NORGESTION

Mergers Alliance

Global Cleantech

Sector Report 2012

www.mergers-alliance.com

France

Capital City: Paris
Area: 643, 427 sq km
Population: 64, 057, 792
Time zone: GMT +2

"Market leaders are looking to capture the growth of sustainable technologies and infrastructure, which should lead to a boost in M&A activity and increase strategic premiums."

Michel Degryck, Capital Partner

EU and domestic directives driving the sector

Although there is a strong disposition towards cleantech solutions by both the public and domestic policy makers, the French cleantech market is primarily driven by the EU's ambitious 20-20-20 target, the objective of having 20% of total energy consumption to be generated through renewable means by 2020.

Through sustainable actions and commitments, many of the EU directives are laid out in France's "Grenelle de l'Environnement" laws of 2007 and 2010:

I. New standards and rules are defined for building and housing energy

II. New tax system favouring green automotives and waste-to-product & waste-to-energy solutions

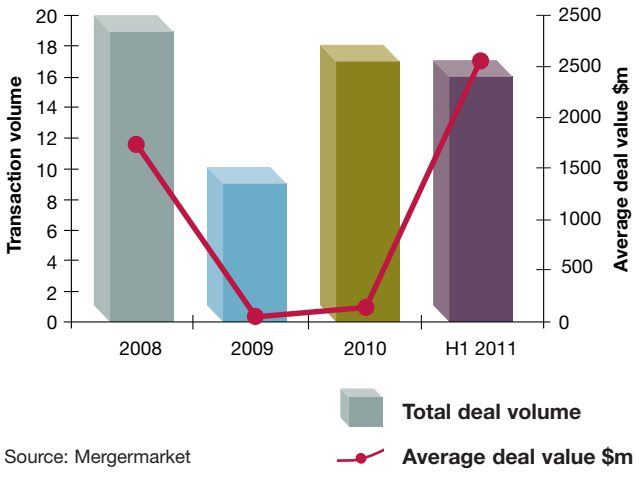
This framework, combined with favourable feed-in-tariffs and easier permitting procedures, will provide a boost to offshore wind, biogas and biomass, hydrogen-related solutions, sustainable waste management (waste to energy and waste to products), smart grid and the energy storage sectors. After some initial problems that came about due to reduced feed-in-tariffs and a distinct lack of visibility, the geothermal market is now recovering thanks to new building energy standards, and the solar market should begin recovering over the next 18 to 24 months. Expect these sectors to become more stable and less speculative.

New business models to drive growth

2010 deal volume was up from the year before and this auspicious trend looks set to continue as deal volume for H1 2011 has already almost equalled the 2010 figure. The French M&A market is strongly fuelled by blue chip companies acquiring technologies to transform their business models and generate additional growth. This was illustrated by General Electric's acquisition of Converteam, a multi-faceted electrical engineering cleantech firm, for US$3.2bn.

This common theme was also evident in EDF's acquisition of the remaining 50% shares of its renewable energy subsidiary EDF Energies Nouvelles. Alongside nuclear production (EDF is the world's leading producer of nuclear energy) renewable energy enables the group to further diversify its forms of decarbonised energy production, which currently accounts for 74% of its installed capacity. By launching an offering for its renewable energy arm a few weeks after the Fukushima disaster EDF sent a strong signal of intent that it is serious about seeking a greener portfolio.

M&A activity



Source: Mergermarket

New feed-in-tariffs for biomass and biogas

In February 2011 French policy makers introduced new generous feed-in-tariff rates to support the sustainable development of its biomass and biogas sectors. The rates were raised by approximately 50% in an effort to make biomass/biogas energy generation more cost-effective and competitive compared to fossil fuels. The lucrative tariff increases will entice long-term investors and should stimulate M&A in the sector as firms vie for market share in what will be an increasingly profitable segment of renewables.

Energy conglomerates increasingly drawn to emerging countries

French energy conglomerates (e.g. EDF, Areva, Total, Suez), environment service providers (e.g. Suez Environnement, Veolia) and traditional industrials (e.g. Schneider Electric, Alstom, Saint-Gobain) are actively seeking entry into emerging markets as they look to capture their strong GDP growth, their ever expanding energy needs and their low cost resources. They are also looking to acquire energy efficiency technologies (mostly in Europe and the US) to broaden their services and products portfolio of value-added solutions. This strong market movement is being followed by mid-sized companies, generating an increase in domestic and cross-border M&A.

Sector forecast

After two years of a buoyant fund raising market (more than 120 cleantech fund raisings in France), successful emerging cleantech firms will start becoming targets to strategic buyers offering multiples exceeding 10x EBITDA, providing high returns to their financial investors.

In the short to medium term the French cleantech sector will likely experience piecemeal movements rather than wholesale changes. Nevertheless, the sector should enjoy double digit growth in the coming years, supported by the Grenelle objectives and tax on polluting initiatives.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Jul 11	Power ENR	Wind and solar farms	Axa PE and Neoen	n/d
Jun 11	Telvent	IT for sustainable activity	Schneider Electric	1,400
Jun 11	Leader Harvest Power	Medium voltage drives	Schneidder Electric	450
Apr 11	EDF Energies Nouvelles	Renewable energy	EDF	6,650
Apr 11	SunPower	Photovoltaic panels	Total	1,050
Mar 11	Converteam	Power conversion	General Electric	3,200
Mar 11	Ecoslops	Residues recycling	BNP Paribas	n/d
Mar 11	Biogazyl	Biomass	Saria	12
Feb 11	ASCAL	Testing	Eurofins	n/d
Dec 10	Carso	Testing	FSI (French state funds)	n/d

Government support

Amendment to the state photovoltaic policy

- As 2020 objectives are set to be achieved by 2013-14, the French government placed a three month moratorium on PV projects to determine the future of the sub-sector. In March 2011 policy makers agreed to reduce PV subsidies by up to 40% in an attempt to prevent market speculation and to reduce costs.
- This new policy has strongly reduced PV activity in France, causing financial difficulties for market players. This new initiative will also likely have a very negative impact on PV M&A in France.

New TGAP rates

- In December 2010 France introduced new TGAP rates (tax on polluting activities and waste). The tax applies to every producer of waste and polluter of emissions.
- The TGAP provisions are to increase progressively over the coming years but are subject to strong and increasing deductions if pollution is tackled through appropriate green means such as through waste to energy, biogas and recycling. TGAP should be a clear booster to waste to product and waste to energy solutions.

Capital City: Berlin
Area: 357,021 sq km
Population: 82,329,758
Time zone: GMT +1

Germany

"With feed-in-tariffs for new projects decreasing on a yearly basis the attractiveness of foreign markets will increase further. Thus, German companies are looking for investments in fast growing markets such as India or China, often with a local partner."

Felix Hoch, CH Reynolds Corporate Finance

General optimism ahead

The M&A environment in 2011 is much improved compared to two years ago. Germany's relatively disciplined approach to the global economic downturn ultimately brought about real growth and a rebalanced economy. The financial results of companies in 2010 have been positive and the order book and intake in 2011 continues to strengthen.

The average number of deals in the German cleantech sector has remained fairly constant with none of the dramatic peaks and troughs that were present in some of the other major Western economies. There was a conspicuous collapse in the total deal value in 2010 however, dropping from a high of US$15.7bn in 2009 to just US$1.8bn in 2010.

