AG	Switzerland	Solar	11/04/2011	457.9
Hanwha SolarOne (f.k.a. Solarfun Power Holdings Co. Ltd)	China	Hanwha Chemical Corp.	South Korea	Solar	03/08/2010	370.0

## "I do think overall volumes will increase and there will be a couple of large corporate transactions"

Joost Bergsma BNP Paribas Clean Energy Partners

# M&A activity to maintain growth curve

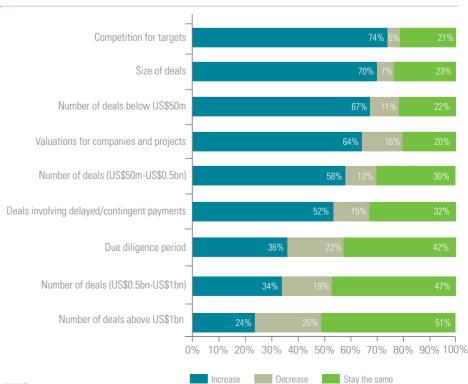
Survey respondents are optimistic about M&A activity levels, particularly with regard to sub-US\$500m deals. Over 60 percent believe that the number of sub-US\$500m deals will increase during the next 18 months. By contrast, there is little confidence that the number of deals above US\$500m will increase this year, with an overwhelming 71 percent of respondents predicting activity at this level to either remain the same or decline. However, it is perhaps optimistic to expect the number of transactions to grow as quickly as the year-on-year increase recorded in 2010. Joost Bergsma, CEO of BNP Paribas Clean Energy Partners, notes:

"I don't expect to see an exponential increase in overall M&A activity. However, I do think overall volumes will increase and there will be a couple of large corporate transactions."

Guy Auger, COO of Eolfi, agrees pinpointing financial investors as the key ingredient for any upswing.

"I see increasing M&A activity this year. A lot of funds have been inactive for a while and have been waiting for the right time to return. There are also new funds coming on to the market."

How do you expect the following aspects of the renewable energy M&A environment to evolve during the next 18 months? (All respondents)



# of respondents predict competition for targets will increase

Survey respondents and interviewees cited a range of reasons for ongoing increased M&A activity. These include the likelihood of more benign financing conditions, an unexpected boost in light of the uncertainty surrounding new nuclear, spiraling oil prices and the emergence of new investors including Asian manufacturers and pension funds.

Looking at the M&A environment overall, the greatest change forecast in 2011 is the heightened level of competition for targets, with over 70 percent of respondents predicting competition for targets to increase.

Higher valuations walk hand-in-hand with increased competition so it is unsurprising that survey respondents also forecast deals to be transacted at higher multiples for both companies and projects in the next 18 months. Over 40 percent of corporate and investor respondents intend to pay 3-5x EBITDA for renewable energy companies over the next 18 months. Last year, most respondents intended to acquire assets at or below 3x EBITDA (39 percent).

Renewables re-evaluated in light of Japanese nuclear crisis

Countries are reassessing the importance and potential of renewable energy in light of Fukushima. The impact on existing and future nuclear programs is significant – Germany has taken its seven oldest nuclear plants (totaling 7 GW of capacity) offline for three months while it reviews last year's decision to extend the lifetime of all of its 17 atomic facilities. It is very possible that the seven oldest facilities will never be brought back online. As RWE Innogy CFO Hans Bünting comments:

"We are seeing a new push for renewables. Governments will now either reinforce current programs or design new ones, especially in Germany."

China has also announced a reduction to its 2020 nuclear power capacity target. Prior to the Japanese nuclear incident, China intended to build 80 GW of nuclear capacity. It is now evaluating its position and, while a new nuclear target has not yet been announced, China has already doubled its 2015 solar PV capacity target from 5 GW to 10 GW.

The impact of this unexpected event has already been reflected in the share prices of many publicly-listed renewable energy companies. Shares in US solar company First Solar and in leading Chinese solar equipment manufacturer SunPower are currently trading at 14 percent and 20 percent respectively above their value on the day of the earthquake. The WilderHill New Energy Global Innovation Index, which comprises 98 cleantech and renewable energy companies across 21 countries, is also trading 18 percent above its value on the day of the tsunami.

## of all survey respondents expect new players to come from China

Oil and gas price changes bring mixed fortunes for the renewable sector

The impact of Japan's nuclear crisis has been accentuated further by spiraling crude oil prices. Political uncertainty throughout the Middle East fueled the price of Brent Crude Oil to a two and a half year high of US\$124 a barrel in April 2011, a significant increase from US\$95 a barrel registered earlier in the year and US\$80 per barrel at the start of 2010.

Unfortunately for the renewables sector, natural gas prices have not followed their historic pattern of rising in line with oil. In fact natural gas prices have fallen significantly in recent years from a high of US\$13.6/mBTU in July 2008 to a current price of US\$4.1/ mBTU, principally reflecting reduced demand, the discovery of new fields of shale gas in North America and market oversupply.

There is little optimism within the renewable energy industry that natural gas prices will rise in the short term to the level that makes wind competitive for utilities.

As Andy Kinsella, CEO of Offshore at Mainstream Renewable Power notes:

"The driving force behind the current poor wind environment in the US is natural gas setting prices at the margins. Furthermore, no-one is predicting a recovery in gas prices that will give renewables the rewards they need for at least two to three years."



# Almost 60 percent of Asian acquirers are targeting India or China

# **Asia** the renewable M&A catalyst

The predicted growth in renewable energy M&A is expected to be underpinned by new investors and acquirers coming to the market from Asia. Some 78 percent of all survey respondents expect new players to come from China, followed by North America (59 percent), India (42 percent) and Western Europe (41 percent).

This trend is already evident. Asian companies made 59 renewable energy acquisitions (13 percent of global deal numbers) totaling US\$3.4bn in 2010, compared with 29 acquisitions (11 percent of all deal numbers) totaling US\$6.9bn in 2009. The decrease in the value of total acquisitions results from a small number of very large transactions in 2009. Although the majority of Asian corporates and investors intend to acquire domestically - almost 60 percent of Asian acquirers are targeting India or China – recent transactions suggest that there is growing appetite to acquire outside their domestic markets.

The acquisition by Chinese turbine manufacturer Goldwind of the 106.5 MW Shady Oaks wind project in Illinois from Mainstream Renewables in December 2010 is a notable development.

"We are seeing a holistic approach by the Chinese, it's not just selling turbines, it is about coming in early and being in as long as possible," said Andy Kinsella.

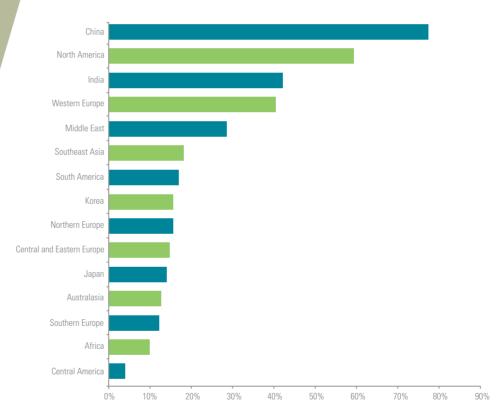
"They will deliver capex/opex advantages, provide investment capital backed up by a fundamental belief in market recovery in the medium term. The first major deployment of Chinese wind technology in any western country will happen in Illinois this year. This has opened a big door for China in the North American market and the US and European turbine OEM's have taken note."

North American acquisitions are a more natural target for Asian turbine makers due to the relative weakness of its wind manufacturing base in comparison to Europe. As Hans Bünting explains:

"I do not think Asian wind manufacturers will buy into Europe on a large scale because it is a tough market here. If the Chinese and Indian manufacturers want to conquer new markets they would rather go to North America because we have strong incumbents here (Europe). There are also still reservations among Europeans about Chinese technology. The US will be their first target."

New players are also emerging from Japan and Korea. In late 2010, for example, the electric products

manufacturing giant Sharp announced the acquisition of US solar project developer Recurrent Energy for US\$305m. Last year the Japanese trading house Sumitomo also announced its intention to allocate significant capital to international renewable energy acquisitions during the next decade. A number of other major trading houses are already active investors across the European and Asian renewables market. By early February, Sumitomo had already acquired an 85 percent stake in two of German solar company S.A.G. Solarstrom's Italian subsidiaries. The Korean industrial group Doosan Power Systems also announced in March 2011 plans to invest up to £170m in Scotland's wind sector over the next ten years.



American respondents are twice as likely to invest domestically in preference to China, India, Germany or the UK

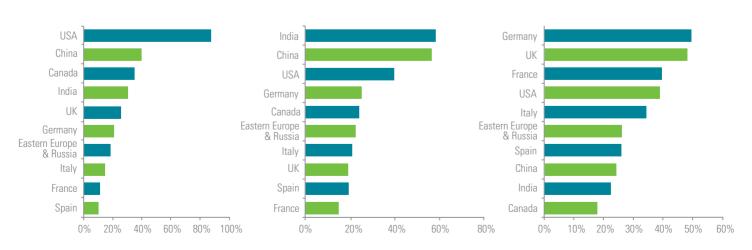
A distinctly loca investment approach

One of the most striking outputs from the survey data is the regional-bias of investors and corporates. Worldwide North America remains the favored nation for investment (this was also the case in 2009) beating China and India into second and third place respectively. However, from a regional perspective American respondents are twice as likely to invest domestically in preference to China, India, Germany or the UK. Asian respondents are less regionally biased but still indicate a strong preference towards investing within their own geographies ahead

of the USA, Canada, Germany and the UK. European respondents are no different focusing on core European markets such as Germany and the UK.

These survey responses suggest that countries may not be able to rely on cross-border investment to plug their domestic renewable energy funding gaps. The greatest concern will no doubt be felt in the debt-laden European countries where government stimulus is being reined back or curtailed.

In which countries is your company planning to invest in renewable energy projects or companies over the next 18 months? (Corporates & Investors)



Respondents: North America

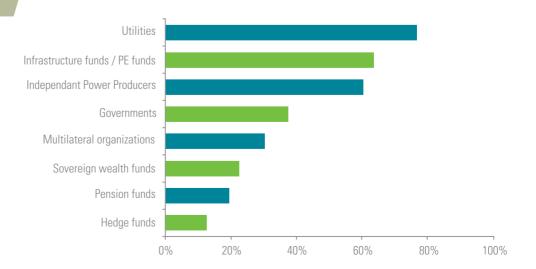
Respondents: Asia-Pacific

Respondents: Europe

## A utility-dominated M&A market

Utilities are expected to continue to dominate the renewable energy M&A market over the next 18 months, through a mixture of increasingly targeted acquisitions and disposals. The US utility NRG Energy's US\$350m acquisition of the clean energy and carbon offsetting firm Green Mountain Energy in November 2010, in conjunction with its purchases of 101 MW of operational wind capacity and 740 MW of pre-operational solar capacity over the course of last year, are recent examples of utilities' continuing interest in renewables.

One way in which utilities are broadening their exposure to renewable energy is by buying out minority investors in their own renewable energy subsidiaries. In March 2011, for example, the Spanish utility Iberdrola SA announced that it intends to acquire the 20 percent stake of publicly traded shares that it does not own in its renewable subsidiary Iberdrola Renovables. Similarly the French utility EDF SA announced in early April 2011 that it will offer in the region of €1.5bn to buy out minority shareholders in its renewable energy arm EDF Energies Nouvelles.



In contrast with last year, many industry stakeholders also expect utilities to divest certain renewable energy assets in the coming few years in response to lower energy prices and a stronger emphasis on more productive technologies such as offshore wind

"Utilities will divest assets to recommit capital back into offshore wind,"

confirms Tom Murley, Head of Renewables at HgCapital.

"Utilities, predominantly Spanish ones, are also looking to rebalance their portfolio to enhance exposure in other countries. They are looking to eliminate exposure to countries where their business is no longer core."



The dawn of pension fund investment?

One investor group that may make waves in the renewable industry over the next 18 months is pension funds. If these typically risk-averse investors are to invest significant volumes of capital in sectors such as offshore wind, then developers will need to develop innovative financing solutions that hedge against the numerous project development and supply chain risks. If this can be achieved then the industry can expect to see further transactions of a similar scale to the pension funds PensionDanmark A/S' and PKA A/S' DKK6bn (US\$1.1bn) acquisition of half of Denmark's largest offshore wind farm from Dong Energy, which was announced in March 2011.

This transaction is unprecedented due to the two funds' willingness to commit more than US\$1bn to a pre-construction stage wind farm – the risk profile of a pre-construction offshore wind farm does not typically sit well with pension investors.

As Andy Kinsella notes:

"Institutional investors are not ready yet. The general consensus is that if you get two years into commercial operations then getting involved in refinancing won't be an issue. The problem is getting through construction and the first couple of years."

"I have a very strong feeling that a lot of financial investors are now at a stage where they are willing to invest in offshore wind"

Torsten Smed DONG Energy

> On the back of DONG's success. Torsten Smed, Head of M&A at DONG Energy, is extremely confident of securing further investment from pension funds in offshore wind projects. He said:

"I have a very strong feeling that a lot of financial investors are now at a stage where they are willing to invest in offshore wind. We have spent a lot of time with them making sure they have a better understanding of the industry and the risks involved."

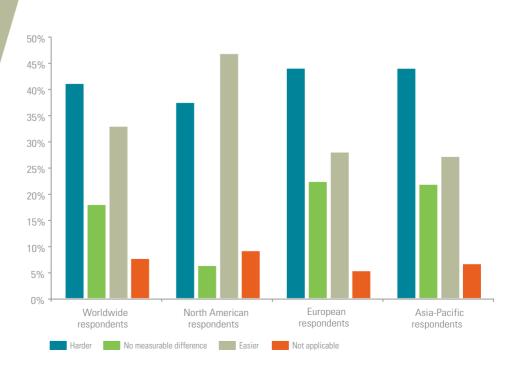
Whilst this transaction is encouraging for the offshore wind sector at large,

the prevailing opinion within the industry is that pension funds are not vet comfortable with the numerous project development risks associated with this sub-sector.