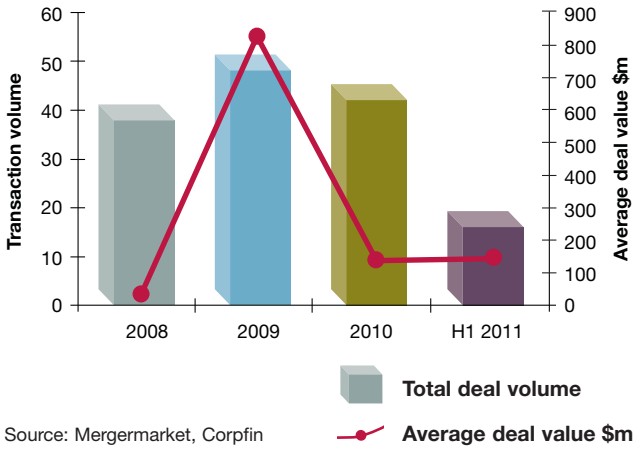
However deep the contraction was, aggressive government initiatives and an ongoing balanced economic recovery should help ensure a flourishing cleantech industry for years to come.

Notable deals in solar

In February 2011 Germany's Calyxo, Europe's second largest producer of solar modules, was acquired by US based Solar Fields for an undisclosed sum. The purchase will allow Calyxo to develop its business model in non-European markets such as Asia and the US.

In June 2010 the German based supplier of EVA films for the encapsulation of solar cells in PV solar modules Etimex Solar GmbH was acquired by US based Solutia Inc. With a purchase price of US$340m this was one of the bigger renewable German targeted energy transactions of 2010. The acquisition is a significant step in Solutia's plans to strategically grow its specialty chemicals and performance materials portfolio by enhancing its current businesses.

M&A activity



Source: Mergermarket, Corpfin

Primary influencing factors

The industry is driven by three major factors: The EEG legislation with feed-in-tariffs. The 20-20-20 target by the EU 27 (20% of final energy consumption must be generated by renewable energy in 2020, in 2010 the figure stood at 11% in Germany). The shut down of seven to eight nuclear plants in 2011 in Germany after the Fukushima disaster and the total exit of nuclear energy around 2022.

Stumbling blocks to wind energy expansion

Although new installed capacity was down in 2010 compared to the year before there is no doubt that wind energy will play a considerable role in helping Germany achieve its EU 27 targets; wind is expected to provide 25% of electricity generation by 2020.

Numerous wind parks have already been planned for construction in the North Sea. The current problem facing Germany's energy infrastructure is that most of the electricity is needed in the southern states of Germany.

The existing grid is unable to provide sufficient capacity to transport the electricity from the north to the south. Experts have estimated a need for approximately 3,600 km of further high voltage long distance grid.

Such an endeavour will not be straightforward to implement due to local opposition. Equally, any onshore wind projects targeted at the densely populated southern regions will also likely be opposed. Nonetheless, with the intended exit from nuclear power, policy makers will look to wind power to bridge the energy gap. We expect the larger energy players to become increasingly active in targeting both wind turbine manufacturers and wind farm projects.

Germany seeks to retain automotive excellence

The automotive industry, one of the most important German industry sectors, is now strongly pushing the development of electric vehicles with the target of having one million electric vehicles on Germans roads by 2020. This major thrust, facilitated by government initiatives, will have a profound effect on the general shape of the industry as the key success factors associated with electric cars such as batteries, electric motors and light-weight chassis differ significantly to the automotive norm.

The precarious state of the German photovoltaic sector

There has been substantial investment in the German PV sector, more than all the other renewable sectors combined: US$19.5bn compared to US$2.5bn in wind and US$1.55bn in biomass. This is despite the fact that significantly more energy was produced by wind and biomass compared to PV.

The German PV sector is currently at a cross roads; although it receives the highest subsidies it is not producing sufficient amounts of energy. International competition has increased dramatically, especially from Asian companies where not only are prices more competitive but the quality of their products is on course to meet near parity over the next decade. What is more, reductions in subsidies will reduce the attractiveness of PV electricity, at least in the short run. German firms participating in the sector may therefore look for opportunities abroad.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Jun 11	Projet Green	Wind farms	EOS Holding SA (Switzerland)	286
Apr 11	Solarkraftwerk Ahorn	Operates a solar park	Investor Group	n/d
Feb 11	Solarparc AG	Alternative energy services	SolarWorld AG	73
Feb 11	Calyxo Gmbh	Solar power cells	Solar Fields (USA)	n/d
Feb 11	REETEC Regenerative	Machinery to the wind industry	EDF Nouvelles (France)	n/d
Feb 11	HKW GmbH	Biomass, photovoltaic	Kosinus Holding BV (Netherlands)	n/d
Jan 11	SOLAR23 GmbH	PV-grid	Ubbink BV (Netherlands)	n/d
Dec 10	Epuron GmbH-Wind Assets	Wind development	Impax New Energy Investors II (UK)	n/d
Nov 10	SUNSELEX GMBH	Solar panels	JPK Beteiligungs GmbH	19
Nov 10	SLS Solar Line	Solar cell production	Roth & Rau AG	49

Government support

Renewable Energy Sources Act (EEG)

- The EEG provides subsidies for energy produced from renewable sources. The act's most significant fiscal incentive has been the feed-in-tariffs (FITs) initiative.
- The FITs would normally remain unchanged throughout the 20 year period after connection to the grid. There is now however potential for year on year reductions to the FITs for new projects which has resulted in uncertainty in the market and a rush to get renewable projects completed before the end of this year. This has been especially apparent in solar.

Environment and Energy Efficiency Programme

- Under this loan subsidy initiative, state owned banks provide artificially low interest loans to small-medium sized enterprises operating in cleantech.
- The loans are available to both domestic and foreign companies operating in the German "green" industries.

Italy

Capital City: Rome **Population:** 58,126,212
Area: 301,230 sq km **Time zone:** GMT +1

"The recent changes in legislation will slow investments into new large-scale photovoltaic plants but will accelerate M&A on already existing plants."

Stefano Indigenti, Ethica Corporate Finance

Cleantech flourishing despite macro concerns

Contagion from Greece and Portugal along with dangerously high levels of government debt (120% of GDP) has been a cause for alarm for investors throughout 2011.

Despite Italy's economic concerns, the cleantech industry has not suffered as a result. It experienced an 8.6% year on year increase in 2010. Wind production was up 29.1% whilst PV production exploded, rising 136.5%.

Italian energy giant ENEL currently leads the pack in both hydroelectric and geothermal production by market share (56% and 100% respectively) whilst multinational British based electricity operator International Power has positioned itself at the forefront of wind power in Italy (17%). Meanwhile, Italian utility company A2A dominates the biogas, biomass solid waste energy production segments. In terms of installed capacity the PV segment is still negligible compared to overall energy generation. PV players tend to be smaller and more dispersed and are, for the most part, newcomers to the energy market.