"There are one or two institutional investors already there,"

explains Joost Bergsma,

"but involvement from the classic pension fund is probably two to three years away. However, they could enter the market relatively quickly. Once you have one or two offshore projects that have worked that should accelerate investment."



of respondents believe that improving financing conditions will be a core M&A driver

Although challenging, financing conditions look set to improve

Many survey respondents are still finding the current renewable energy financing environment challenging although the indicators are pointing in the right direction. Only 41 percent believe that financing conditions are harder now compared with 12 months ago, a marked reduction against the 56 percent recorded in 2010. In contrast a third believe that financing markets have improved, an increase on the 22 percent registered last year.

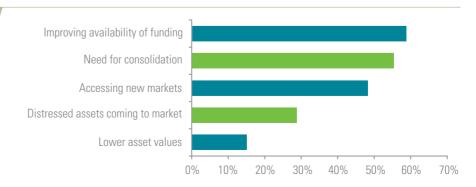
The range of opinions, also highlights the very specific financing conditions associated with certain sub-sectors within the renewable energy industry as well as regional variations. The financing environment is particularly fragile in Europe, where 44 percent of respondents believe that conditions have deteriorated. However North American respondents (47 percent) generally believe that it is actually easier to raise financing compared with 12 months ago.

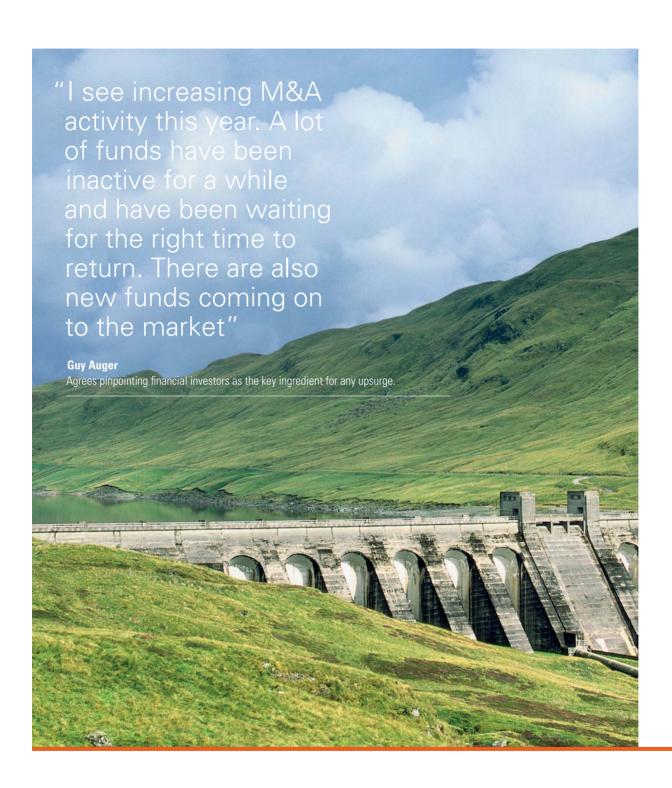
What really determines the availability of financing on a sector-by-sector and country-by-country basis are national and regional policies. As Javier Sobrini, Global head of M&A Energy at Santander summarizes:

"Regulatory reviews and turbulence in the credit markets are the perfect storm for players looking to secure debt in the renewable energy market. This has been the case in the last few years, more so in some markets than others. Now, with some regulatory reviews finished and international credit markets recovering, debt financing for acquisitions is more accessible."

Respondents are also optimistic that the financing environment will improve. As outlined in the graph below, the majority (59 percent) of respondents believe that improving financing conditions will be a core M&A driver during the next 18 months. However, there remains a large gap between respondents' expectations of improving financing conditions and the market itself.

What will be the primary drivers of M&A activity in the renewable energy sector ove the next 18 months? (All respondents)





Survey respondents planning to invest in the major Western European renewable markets cited incentives as their primary motivation

Incentives remain critical in Western Europe

In Western Europe, government incentives remain the most important catalyst to M&A activity. Survey respondents planning to invest in the major Western European renewable markets of Italy (41 percent), the UK (38 percent) and Germany (29 percent) cited incentives as their primary motivation ahead of every other factor. In contrast, market demand is the most important factor in the US (41 percent), China (46 percent) and India (46 percent).

In Europe, the actual process of reviewing incentives has typically had more impact on M&A activity than the actual reductions themselves. As Javier Sobrini notes:

"When governments decide to review regulatory frameworks, the first reaction in M&A activity is a significant slowdown. This is logical as during regulatory reviews, valuations cannot be accurate and additionally banks are unprepared to finance the acquisition of assets with uncertain returns. Once the review is over, valuations reflect the new regulatory environment and M&A transactions should rebound."

# Reduced government incentives redefine M&A landscape



Solar technology is less mature than wind, making solar M&A activity particularly vulnerable to reductions in government incentives. Italy and Germany have been popular for buyers and sellers of photovoltaic (PV) assets during the last three years because they have managed their tariffs in a relatively transparent manner. Predicted cuts to feed-in tariffs (FiTs) in Germany, Italy, France and the UK over the course of the coming year are therefore likely to disrupt the M&A environment significantly within these countries. Indeed certain industry observers believe they will actually render the market untenable for buyers once all the operational projects with attractive feed-in tariffs in place have been acquired.

As Tom Murley comments:

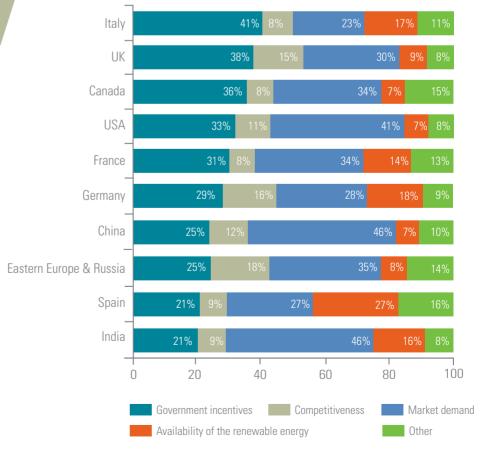
"PV in Europe will be reasonably strong in the first half of the year but will begin to dry up and then be non-existent in the second half of the year. You never want to say never, but I think we will go into a low period of M&A for PV for the next three to five years. Activity will pick up depending on how the power prices of PV continue to fall."

In contrast, wind assets should be relatively unaffected and remain attractive at the pre-construction stage for private equity investors. Due to the lower cost of wind and its maturity relative to other renewable sources, it can continue to generate attractive returns for financial investors even as subsidies are reduced.

Wind is also set to be the main source of renewable capacity growth in Eastern and Southern European markets such as Poland, Romania, Bulgaria and Turkey. Here, the conventional model of acquiring late-stage pre-construction wind farms

is likely to increase in 2011 thanks to critical emissions targets, growing power demands and generous incentives compared to declining subsidies in the more saturated Western European markets.

What is your primary motivation for investing in these regions? (Corporates & Investors)



## The Spanish solar nightmare

Investor confidence has been dented by the Spanish Government's decision to impose retroactive cuts to the feed-in tariff paid out to operational projects in December 2010. However, evidence suggests this is a shock the renewable energy sector will absorb even in Europe. As Joost Bergsma noted,

"Spain was not as damaging as you might think. In the sense that, if this had happened four or five years ago when the market was at a very different stage of maturity it would have been really serious. Now that the markets are more mature. people could understand that the Spanish circumstances were specific to Spain."

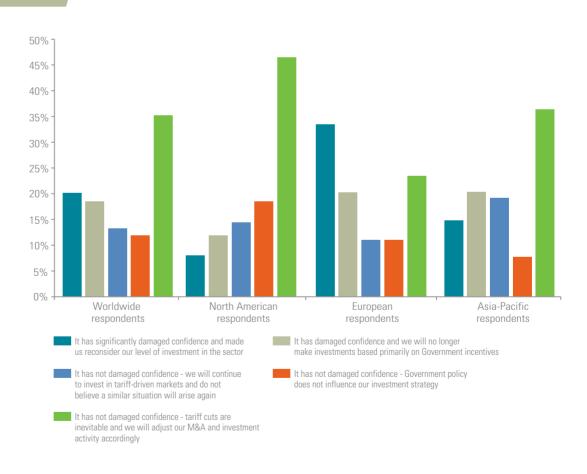
Unsurprisingly, the greatest impact was felt in Europe, where 34 percent of respondents are now reconsidering their investment strategy in renewables. Encouragingly, 36 percent of all respondents said the Spanish case would not affect their investment activity because they view tariff cuts as inevitable and simply adjust their M&A activity accordingly. Certain investors also view Spain's retroactive tariff cuts

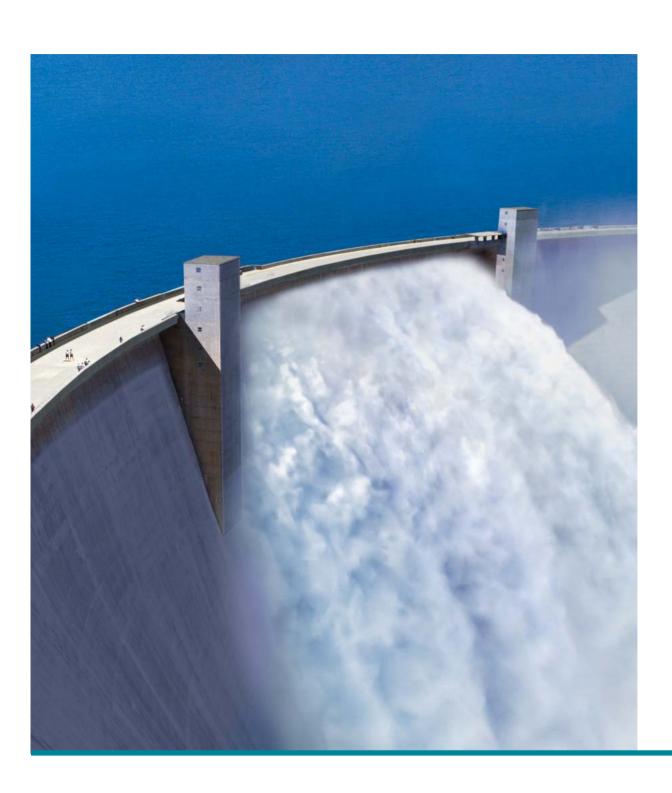
as the result of an unusually intense boom and bust cycle, driven by a combination of market forces and circumstances that are unlikely to be repeated elsewhere.

One of the most obvious direct outcomes from events in Spain is that foreign owners of Spanish solar assets will be looking to sell at any opportunity to refocus on their core markets, where there is greater predictability. Events in Spain have also brought risk management back to the fore as Siobhan Smyth, Head of Renewables at HSBC, notes:

"The fact that people are losing money on what is happening in Spain is focusing minds on where risks may lie elsewhere. What happened there was a surprise to a number of parties. There are a lot of infrastructure funds that have been burned quite badly in Spain, and that affects their photovoltaic investment in other markets."

in Europe 34 percent of respondents are now reconsidering their investment strategy in renewables





45% over 45 percent of surveyed respondents selected biomass as a target sector this year

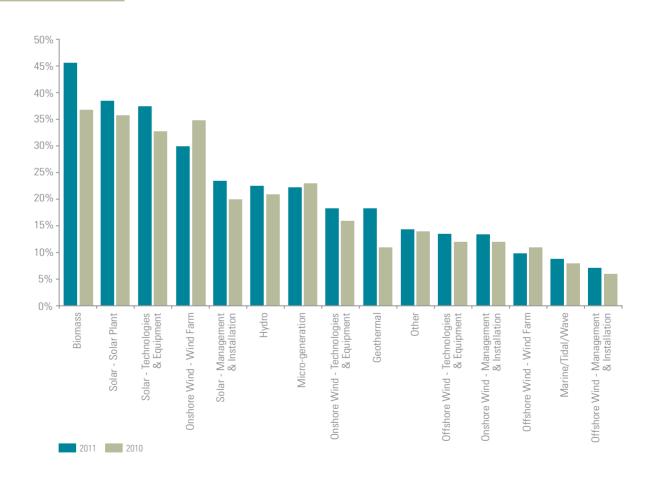
Biomass and solar remain attractive targets

Like last year, investors and corporates highlighted solar and biomass as their preferred sectors for acquisitions. Biomass fared particularly well, securing the top spot for the second year running – over 45 percent of surveyed respondents selected biomass as a target sector this year compared with 37 percent in 2010.

Onshore wind performed less well with only 30 percent of corporates and investors selecting it as a target sector this year (35 percent in 2010). As discussed in the section below, this decline appears to be attributable largely to a lack of targets particularly in the US where there are considerable constraints on Favorable Power Purchase Agreements (PPAs) – onshore wind remains a mature and well understood technology.

# Sectors in focus

Please specify your company's target sub-sectors for acquisitions of renewable energy projects or companies. (Corporates & Investors)



# Over 75 percent of lenders highlighted onshore wind as a target sector for investment

# Debt providers remain hard taskmasters

Within the renewable energy sector, onshore wind remains the preferred sector for debt providers. Over 75 percent of lenders highlighted onshore wind as a target sector for investment during the next 18 months. Put simply, minimal technology and policy risks compared with solar and limited installation and operational risks compared to offshore wind make onshore wind the most bankable sector within the industry.

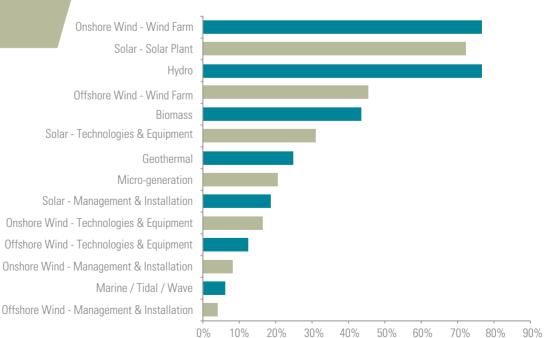
However, anecdotal evidence suggests that lenders are becoming increasingly selective and are scrutinizing investment opportunities much more vigorously, even in the onshore wind sector.

"Before, it was a matter of whether it (debt financing) was available or not,"

explains Guy Auger.

"Now, it is available but the way banks lend is more difficult. The conditions are much tougher, due diligence is much more difficult."

Please specify your company's target sub-sectors for acquisitions of renewable energy projects or companies. (Debt Providers)





Peter Kruse, Senior Vice President of Group Communications at Vestas, believes that heightened scrutiny from banks stems from the need for wind power projects to be competitive in the current environment of low natural gas prices, which in turn means that only projects that deploy the most advanced turbines are bankable.