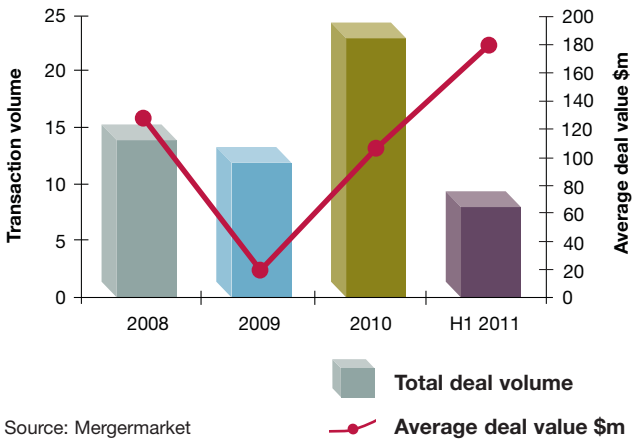
Recovery in cleantech M&A

Italian cleantech M&A is currently experiencing one its most buoyant periods. Deal volume over the past 18 months has been high whilst average deal value rose steeply from years previously. Bucking the overall global trend, cross-border activity also experienced an increase in activity.

Of these cross-border deals one of the largest was the sale of Rete Rinnovabile, a PV company with a production capacity equating to approximately 10% of Italy's total solar capacity, to UK based private equity firm Terra Firma. The deal value amounted to US$899m (US$6.2m per MW). All of Rete Ronnovabile's 145 MW power generation will benefit from the Conto Energia feed-in-tarrifs – See inset.

Deals in the solar segment continue to dominate the cleantech market, however, there has been a marked increase in the number of deals in the other renewable sub-sectors. These market trends can be partly attributed to the kneejerk reductions in PV subsidies which resulted in supply suddenly exceeding demand. Deals outside the solar space included the sale of turbine manufacturers Hydro Co-Ver to Italian private equity firm Finanziaria and ERG Renew's acquisition of wind farm operator IVPC Power 5.

M&A activity



Source: Mergermarket

Energy services dominated by French players

The Italian energy efficiency and services sectors are dominated by a crop of large French firms; Dalkia, GDF Suez, Veolia and Cofatech. The current support scheme for the energy efficiency sector - the so called White Certificates - has proven to be wildly convoluted and ineffective. A new incentive system is expected to be passed coupled with a more pronounced power purchase agreements arrangement. This should support domestic firms allowing them to grow and develop to a point where they can successfully compete with their French

counterparts. In the meantime, we expect to see more foreign firms entering the market to capitalise on the poor energy efficiency of Italy's private and public sector buildings.

Solar M&A opportunities in the wake of reduced support mechanisms

Previously, the state had maintained high solar feed-in-tariffs despite declining technology prices. As a consequence, cumulative installed capacity more than doubled every year and now stands at 2.9 GW. The revision of the state support scheme has left the Italian PV sector in a precarious state. Despite this uncertainty, we expect the recent slowdown in solar M&A activity to reverse:

- The most recent feed-in-tariff scheme (the 4th Conto Energia) will limit the construction of large-scale PV plants, therefore investors that entered the industry to diversify their investments over the past two or three years will start seeking opportunities to divest and take advantage of the increasing prices of already built PV plants.
- We are already seeing acquisitions of these assets gain momentum and are starting to see some upward pressure on their valuations.

Futures buyers of foreign cleantech

Outbound investment from local acquirer's has historically come from large independent power producers or utility firms. Enel Green Power, the listed green energy company of Enel, is active in acquiring global cleantech assets particularly in North and South America. Other active cross-border buyers include Ambienta SGR, Solar Ventures, Atmos Group, ERG Renew and TerniEnergia.

Despite turbulent economic conditions, Italy remains a strong cleantech market. We do however expect investors, both domestic and foreign, to be a lot more mindful about the fundamental business viability of potential targets due to the overhaul in state subsidies.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
May 11	Sorgenia Solar S.r.l.	Solar power plants	RTR Capital	140
Apr 11	Hydro Co-Ver S.r.l	Production of turbines	Palladio Finanziaria	n/d
Mar 11	Ansaldo Trasmissione	Renewable energy services	Toshiba Corporation	37
Dec 10	Fortore Energia	Renewable energy generation	BKW FMB Energie AG (Switzerland)	n/d
Dec 10	Italgest Photovoltaic	Solar energy production	GSF Capital (Luxembourg)	n/d
Nov 10	Energia Tre	Solar power generation	Mistral International (Luxembourg)	40
Oct 10	Rete Rinnovabile	Solar Energy	Terra Firma Capital (UK)	887
Jun 10	IVPC Power 5 S.r.l.	Wind farms operator	ERG Renew S.p.A	320
Feb 10	Italgest Wind S.r.l.	Wind farm engineering	Enel Green Power	29
Jan 10	Italian Wind Energy	Wind farm operator	EDP Renovaveis (Spain)	17

Government support

Renewables Framework Bill

- The Legislative Decree No. 387 of 2003 enacting the European directive 2001/77/EC effectively marked the beginning of the renewable energy market in Italy.
- The decree lays out various policy initiatives such as simplifying the approval process for renewable energy plant construction, fixed incentive tariffs, grid improvements and fines.

The Fourth Conto Energia

- An offshoot of Decree 387, the Conto Energia feed-in-tariffs have made Italy the world's most profitable PV market. The most recent feed-in-tariff framework however establishes a sharp reduction in incentives and subsidies and sets limits to the number of large-scale PV projects built.
- The overall effect on M&A could turn out to be net neutral as regulatory uncertainty and reduced tariff guarantees will put off certain sector players while existing PV plants, newly available on the secondary market, should prove attractive to investors.

Capital City: Amsterdam **Population:** 16,715,999
Area: 41,526 sq km **Time zone:** GMT +1

The Netherlands

"For decades the Netherlands has been at the forefront of the global water technology and water management industries. The government's recent decision to offer additional support to these sub-sectors in their 'Top Technology Sectors' should help entice investors looking to invest in firms with a clear competitive advantage."

Ronald Bobbe, Bluemind Corporate Finance

Macro indicators remain strong

The Dutch economy remains one of the most robust in the EU. Its strong trade links with Germany, which itself is experiencing its own sturdy, albeit moderating, recovery, has facilitated the Netherlands steady growth rates. Dutch companies have traditionally been highly active in global M&A relative to its GDP; the Netherlands being the third largest investor in the US being a good case in point.

A good deal of cleantech activity over the past few years involved the consolidation of the waste management sector, although transactions in wind energy (equipment and generation) and solar cells were also evident.

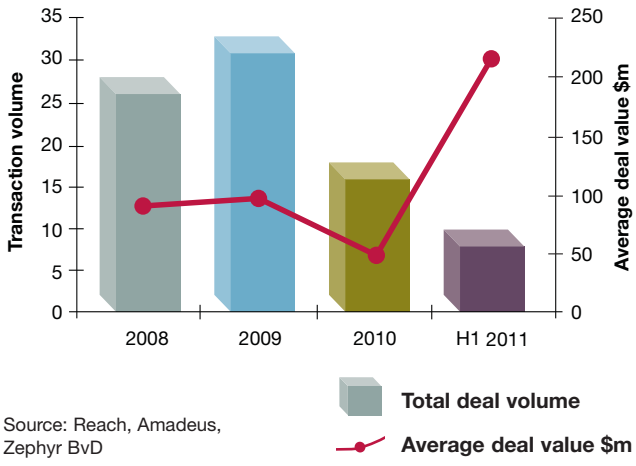
Lively M&A market

In recent years there has been substantial M&A activity in cleantech in the Netherlands. Transaction volumes peaked in 2009, while transaction values were also high during that year with the total deal value exceeding US$1bn.