"In general, with the present low price of gas, money is there for the right projects, but only the best performing turbines make sense from an economic perspective,"

he said.

"Three to five years ago anything that looked like a turbine could get financed. Smaller brands are now no longer as bankable."

Low natural gas prices have had a particularly adverse effect on the North American wind energy market, where the revenues derived from wind generation are negotiated between utilities and project developers in the form of PPAs. Faced with low natural gas prices, wind only becomes competitive from the utility perspective if the rates it pays for wind energy are lowered as well. Unfortunately, in many instances, wind projects simply become un-bankable if the returns are decreased. This factor contributed significantly to the stagnating wind energy market in the US last year, when only 5.3 GW was brought online, just over half of the 9.5 GW installed in 2009.

On a more positive note, with low natural gas prices reducing the number of projects with bankable PPAs, industry commentators are predicting more favorable interest rates as banks compete to gain exposure to a diminishing pool of projects.

of surveyed corporates and investors intend to acquire offshore wind equipment manufacturers and project developers during the next 18 months

**Offshore wind** Limited obvious M&A targets

As outlined in an earlier section of the report, there are signs that pension funds may be becoming more comfortable with financing offshore wind projects. Encouragingly, banks are also starting to allocate substantial capital to offshore wind projects. For example, in February 2011 the developer PNE Wind announced that it had received a number of written expressions of interest from European banks with regard to financing its 400 MW Gode Wind 2 offshore German wind farm. This follows a series of successful offshore wind project finance deals completed towards the end of last year including C-Power's 295 MW (€1.3bn financing) and Trianel's 200 MW (€700m financing) offshore wind farms.

Despite the increased availability of financing for offshore wind farms, the sector's relative immaturity means that targets are scarce. The oligopolistic nature of the turbine supply market also limits scope for acquisitions. This essentially explains why only 13 percent of surveyed corporates and investors intend to acquire offshore wind equipment manufacturers and project developers during the next 18 months.

The most likely acquirers, suggests
Peter Kruse, are large industrial groups
who are seeking targets in the offshore
turbine manufacturing supply chain.
However, a lack of credible targets also
prohibits them from entering the market.

"There will be no major movement in offshore wind this year,"

he said.

"Some people who have announced they are manufacturing in the sector have not even made onshore models. Realistically, at the moment it is only Siemens and Vestas that will do offshore for the foreseeable future."

Furthermore the substantial volume of capital and expertise required to bring large-scale offshore wind farms online has even forced utilities to collaborate through joint venture partnerships with installers and turbine suppliers. For example energy giant RWE is developing the 576 MW Gwynt-y-Môr wind farm, situated off the north coast of Wales, in partnership with the turbine manufacturer Siemens and Stadtwerke München.

## Approximately one third of survey respondents intend to target investments in solar over the next 18 months

## Solar M&A remains radiant

Solar power retained its allure this year and is still the second most sought after sector for acquisitions behind biomass. Approximately one third of survey respondents intend to target investments in solar over the next 18 months. Interestingly, this contradicts the views of certain stakeholders who are forecasting a lull in solar M&A activity in the short to medium term due to extensive feed-in tariff cuts in many of Europe's largest solar markets. This decline already appears to be manifesting itself with the total value of solar M&A decreasing 16 percent year-on-year in 2010.

For this reason, solar M&A activity is likely to be underpinned by equipment manufacturers acquiring project developers to secure demand for their products. This will most likely take the form of Asian manufacturers acquiring project developers in Europe and North America. Joost Bergsma notes:

"We may see Asian players entering downstream by snapping up one or two developers. Asian solar manufacturers looking for markets for their solar panels will be interested."

Acquisitions of solar projects look set to be concentrated in the USA, India and Italy. Some 70 percent of respondents that selected solar pinpointed the US as a geographic focus for acquisitions. A further third of respondents targeting solar are seeking deals in Italy and India.

One of the reasons why the Indian solar sector is increasingly attractive to acquirers is the plethora of government incentive mechanisms that have been implemented to support regional development.

"With India it is a combination of factors."

comments Siobhan Smyth,

"There is a portfolio standard on a state by state basis. Developers have the ability to get PPAs due to utility obligations. Then there are the Generation Based Incentive (GBI) and tax depreciation incentives. You are looking at 15-20 percent returns depending on the state you look at and the type of assets you are buying."

# **US\$2.2bn**

# Total biomass M&A values more than doubled to US\$2.2bn in 2010

#### **Biomass**

Smaller-scale deals likely to remain buoyant

Total biomass M&A values more than doubled to US\$2.2bn in 2010, confirming the prediction in last year's report that 2010 would be a strong year for the sector. Biomass was also selected by survey respondents as their preferred area for acquisitions this year, with 46 percent of all corporates and investors targeting the sub-sector. Over 40 percent of respondents that intend to acquire biomass targets are specifically seeking acquisitions in the US market, whilst 34 percent are seeking targets in India and China.

Although biomass demonstrates significant advantages over intermittent technologies such as wind and solar, many acquirers still have concerns over feedstock supply. M&A activity in biomass is therefore likely to remain focused on smaller facilities that are less exposed to feedstock shortages than larger plants.

"Biomass may be an interesting area where deal volumes increase,"

suggests Joost Bergsma.

"The really large plants will find it difficult because of complicated feedstock logistics, but I would expect deals to happen with plants in the 10-80 MW range. That will take place in continental Europe and possibly the UK."

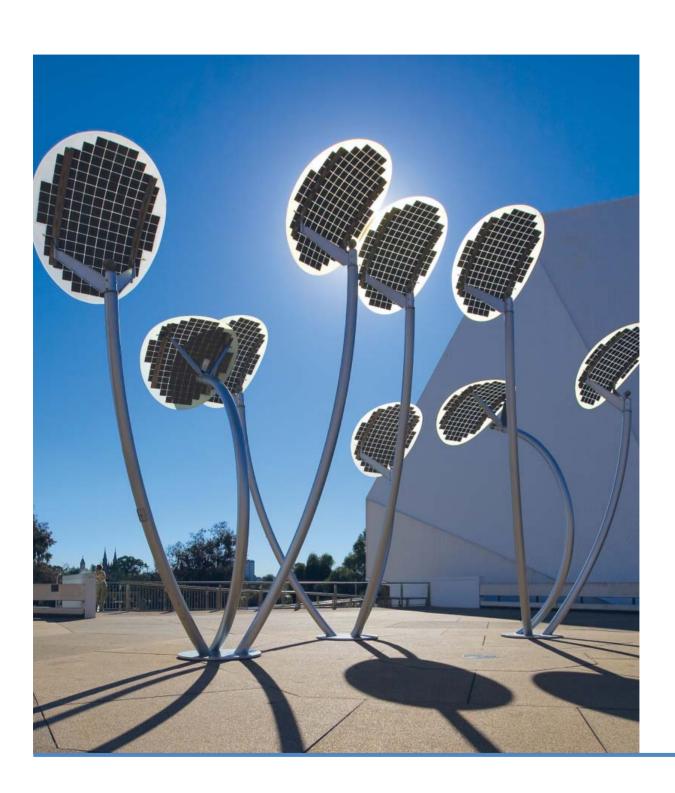
Tom Murley is less bullish believing that feedstock concerns will even deter acquisitions of small-scale biomass facilities.

"Biomass in Europe will remain constrained by fuel supply issues,"

he stated.

"People have legitimate concerns about pricing risk and the volume of biomass fuel supplies."

The onus is therefore on financial institutions to put together packages that mitigate the risks associated with feedstock shortages if the sector is to achieve its potential.

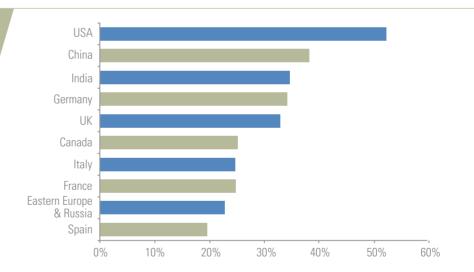


# The country "A-List"

The top five targeted countries for renewable energy investment are the USA, selected by 53 percent of respondents, China (38 percent), India (35 percent) Germany (34 percent) and the UK (33 percent). The main mover is China, which this year moved from fifth to second position. The following sections provide an overview of the

key factors that are making these countries attractive and, in some cases, the obstacles that certain countries must overcome if their true renewable energy potential is to be realized.

In which countries is your company planning to invest in renewable energy projects or companies over the next 18 months? (Corporates & Investors)



# The renewables country "A-List"

### The President's stated aim is for 80 percent of US energy to be derived from clean sources by 2035



The USA remains the most attractive market for renewable energy investment. Over 50 percent of survey respondents expect to target the USA during the next 18 months, a similar number to last year. Significantly US M&A deal values accelerated during the past twelve months whilst activity in other regions stagnated or declined - the total value of US M&A transactions totaled US\$9.4bn in 2010, almost double the US\$5.4bn recorded in 2009.

One of the reasons why the USA remains such a popular market for renewable energy investment is that companies and investors worldwide view it as a stable investment environment. The lure of the US has not been lost on Asia-Pacific respondents, being their third most popular country for investment (40 percent) behind India (58 percent) and China (57 percent). European respondents are equally enamored placing the US ahead of many other European countries including Italy and Spain.

The attractiveness of the US is underpinned by the Obama administration's determination that renewable energy plays a vital role in accelerating the country's economic recovery. The President's stated aim is for 80 percent of US energy to be derived from clean sources by 2035. This goal is being supported by a variety of incentive schemes, including the loan guarantee program, investment tax credits, production tax credits and state-level renewable energy standards.

With the US wind industry in some difficulty, many industry experts are predicting solar energy to play an increasingly strong part in meeting these objectives.

"We estimate that the US will be the largest solar market in the world by 2014,"

explained Eric Hafter, Senior Vice President, Sharp Solar Energy Solutions Group.

"Not having a market presence here would be like not being in Spain a few years ago or Germany in 2004."

Hafter expects non-US companies to acquire and partner with local project developers in order to gain a foothold in this burgeoning market.

"There is a reason why we are seeing Spanish and German developers come to the US,"

he said.

"The problem is that they lose the basic tenet of development which is that development is always local. Partnering with local developers is the only way to be successful in an unfamiliar market."

# 2013

"Government statements on clean energy policy for 2013 onwards are key for the recovery of the sector in the medium and long term"

Javier Sobrini Santander

The cloud looming on the horizon for renewable energy, is the growing influence of the Republican Party on US political decision making. The Republican Party is threatening to remove many of the incentives that have enabled the US to become such an attractive area for renewable energy investment in recent years.

House Republicans have already proposed an immediate termination of the Department of Energy loan guarantee program (that is essential to securing debt financing for large renewable projects) and have also signaled their intent to roll back the Environmental Protection Agency's ability to curb emissions from fossil fuel power plants, a move that would depress energy prices and drastically curtail renewable growth.

Despite these looming clouds, the one-year extension of the section 1603 Treasury Cash Grant in December 2010 remains a major achievement of the Obama Administration. This allows the federal government to offer direct funding for 30 percent of a renewable project's cost in lieu of investment tax credits as long as it achieves grid connectivity before the end of 2011.

This grant is an important incentive for corporates and investors in the US market. Almost a quarter of respondents said they would not invest in the US without the cash grant, while another 28 percent said it was the most important but not the only factor driving their interest in investing in the country. Paradoxically, the extension of the grant may reduce the volume of M&A activity in the US in 2011, as it will enable a number of developers to continue building new assets that should otherwise be sold.

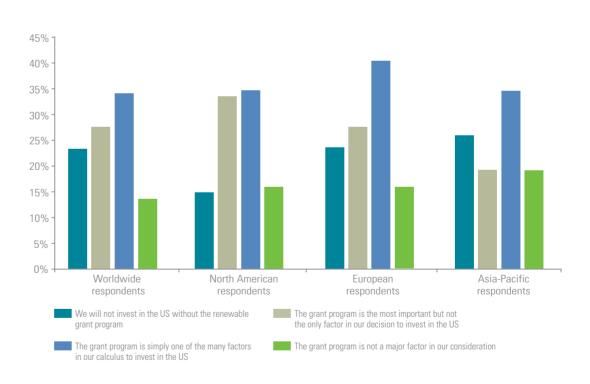
Tom Murley said:

"I expect to see some acquisitions of project development companies – there are listed companies that are in a severe state of distress. That probably won't happen this year. The tax guarantee extension means that any acceleration in sector consolidation will happen around twelve months from now."

In the longer term, the US government will need to provide greater visibility on policy to ensure continued healthy development of renewable energy.

Javier Sobrini warns:

"Most of the existing federal support policies expire at the end of 2012. Therefore, recovery of the US wind sector will depend on the outlook for the support policies. Government statements on clean energy policy for 2013 onwards are key for the recovery of the sector in the medium and long term."



38%

# of respondents globally will target investment in China over the next 18 months

#### China

attractive and dynamic but challenging for overseas investors China was the fastest growing renewable energy market in 2010. The country brought 16,500 MW of wind energy capacity online during the year, lifting total installed capacity to 42,287 MW. This rapid growth pushed the US into second place in terms of installed wind capacity at 40,180 MW. China has equally ambitious plans in the solar sector. Earlier this year the country announced its intention to bring an additional 5 GW of solar power capacity online by 2015 as part of its latest five year plan, a target it has recently doubled following the Japanese nuclear crisis.

China's booming renewable energy sector looks like an exciting opportunity from the perspective of companies and investors worldwide. Some 38 percent of respondents globally will target investment in China over the next 18 months, up slightly on the 34 percent that were targeting the country last year.

Despite the obvious appeal of investing in China, there are little signs that non-Asian companies have the local knowledge required to complete a Chinese acquisition. Domestic acquisitions accounted for 63 percent of all renewable energy M&A activity in China in 2010 (US\$1.9bn). By contrast acquisitions of Chinese firms by US companies only accounted for 11 percent of the total value of Chinese M&A activity, whilst acquisitions by European companies represented a mere 3 percent.

# **US\$586m**

Some US\$586m of project financing flowed into Indian onshore wind farms in the first quarter of 2011

India perfectly poised for investment and A&M

Renewable energy continues to thrive in India – 35 percent of respondents (36 percent in 2009) globally are targeting investment in India over the next 18 months.