There have been no big ticket deals over the past 18 months, however, there were some notable mid-market transactions including the acquisition of Dutch solar cell producer OTB Solar by German solar energy firm Roth & Rau AG for US$51m. The acquisition will help Roth & Rau AG become a major turnkey player in solar technology. The acquired technology will also enable the company to expand its crystalline silicon solar cell offerings.

There have been some notable cross-border movements including South Korea based firm STX Heavy Industries' acquisition of Harakosan Europe BV, a Dutch producer of multi megawatt gearless wind turbines. Through this acquisition, STX has secured key technologies for the installation and maintenance of wind power plants. Elsewhere, MCP Group SA, a Belgium based firm with substantial operations in scrap recycling, was acquired by Canadian metal and chemicals firm 5N Plus for US$301m.

M&A activity



Source: Reach, Amadeus, Zephyr BvD

Growing interest from private equity

Private equity's intent on the Benelux cleantech market has become increasingly pronounced. French private equity firm Crédit Agricole PE acquired a stake in Ikaros Solar, one of Belgium's more prominent PV solar energy plant manufacturers. Crédit Agricole has already made 18 investments in the wind, solar, hydroelectric and biomass segments.

There has been a growing tendency by private equity firms to set up funds which focus exclusively on cleantech. Waterland Private Equity, Capricorn Venture Partners and NIBC, are expected to become major cleantech investors over the coming years.

Key sub-sectors

The most important sub-sectors in the Netherlands are wind, water and waste management.

Wind in particular remains an interesting proposition for investors. Although capacity is already high (it has the largest off shore wind capacity next to the UK and Denmark) there is still plenty of room for expansion in the technology enhancement and efficiency side of this sub-sector.

The Netherlands has a highly developed water management industry and current government policy to make it one of the key technology sectors is expected to boost activity and investments even further.

The Netherlands is also one of Europe's leaders in waste management and recycling. Large players include Van Gansewinkel Group and Shanks, both of which have made several recent key acquisitions.

Expansive growth predicted

The Dutch cleantech market has the potential to grow from US$2.6bn today to US$12.3bn in 2015 partly fuelled by EU regulations and its energy targets for 2020 and partly fuelled by the Netherlands technical ingenuity and competitive advantage across certain sub-sectors.

We expect M&A growth to be greatest in wind where there have been several noteworthy acquisitions in both technology and wind park operators in recent years. We also expect further consolidation in waste management in the coming years, mainly due to the capital intensity of the sector and a need for up-scaling.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Jul 11	Enfinity	Green electricity distributor	Waterland PE (UK)	19
Jun 11	Van Gansewinkel Groep	Solid waste management	Veolia Environmental Services (France)	n/d
May 11	Norther NV	Solar products	Electrawinds NV	n/d
Apr 11	Horizon Energy BV	Solar energy developer	HVC NV	n/d
Apr 11	Verhuur EN Energie	Energy efficiency	Feenstra Verwarming	n/d
Apr 11	Ducatt NV	Solar energy developer	Capricorn Venture	n/d
Apr 11	MCP Group SA	Recycling and reprocessing	5N Plus (Canada)	301
Mar 11	Ikaros Solar NV	Solar manufacturer	Credit Agricole Private Equity (France)	n/d
Feb 11	Novopolymers NV	Polymer based encapsulates	Capricorn Venture	4.2
Dec 10	Mastervolt International	Solar products	Actuant Corporation (USA)	115

Government support

The Environmental Act 2011

- The Environmental Act 2011 draws from the EU Directive of 2008/9 which requires that EU members revise their environmental legislation before 2013. The EU Directive introduces new regulations and sets new waste management and recycling targets.
- Since the Netherlands is already close to meeting its recycling targets the new law will help Dutch companies gain more momentum. M&A activity may increase as firms look to capitalise on this clear competitive advantage.

Top Technology Sectors

- Policy makers have pinpointed nine economic sectors to which they will offer financial and regulatory support. One of those sectors is water management/conservation.
- Because of the high-cost, low yielding nature of the water management/conservation industry, we expect foreign firms, through M&A, to penetrate the Dutch market to take advantage of these support schemes.

Poland

Capital City: Warsaw
Area: 312,679 sq km
Population: 38,482,919
Time zone: GMT +1

"The Polish cleantech sector is set to grow exponentially from a nominal base. While production and generation will increasingly be the purvey of the market giants, there will be a range of opportunities for those servicing and adding value to this emerging industry."

Michael Harvey, IPOPEMA Securities

Several factors to spur on cleantech growth

Poland has performed well over the crisis, being the only EU country not to move into recession, and growth forecasts for the coming years remain healthy at 4.2% and 3.9% for 2011 and 2012 respectively. Ageing power stations, limited installation of new generating capacity along with the strong economic growth of the past decade is putting huge pressure on capacity in the medium term. This combined with Poland's commitment to produce 15% of its energy from renewable sources by 2015 means that focus will continue to be on new and alternative forms of energy and other green initiatives.

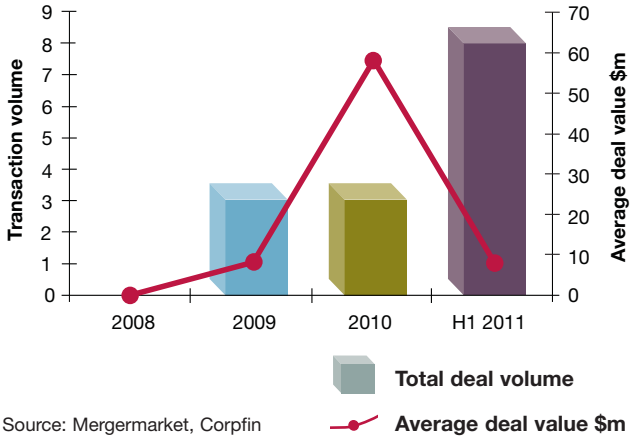
A developing industry

Overall volumes in cleantech M&A have been relatively low compared to Poland's more westerly neighbours and reflects the relatively underdeveloped nature of its cleantech industry. Focus to date has been on the large power production and distribution companies buying out project stage or just completed wind generation projects from smaller entrepreneurial businesses.

Acquirers of wind power projects have fallen into three broad categories: Multinational power groups with expertise in renewables like Iberdrola and Acciona, who are keen to stake a claim in what is an adolescent, yet highly promising and large-scale market. German based power generators (like RWE) expanding across the border (Poland's North-West coastal area is adjacent to some of Germany's largest wind farms in Mecklenburg and Brandenburg) and local Polish power generators, looking to acquire production capacity to make up for their limited investment to date.

Several of the larger wind farm sales have been carried out by Warsaw Stock Exchange listed energy generation firm Polish Energy Partners SA, which sold a series of wind farms to RWE and Electrabel. They also sold 43 MW Pagowo and 30 MW Wartkowo projects to GDF Suez (for around US$21m), broadening its relationship with the French power company which also includes joint involvement in biomass power development.

M&A activity



Source: Mergermarket, Corpfin

World's largest biomass plant

In the biomass space, Canadian based Carbon Friendly Solutions acquired a 51% stake in biomass pellet producer Carbiopel in May 2011. The latter is to produce 20,000 tonnes of pellets in 2011, rising to 80,000 tonnes in 2016. The pellets will be feed stock for the world's largest biomass plant; the 190 MW unit currently under construction at the Polaniec power plant owned by French energy giant GDF Suez. It is expected to consume around 1 mn tonnes of biomass annually. The deal highlights the interest foreign buyers have in locking in long-term relationships in early stage markets with global leaders.

Promise in wind, biomass and biogas

While Poland's theoretical wind capacity is similar to Germany's, its current installed wind power capacity is less than 3% of that of its neighbour. Key constraints include bureaucratic hurdles in licensing and network connections and structural problems with the grid network, which is poorly developed in the areas with the highest wind potential. However, thanks to a recent streamlining of legislation and mounting pressure on power generators and distributors, installed wind capacity is expected to grow exponentially from 1.58 GW (with just over fifty largely small-scale wind farms) in 2010, to just under three times that level (5.19 GW) by 2015.

Poland's large arable farming and forest industries also offer considerable scope for industrial and farm enterprise scale biogas and biomass facilities. These projects are still in their infancy, with only 16 biomass plants with an overall capacity of 254 MW and 136 small-scale biogas plants generating just 79 MW in place to date. Poland's potential in this area is largely unexploited but these segments are expected to play a significant role in the future.

Looking ahead

There will be an increasing number of transactions as the project approval process initiated by a wide range of smaller companies reach fruition, and are bought out by a widening range of big-league buyers.

The wind power sector will, in its turn, require project development, construction and maintenance services whilst biogas and biomass sectors demand large-scale infrastructure, logistics, financing and long-term cooperation between a disparate group of collaborators to succeed.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
May 11	Dexia FondElec	Energy saving technology	E-Star Alternative (Hungary)	19
May 11	Portfolio of Wind Farms, Poland	Wind farms	ELKOP Energy	n/d
Jan 11	Piecki Wind Farm	16 wind turbines	RWE Innogy GmbH, (Germany)	n/d
Jun 10	Centrozlom Wroclaw SA	Metal recycling services	KGHM Ecoren SA	n/d
Apr 10	Portfolio of Wind Farms, Poland	Wind farms	AES Wind Generation (USA)	n/d
Feb 10	Iberdrola Renewables	Wind farms	The EBRD	169
Jul 09	Gamar SL, Poland	Develops wind farm projects	Renewable Energy Holdings (UK)	2
Jul 09	Ecofys Poland Sp Zoo	Energy saving services	Aveco de Bondt (Netherlands)	n/d
May 09	Eco-Wind Construction	Wind plant manufacturer	Trakcja-Tiltra SA	7

Government support

Certificates of Origin

- The government encourages renewable energy investment through its Certificates of Origin initiative, otherwise known as Green Certificates. The initiative requires electricity distributors to buy renewable energy, and at premium prices. The current renewable quota is 10.4% rising to 11.9% in 2014 and 12.9% in 2017. These rights are negotiable and can be traded on the Polish Power Exchange.
- Renewable investments will likely hasten as power companies strive to comply with the rising quota.

Ministry of Economy energy targets

- Cleantech investment in Poland is being underpinned by EU legislation such as the requirement under EU law that 15% of Poland's electricity output be produced from renewable means by 2015. Poland's Ministry of Economy expects 8.9% renewable electricity output by Q4 2011, rising to 13% by 2015 and 19% by 2030.

Russia

Capital City: Moscow **Population:** 140,041,247
Area: 17,075,200 sq km **Time zone:** GMT +3

"For Russia to remain an energy superpower it needs to supplement its wealth of natural resources with investment in advanced technology. Therefore, not only are foreign companies still acquiring Russian resources, there is a new trend of rich Russian companies acquiring foreign technology through M&A and joint ventures."

David Wolfe, Northstar Corporate Finance

Russia yet to capitalise on its potential renewable capacity

With Russia home to a tenth of the world's oil reserves, a third of the world's natural gas reserves and a fifth of the world's coal reserves it should come as no surprise that the country is not at the forefront of the global renewable push. There have been no sweeping state initiatives nor has there been an immediate or practical need to pursue green policies as conventional energy remains (artificially) cheap. There have been some small moves of late by state sponsored and private companies to engage in renewable energy projects with joint ventures (JVs) facilitating proceedings.

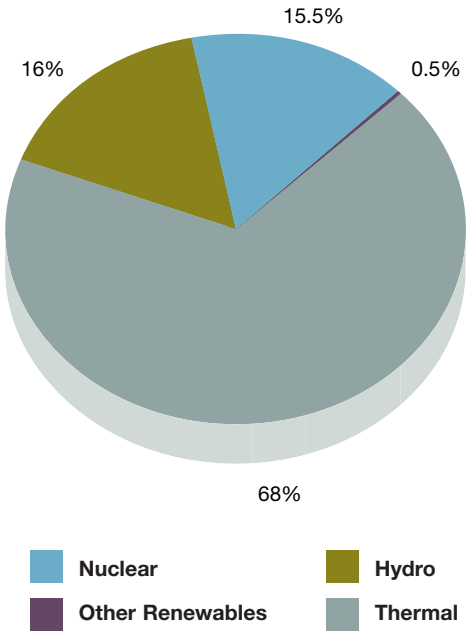
Large-scale hydropower is by far and away the most developed renewable source of energy in Russia. Approximately 16% of electricity is produced by hydropower (45 GW capacity). Geothermal is the next biggest source, contributing just 307 MW. Russia also produces 186 bn tonnes of peat, second only to Canada, however only 1,5 mn tonnes per annum is used for fuel production.

Joint ventures key to Russia's cleantech push

In June 2011 French energy conglomerate Alstom entered the Russian renewable market through an agreement with Russia's hydropower generation giant Rushydro. The agreement between the two stipulates the creation of a hydropower manufacturing facility in the Russian federal state of Bashkortostan. The plant will manufacture equipment across the hydropower production chain as well as auxiliary equipment. This agreement will strengthen Alstom's growing presence in Russia's energy market whilst technology spillover should help ensure improvements in the efficiency of Russian hydropower plants.

In 2010 Siemens retained a majority stake in a joint venture with Rushydro and state owned technology body Rostechnologii to develop wind component production facilities. The turbines and components built will serve the Russian market as well as the peripheral markets surrounding Russia. The JV establishes a major renewable player in the region and broadens the capabilities of Russia's energy production output. In a statement made following the agreement, the CEO of Siemens confirmed the company's intention to install up to 500 MW annually for the next five years.

Russian electricity production by source



Source: eia.gov

Largest wood pellet plant in the world

Finnish softwood sulfite pulp firm Vyborgskaya Cellulose and Finnish forestry services firm Ekman & Co pooled resources to develop a wood pellet plant in Sovietsky, a region in Russia close to the Finnish border. On its completion in December 2010 the plant became the largest wood pellet plant in the world and twice as large as any other plant currently in existence. Overall production of wood pellets will be in the region of 1 mn tonnes per year. The target market for the pellets will be Scandinavia and parts of central Europe.