The Indian market has become increasingly dynamic in recent years as a result of strong natural resources, greater accommodation to international investment compared with China and a variety of government incentives. Government stimuli include renewable energy generating standards for utilities, creating a structure for trading renewable energy certificates (RECs) and tax incentives that allow project developers to take 80 percent accelerated depreciation on assets deployed in renewable energy generation in addition to a ten year tax holiday and concessional duties for imports. Furthermore, for Independent Wind Power Producers (IWPP) not able to avail accelerated depreciation, the government has provided an alternative scheme in terms of a Generation Based Incentive ("GBI") of Rs. 0.50 per unit with an annual ceiling. These incentives will play an important role in helping India to meet its objective of quadrupling its renewable power generation capacity to 72.4 GW by 2022.

According to Cyrille Arnould, Head of the Global Energy Efficiency and Renewable Energy Fund, European Investment Bank (EIB), one sector that appears ripe for M&A in India is wind.

"With wind, there has been a lot of tax-driven development which just begs to be consolidated,"

he said.

"Utilities will be buyers because they need more generation capacity. Pricing will be good for sellers in India. I'm not sure it will be a quick buck for buvers, it is more of a long-term investment for utilities and domestic institutional investors."

The Indian wind market has experienced rapid growth in recent months. Some US\$586m of project financing flowed into Indian onshore wind farms in the first quarter of 2011, only 37 percent below the US\$934m that was allocated to the sector throughout 2010. Most of this financing has been provided by Indian banks, although there are signs that international lenders are now taking an interest in the sector in India. By way of example, HSBC and Sumitomo Mitsui Banking Corp provided US\$110m debt project financing in March 2011 for a 92 MW wind farm situated in Gujarat.

### Wind sector still offers lucrative returns for private investors and funds in Germany

#### Germany

no longer as safe a haven for renewables Germany is the most attractive
European country for investment –
34 percent of worldwide respondents
expect to target Germany over the next
18 months, placing it slightly ahead of
the UK (33 percent).

However, over the last 12 months the country's star has fallen, particularly among North American respondents. Last year 39 percent of North American respondents indicated an intention to invest in Germany, compared with a paltry 20 percent this year. This decline undoubtedly stems from a series of feed-in tariff cuts during the last 12 months. The solar tariff, for example, was cut by 13 percent at the beginning of the year and will be cut by a further 3-15 percent in July depending on the volume of installed capacity at the end of May.

Whilst solar now represents less of a compelling M&A opportunity, many in the industry believe that the country's wind sector still offers lucrative returns for private investors and funds. As Hans Bünting states:

"In Germany, onshore wind attracts private investors or smaller funds that use the leverage from the FiT to get a higher level of debt from banks. Utilities are not predominantly in the market because the IRRs are not sufficient, but the equity returns are fine for private investors.

# The attractiveness of onshore wind is still high so there are plenty of opportunities."

If the German government is genuinely going to curb its reliance on nuclear energy, it will have to find new ways of promoting renewable energy investment in Germany. This is increasingly pertinent given German Chancellor Angela Merkel's recent decision to take 7 GW of nuclear capacity offline while safety measures are reviewed. The historic defeat suffered by Merkel's Christian Democrat party at the hands of the country's popular Green party in March 2011 only exacerbates the pressure on the Government to promote the renewables sector ahead of nuclear.

# **75%**

of respondents either did not invest in the UK over the last three years or committed less capital than they would have done if regulation and legislation had been more consistent



The UK is potentially one of the leading renewable energy markets in the world. It has the largest offshore wind, wave and tidal resources in Europe, a strong history of technology development and one of the world's leading financial centers in the City of London. These considerable assets are reflected in the survey results showing the UK as currently the second most attractive renewables market in the world for European corporates and investors. second only to Germany.

To seize the immense renewable energy opportunity on its doorstop, the UK must quickly implement a clear policy framework to encourage investment. There is a risk that any delay to the UK Government's process of Electricity Market Reform (EMR), which is being crafted to ensure that all low-carbon generation can be delivered in the UK, may impede investment in renewable energy sectors such as offshore wind in the short term.

Timing is key, and with the White Paper on EMR due to be delivered in summer 2011 and the resulting legislation potentially taking up to a year to be passed, there could be a halt in the development of the UK renewables sector during this entire period.

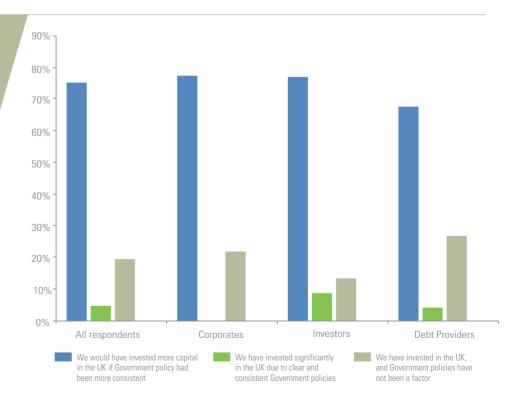
The survey results highlight that a lack of clarity and consistency is hampering investment, with 75 percent of respondents indicating that they did not invest in the UK or committed less capital than they would otherwise have done over the last three years. Continued uncertainty or delay in EMR could result in the UK missing its full share of what is expected to be a strong year for renewable energy M&A transactions.

Just as significantly, a freeze in investment and development could drive the still-nascent offshore wind supply chain into distress, resulting in companies being sold to ensure survival. For example, this year, the Glasgowbased offshore cable installation company Subocean has been acquired by French industrial Technip after it became unable to service its short-term debt facilities.

The solar feed-in tariff (FiT) in the UK is an example of the way in which policy drives investment decisions and M&A. In April 2010 the FiT was introduced by the Labour Government for projects up to 5 MW. The Coalition Government, elected in May 2010, initially supported it, but indicated that a review of large-scale

solar would occur if installation threatened to reach excessive levels. In February this year, the Government announced it would review the tariff for any installation above 50 KW and a host of investment funds immediately ceased all fundraising and investment activity. The subsequent cuts to the tariff in March effectively nullified investor interest in UK commercial solar projects.

On a more positive note, the Government recently provided some encouragement for the renewable energy sector in the recent budget through the increased capitalisation of the Green Investment Bank at £3bn. This is £2bn more than initially planned. The Green Investment Bank will also become operational earlier than anticipated in 2012 but will only be able to use leverage from 2015.



#### Other KPMG thought leadership



#### Powering Ahead 2010: An outlook for renewable energy M&A

Powering Ahead is the 2010 version of an annual publication which discusses trends in M&A in the Renewable Energy Industry. Over 250 senior executives were surveyed and supplementary interviews were carried out with key industry players to uncover the trends and outlook for the sector.



#### The Winds of Change: an Insight into M&A in the Renewable Energy **Industry in 2009**

KPMG and the EIU surveyed 200 energy professionals to uncover their views on trends and challenges for M&A in the renewable energy industry. Deals were expected to be smaller, but still economically viable.



#### **China's Energy Sector: A Clearer View**

This report shares KPMG in China's observations on key trends in each area of the energy sector, from up-stream oil and gas to power generation.



#### The ENR Finance Survey - Insights from Leading Finance Functions

Based on a survey of leading mining and upstream power and utilities organisations that provides insight and views on the latest trends, priorities and challenges for finance, including their response to the current economic turbulence.