Energy powers looking east

Major Russian energy players Rushydro and Inter Rao UES are ostensibly keeping to their geographical and geopolitical comfort zone with regards to their cross-border movements. They are mostly, but not exclusively, targeting companies and assets in the former Soviet bloc or in former Soviet allied countries such as Venezuela and Vietnam.

Examples include Inter RAO UES' US$104m purchase of Georgian hydroelectric power stations AO Khrami GES-1 and AO Khrami GES-2. The two plants will provide 110 MW combined, which works out to roughly US$1m per MW. Elsewhere, Rushydro acquired a 51% stake in Dakdrinh Hydropower from Vietnamese state energy firm PetroVietnam. Upon completion of the deal, Dakdrinh were in the process of constructing a US$125m-150m 125 MW hydropower plant in Vietnam. Rushydro also acquired 100% of the 560 MW Sevano-Razdan hydropower cascade in Armenia.

Short term goal to be on grid modernisation

Russia's ageing grid infrastructure is in desperate need of modernisation. It has been estimated that the distribution infrastructure loses up to 12% of energy transmission at a cost of US$10bn annually. Russia is just beginning to invest in smart grid projects which, in the long term, should smooth the deployment of renewable energy technologies.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
May 09	Rusnano	Solar modules technology	Renova Group	n/d
Apr 09	RusHydro Energy Distribution OAO	Hydro	Rushydro OAO	43
Aug 08	Jugenergopromtrans	Hydroelectric power plants	Alter Energy Group AG (Switzerland)	n/d
Jun 08	OGK-5 JSC	Hydro interests	Enel Investment Holding Bv (NL)	1,225

Government support

The Energy Strategy Document

- The Energy Strategy document released in 2003 sets out the Russian energy policy for the period up to 2020.
- The document outlines Russia's energy priorities which includes increasing energy efficiency, reducing pollutions impact on the environment, promoting sustainable, energy and technological development. It also promotes more openness and competitiveness in the energy market framework.
- In 2009 policy makers set a target of increasing its share of renewable electricity generation to 4.5% from less than 1% today. Direct investments and minimal support structures have been promised to facilitate achieving this target.

The Federal Law FZ 250

- The Federal Law FZ 250 enacted in 2007 focuses on the reorganisation of the equity positions of companies in the Unified Energy System of Russia and of other federally owned joint-stock companies in the Russian electricity industry. The result of which appears to be more competitive and efficient electricity companies that are more prone to invest in the future development of Russian electricity.
- Implicit in this law is a policy for promoting the use of renewable sources for electricity power generation. However, there are no specific incentives such as feed-in-tariffs or subsidies.

Countries: Norway, Sweden, Denmark
Area: 12,166,85 sq km
Population: 24,784,800
Time zones: GMT +1 to +2

Scandinavia

"From the Swedish automobile industry to Danish wind energy to Norwegian energy initiatives, the Scandinavian region has reached a point now where the goods it produces are in high demand across the world."

Bengt Ellow, Experia Corporate Finance

A recipe for success

For years the Scandinavian countries have made extensive efforts championing cleantech and have been considerably successful in this field: Denmark is a world forerunner in wind energy technology, Norway is one of the world's leading innovators of solar technology and home to Europe's biggest renewable energy operator; Statkraft, whilst Sweden is leading the way in biomass technology.

The most prevalent renewable sources in Scandinavia are hydro, wind, solar and bio-energy. Sweden has the highest share of renewable in the energy mix (excluding large-scale hydro) among the EU27 and is well positioned to meet its EU energy and climate commitments by 2020.

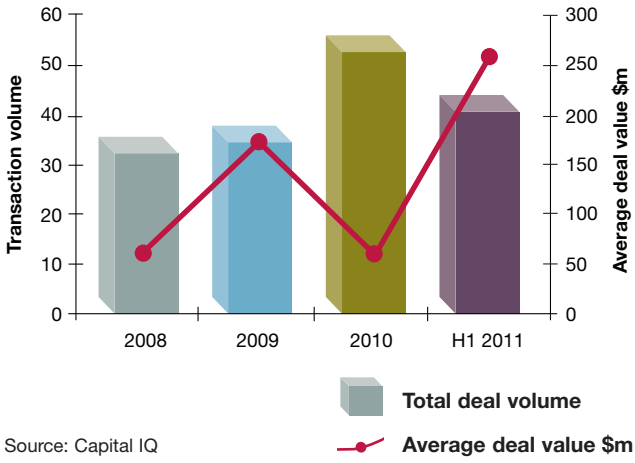
Healthy industry

M&A volume in cleantech was unimpeded by the economic slowdown and even rose at the height of the downturn. The latest notable deals include the purchase of Swedish biorefinery firm Domsio Fariker by the Aditya Birla Group, an Indian conglomerate with a substantial renewable interest, from a consortium of Sweden-based private investors for a consideration of US$340m. Domsio Fabriker's state-of-the-art biorefinery will give Aditya Birla access to a variety of different renewable sources they currently lack exposure to.

In June 2011 GWM Renewable Energy, the subsidiary of Italian wealth management group GWM, agreed to acquire a 50% stake in Danish wind energy specialists Greentech Energy Systems via a capital increase, on top of the 10% it already holds on a pro-forma basis. The 60% share capital ownership means GWM will have to make a mandatory offer for the remaining shares. The purchase will afford Greentech with the added capital as well as access to a prominent industrial shareholder to help push forward its wind power strategy whilst expanding into other areas of renewable power including solar and biomass.

In one of largest deals in the renewable sector over the past couple of years Norway based Elkem AS, one of the world's pre-eminent solar grade silicon developers, was acquired by China based chemical firm China Bluestar Group. The landmark deal will give Elkem access to the vast and bourgeoning Chinese renewable market.

M&A activity



Source: Capital IQ

Offshore wind in Scandinavia

Denmark were pioneers in offshore wind having developed its first offshore wind farm in 1991. The industry currently generates US$6.5bn and serves 40% of the world market. There are a number of large-scale domestic projects in the pipeline; the most significant being the joint project between Denmark's largest energy firm Dong Energy along with pension fund PensionDanmark. The two entities are to build a 400 MW offshore wind farm between the island of Anholt and Djursland. The project will provide 4% of Denmark's renewable consumption.

Home to the longest coastline in Europe and considerably larger than the traditional wind farm states of Denmark or northern Germany, Norway has vast untapped offshore wind power potential. According to the Energy Council, offshore wind power will make up 40 tWh of Norway's renewable energy by 2025. In 2009 Norway's Statoil and France's Technip partnered to build the first large capacity floating wind turbine. The floating turbine sub-sector remains an interesting prospect as it is already competitively priced and can be installed far from the coast where wind flow is unhindered by terra firma and is therefore more constant.

Although onshore wind in Sweden is expanding at a rapid pace its offshore variant is almost nonexistent with only 165 MW total installed capacity to date. In late 2010 the Swedish authorities approved planning permission for an unnamed German wind power firm to build a 265 MW offshore wind farm 11 miles off the coast of Söderhamn. Construction is planned to commence within 18 months and should signify a new trend in large-scale offshore developments in Sweden.

Mid-market private equity taps into energy efficiency market

In September 2010 one of Europe's leading mid-market private equity firms Palamon Capital Partners acquired a majority stake in Eneas Energy AS for a sum of US$64m. Eneas provide a variety of services in the energy efficiency spheres and is one of the market leaders in their field in the Nordic region.

The deal is representative of a growing number of mid-market private equity firms branching out of their conventional investment models into sectors associated with industrial cleantech as well as cleantech consulting, logistics and financing services.

Cleantech backbone of economic growth

A comprehensive policy mix along with a propensity towards innovation should ensure that cleantech will continue to play a major role in driving the Nordic economies. One should look no further than Denmark, where cleantech has been its fastest export growth sector for the past two years and the pace of this export growth is expected to more than quadruple over the next five to six years. Owing largely to the above factors, we see no reason why the recent upsurge in cleantech M&A should stop.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
May 11	Triventus AB	Wind power generation	Industrifonden; Sustainable Tech	16
May 11	Greentech Energy Systems	Wind energy projects	GWM Renewable Energy SpA (Italy)	461
Jun 11	Sarepta Energi AS	Wind power plant	TrønderEnergi Invest AS	n/d
Apr 11	Domsjo Fabriker AB	Biorefinery and specialty cellulose	The Aditya Birla Group (India)	340
Mar 11	Veidekke Gjenvinning AS	Waste recycling company	Altor Fund III GP Limited	58
Jan 11	Amminex A/S	Alternative energy systems	Faurecia SA (France)	26
Jan 11	Elkem	Solar	China National Bluestar (China)	2,000
Sep 10	Eneas Energy AS (Majority Stake)	Energy efficiency services	Palamon European Equity (UK)	64
Sep 10	Ekesjo Windpower AB,	Windpower	Arise Windpower AB	n/d
Jun 10	Kommunekemi a/s	Wastewater	EQT Infrastructure Fund (UK)	52

Government support

Electricity Certificate System (Sweden)

- Initially introduced in 2003, the Electricity Certificate System was revised in 2007 with the objective of increasing renewable production to 17 tWh by 2016. 1 Mwh equals one certificate which can be traded on the Nordic Power Exchange. Has promoted green investments into Sweden.

Green car tax exemption (Denmark)

- Denmark exempts vehicle purchase tax for electric vehicles (equivalent to an exemption of 105% of the car value below DKK 76.500 (US$14.400), and 180% of the car value above this. Electric cars also have an exemption from the annual registration fee of between US$95 to US$1900. The tax breaks have attracted a number of auto manufacturers to the country's market.

Feed-in-tariff (Norway)

- In 2008 the state introduced feed-in-tariffs for renewables. Producers of electricity using regionally undeveloped technologies such as biomass receive US$00.2 kWh, whilst wind power producers receive US$00.1.5 per kWh and hydropower producers receive US$00.07 kWh.

Spain

Capital City: Madrid
Area: 504,782 sq km
Population: 46,745,807
Time zone: GMT +1

"Due to the introduction of more restrictive renewable energy legislation recently, both big and medium sized Spanish players will almost certainly have to look abroad if they want to maintain the growth they achieved in a buoyant domestic market over the last decade."

Mario Senra, Norgestion

Cleantech to drive the economy

Spain has been particularly damaged by the global economic downturn. A period of continued growth pushed along by a credit fuelled housing and construction bubble ended abruptly once the financial crisis hit. Spain has in effect had to find a new "business model" to offset the dramatic reduction in activity in the affected markets and to allow for real growth to take place on the back of manufacturing and exports rather than the expansion of the property market. The government has pinned its hopes on cleantech to kick start its struggling economy. Despite the recent restrictive policies adopted, mainly due to budget constraints, the Spanish are still preeminent across certain sub-sectors.

2011: A turning point

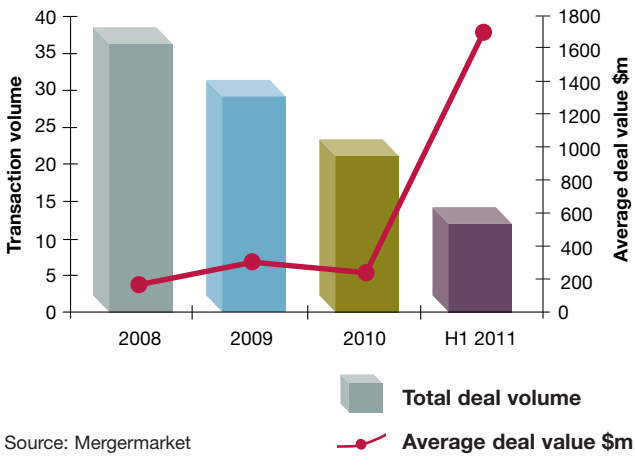
Excluding the mega deals involving Endesa, Acciona, and Enel during 2009-2010, both the volume and value of cleantech transactions involving Spanish targets has been declining since 2008. This can be attributed to the deteriorating macroeconomic environment and the increasingly budget conscious attitude towards green initiatives by the government. The volume and value of cross-border cleantech transactions involving targets in Spain has also been decreasing for the same reasons. There is an indication that deal volume will start to recover to pre 2010 levels judging by the H1 2011 numbers. Moreover, 2011 has seen average deal value shoot up thanks to a string of large deals.

One of the most high-profile transactions was Spanish electricity giant Iberdrola SA's acquisition of the remaining shares it does not already own (20% approximately) of Iberdrola Renovables SA, its listed renewable energy arm for US$5.3bn. The deal, announced on March 2011, demonstrates Iberdrola's strong focus on renewable assets and highlights the role the company is taking as a leading consolidator within the renewable energy market. Iberdrola has also been directing its attention offshore: In late 2010 it announced its intention to invest US$6.9bn into UK cleantech over the next two years. Its primary focus will be on smart grids, carbon capture and wind farms such as the 7.2 GW offshore farm off the coast of East Anglia.

Regressive government policies may facilitate sub-sector growth

Conducive market conditions along with favourable government policies have seen the number of renewable energy facilities grow from 1,778 in 2000 to 57,504 in 2010. A number of initiatives like the aggressive feed-in-tariffs have helped position Spain as one of the world's biggest producers of renewable energy. Recently, policy makers put through various changes in legislation clearly aimed at slowing down investments in certain renewable sectors such as solar PV due to its high costs. As a result, other cleantech sub-sectors like waste management, recycling and energy efficiency are emerging at the forefront of Spain's green industries.

M&A activity



Source: Mergermarket

Looking overseas to invest

Big Spanish construction groups like FCC, Ferrovial and ACS have been diversifying away from the construction sector and entering into new business areas with environmental services being top of their agenda. They are also increasingly interested in diversifying geographically with the belief that a growing proportion of their growth will occur outside of Spain.

A fiscally weak state equates to an undermined public sector. This is of particular importance because for firms in certain cleantech sub-sectors, public agencies are their principle client; waste management serving local municipalities being a good case in point. As a result, we expect to see an increasing amount of cross-border deals involving Spanish buyers in the waste management sector, similar to the last one performed by Ferrovial when it acquired Donarbon Limited, a UK based waste management company in September 2010.

Consolidation and outbound deals will characterise future M&A

Although there are major players in cleantech like the listed Gamesa or Abengoa or the environmental services divisions of some of the main construction holdings, the general market is highly fragmented with hundreds of small players with revenues below US$20m. Continued consolidation in the domestic market is therefore highly probable.