#### Offshore wind in Europe

KPMG's report "Offshore Wind in Europe - 2010 Market Report" in cooperation with the German Offshore Wind Energy. Foundation "Stiftung Offshore-Windenergie" concludes that the growth targets for offshore wind are at risk due to low returns.



### Central & Eastern Hydro Power Outlook

Hydropower offers extremely varying potentials in the CEE region, but provides a decent 23 percent share overall in the capacity mix of the region, placing it far above all other renewable technologies.



#### **Accounting for Carbon**

Discusses the impact of carbon trading on financial statements; providing insights and strategies to help organisations understand and manage the business implications of climate change.



# Securing Investment in Nuclear in the Context of Low-Carbon Generation

The UK Government has set ambitious targets to reduce greenhouse gas emissions by 2050, and established Carbon Budgets up to 2022. The targets will require substantial investment in electricity generation with low emissions; nuclear, renewables and fossil fuel generation with carbon capture and storage (CCS). This report focuses on market and other mechanisms that affect the revenues for new nuclear investors.



### The Future of the UK's Energy and Water Industries

Energy and water industry executives are increasingly questioning whether the existing utility business model remains fit for purpose. The survey of 320 executives reveals an enthusiasm for reform, calling for a more sophisticated shape for both the UK's energy and water markets.



### **Delivering Water Infrastructure using Private Finance**

This whitepaper examines the risks and rewards of water PPPs and discusses how municipal governments and potential investors can benefit.



### Construction Risk in New Nuclear Power Projects – Eyes Wide Open

Global pressure to reduce carbon footprint has led to a renewed focus on the power industry, with some estimates putting total global energy infrastructure investment at US\$26 trillion leading up to 20301. For energy specialists, there are high expectations for nuclear power generation as the lowest cost source of low-carbon electricity that can be delivered at the scale needed to meet this growing demand.

#### Other KPMG thought leadership



#### **Taxes and Incentives for Renewable Energy (2010)**

Governments have allocated more than \$430 billion in fiscal stimulus to key climate change investment themes, with China and the United States leading the way. This guide from KPMG International outlines the investment and operating support schemes available in 18 countries. The guide was designed to give a high-level overview of the various types of renewable energy incentives that may be available



#### **Alternative Energy Project Development - Update**

This publication provides an update on alternative energy project development. Specifically, this publication discusses the Department of Energy (DOE) Loan Guarantee Program for renewable energy projects and the Federal Renewable Energy program, focusing on the construction commencement requirements.

## The KPMG Global Energy & Natural Resources (ENR) Practice

The KPMG Global Energy & Natural Resources (ENR) Practice is dedicated to assisting all organizations operating in the Oil & Gas, Power & Utilities, Mining and Forestry industries in dealing with industry trends and business issues. We believe we have a distinct portfolio of service offerings which have been carefully tailored to the needs of our clients, and can be delivered by our industry professionals. We have a well balanced portfolio of clients, ranging from global super-majors to next generation leaders including those raising capital, some for the first time, in local markets.

The M&A Energy and Utilities team at KPMG is a leading global network of transaction professionals that regularly advises on some of the largest deals in the sector. The team provides strategic, financial and commercial advice on all types of transactions including acquisitions, disposals, fund raisings and capital market offerings.

## About the KPMG Global Energy Institute (GEI)

The KPMG Global Energy Institute has been established to provide an open forum where industry financial executives can share knowledge, gain insights, and access thought leadership about key industry issues and emerging trends.

Energy Companies' financial, tax, risk, and legal executives will find the GEI and its Web-based portal to be a valuable resource for insight on emerging trends.

To register for your complimentary membership in the KPMG Global Energy Institute, please visit www.kpmgglobalenergyinstitute.com

#### **KPMG's Global Energy & Natural Resources Practice**

Michiel Soeting

Global Chair, Energy & Natural Resources

+44 (0) 20 7694 3052

michiel.soeting@kpmg.co.uk

#### **Andy Cox**

Global Head, Energy & Natural Resources for Transactions and Restructuring

+44 (0) 207 311 4817 andrew.f.cox@kpmg.co.uk

#### KPMG's M&A Energy & Utilities team Primary Global Contacts

#### **KPMG** in the UK

#### Adrian Scholtz

+44 (0) 207 311 4230 adrian.scholtz@kpmg.co.uk

#### Miles Bradbury

+44 (0) 207 311 5439 miles.bradbury@kpmg.co.uk

#### **KPMG** in Australia

#### Mat Panopoulos

+61 3 9288 5148 mpanopoulos@kpmg.com.au

#### **KPMG** in Brazil

#### Andre Castello Branco

+55 21 3515 9468 abranco@kpmg.com.br

#### **Augusto Sales**

+55 21 3515 9443 asales@kpmg.com.br

#### **KPMG** in Canada

#### Craig Walter

+1 416 777 8342 cwalter1@kpmg.ca

#### **KPMG** in China

#### Alex Henderson

+86 10 8508 5806 alexander.henderson@kpmq.com.cn

#### **KPMG** in France

#### Wilfried Lauriano Do Rego

+33 1 55 68 68 72 wlaurianodorego@kpmg.com

#### **Chantal Toulas**

+33 1 55 68 93 37 ctoulas@kpmg.com

#### **KPMG** in Germany

#### Ingo Bick

+49 211 475 7015 ibick@kpmg.com

#### **Annette Schmitt**

+49 699 587 1467 aschmitt@kpmg.com

#### **KPMG** in Greece

#### **Christian Thomas**

+30 211 181 5815 christianthomas@kpmg.gr

#### **KPMG** in Hungary

#### Chris Dinsdale

+36 1 887 7194 chris.dinsdale@kpmg.com

#### **KPMG** in India

#### Bhavik Damodar

+91 223 090 2126 bdamodar@kpmg.com

#### **KPMG** in Italy

#### Johan Bode

+39 02 6 7631 johanbode@kpmg.it

#### **KPMG** in Japan

#### Mina Sekiguchi

+81 3 5218 6742 mina.sekiguchi@jp.kpmg.com

#### **KPMG** in the Netherlands

#### Hans Bongartz

+31 10 453 4466 bongartz.hans@kpmg.nl

#### Jaap Van Roekel

+31 20 656 7623 vanroekel.jaap@kpmg.nl

#### **KPMG** in Poland

#### Dariusz Marzec

+48 22 528 1253 dmarzec@kpma.pl

#### Marek Sosna

+48 22 528 1203 msosna@kpmg.pl

#### **KPMG** in Russia

#### Leonid Balanovsky

+7 (495) 937 4444 ext: 10455 lbalanovsky@kpmg.ru

#### **KPMG** in Spain

#### David Hohn

+34 914 563 400 dhohn@kpmg.es

#### Manuel Santillana Owen

+34 914 563 400 msantillana@kpmq.es

#### **KPMG** in Sweden

#### Anders Röstin

+46 8 7239223 anders.rostin@kpmg.se

#### **KPMG** in Switzerland Sean Pever

+41 44 249 21 96 spever@kpmg.com

#### **KPMG** in Turkey

#### Jared Irving

+902123177400 jaredirving@kpmg.com

#### **KPMG** in the US

#### **Tony Bohnert**

+1 713 319 2524 abohnert@kpmg.com

#### John Gimigliano

+1 202 533 4022 igimigliano@kpmg.com

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