Inbound M&A may increase over the coming few years as foreign companies, after a period focused on restructuring and cost cutting and allowing for excess cash to build up on their balance sheets, start to assess how macroeconomic indicators develop. Spain could be perceived to be a country with reasonable valuations as well as being a strategic launch pad into Latin-America.

Wind power giant Gamesa has been shifting its attention to new markets of late. In April 2011 it signed an agreement with Chinese wind player Longyuan to jointly develop a new 200 MW wind farm in China. Its project portfolio now totals 2.9 GW in China and 22.6 GW worldwide. Indeed, the more restrictive government policies towards renewable energy and the sustained troubles facing domestic financial institutions should make outbound M&A activity predominate in the near future with Brazil, China, the UK and the US being the most attractive propositions.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Apr 11	Jantus SL	Wind power plants	CPFL Comercializacao (Brazil)	973
Mar 11	Grupo Guascor SL	Renewable energy	Dresser-Rand Group Inc (USA)	494
Feb 11	Grupo Agbar	Water and sewage services	GDF Suez SA (France)	97
Dec 10	PET Compania Reciclado SA	Recycling of plastics	Dentis S.R.L. (Italy)	n/d
Sep 10	Orisol Corporación Energética SA	Renewable energy projects	Repsol YPF SA	8
Jun 10	Biomasa Fuente de Piedra SAU	Biomass electricity	Neoelectra SA (France)	30
Jun 10	Parque Eólico La Peñuca SL	Wind power plants	Elektrizitaets Gesellschaft (CH)	12
Jun 10	Isofoton SA	Solar panels manufacturer	Toptec Company (South Korea + Spain)	45
Feb 10	Hersen Cinco SL	Recycling company	Mauser AG (Germany)	n/d
Jan 10	Aldesa Construcciones SA	Solar PV power plants	NIBC; Ampere (Netherlands)	27

Government support

Real Decreto-ley

- In an attempt to reduce the "tariff deficit" (the difference between the government fixed price for electrical power and the cost of generating it), Spanish policy makers introduced a cap on the previously established solar PV feed-in-tariffs.
- The effect on M&A should be mixed. Positive as investors, seeing how their internal rate of return is decreasing, might start to look for an exit, and negative because it introduces uncertainty and a distinct lack of confidence in the Spanish renewable energy market.

PNIR

- PNIR, otherwise known as the National Integrated Plan for Waste Materials, started in 2008 and is set to run until 2015.
- Its purpose is to reduce the amount of waste generated and to increase reutilisation and recycling rates. The implementation of the plan should gradually drive growth in areas such as recycling and waste to energy which should subsequently have a positive effect on M&A.

Capital City: London **Population:** 61,113,205
Area: 244,820 sq km **Time zone:** GMT

United Kingdom

"Given that 40% of Europe's wind energy blows across the UK, the wind industry is likely to dominate cleantech investment flows here for the next 20 years. Other industries, such as waste recycling and energy recovery, are also hugely important."

Mark Wilson, Catalyst Corporate Finance

Legislation driving deals

Rising inflation and lower than expected growth has led to a crisis in confidence in the UK recovery. Interestingly, the UK economy has been greatly influenced by (EU and UK) cleantech legislation over the last five years, ensuring that even in a slow growth environment, deals are still being completed. For example, the introduction of the UK's feed-in-tariff (FIT) programme in April 2010 was a catalyst for Carillion's acquisition of Eaga, the largest deal of 2011 so far, at US$493m and roughly 6.8x this year's EBIT.

Eaga is poised to deliver a mass roll out of solar PV to the social housing community, approximately 320,000 homes this year. In late January they announced that they had secured US$97m of SPV equity funding through the HSBC Environmental and Barclays European Infrastructure Funds to facilitate this. As a proven deliverer of complex national installation programmes, Eaga was an attractive target for Carillion, a leading support services business, which has the balance sheet strength to help Eaga fully capitalise on the FIT programme. Similar businesses such as Keir have also been acquisitive in the PV roll out space.

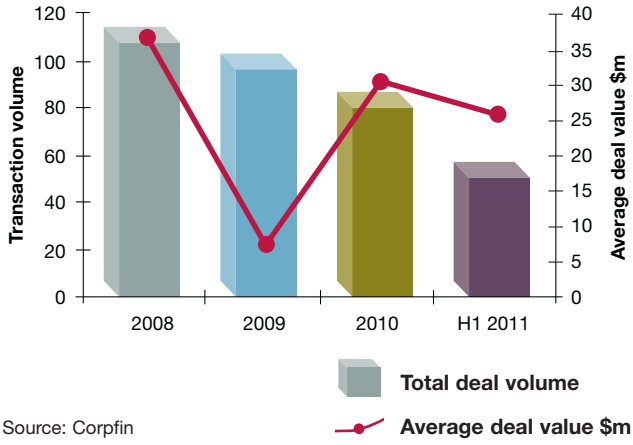
Wind industry evolving

The wind industry is the most developed and mature of the renewable energy sectors in the UK and is poised for over US$160bn of investment in the off shore sector as well as continued investment onshore. During the past 12 months a number of assets have changed hands, with Infinis plc, the Terra Firma Capital Partners backed renewable industry consolidator, acquiring onshore wind farms from both Scottish & Southern and E.ON during 2011.

Whilst the North Sea oil & gas industry is primary to the UK energy sector, we have seen a range of traditional oil and gas service businesses acquire renewable capabilities in anticipation of the growth in non carbon derived energy. At the end of 2010, Aberdeen-based John Wood Group acquired a stake in SgurrEnergy, the specialist renewable energy consultant combining offshore experience with wind, wave and tidal expertise. In 2009, the more established Bristol-based Garrad Hassan Group, and recognised authority on wind especially with the funding community, was acquired by Germanischer Lloyd AG, the German maritime and oil & gas consultant.

Despite the growth expected across the wind supply chain, there are very few British manufacturing businesses of any scale remaining, most having been acquired by overseas buyers. Blades, turbines and transmission systems are almost entirely supplied by European manufacturers. We are however beginning to see the emergence of British wind service companies.

M&A activity



Source: Corpfin

Waste industry slowly reconfiguring

As economic activity has strengthened, many waste businesses have seen their volumes and resulting trading figures improve, helped by increasing global recyclate prices (especially paper and plastics). Investment in recycling and treatment operations continues to stimulate M&A activity. Last July, Biffa acquired the recycling-led

Greenstar UK for US$218m to grow its recycling footprint. Also, Viridor acquired private equity backed Reconomy Recycling Solutions (RSS) for US$39m, a business which processes 250,000 tonnes of material a year through three materials recycling facilities (MRFs).

The industry is also experiencing increased vertical integration as manufacturers secure recycled 'raw materials' at source. Spanish paper manufacturer SAICA, who are building a US$480m paper mill in Manchester, secured over 450,000 tonnes of paper annually for the mill through the acquisitions of Futur Recycling, Cutts Recycling and Stirling Fibre

Funders selective about clean technology investments

There is no shortage of clever ideas in the UK for cutting carbon emissions, saving energy and commercialising low carbon technologies. There is however limited capital to fund these (often pre-revenue) businesses or renewables projects and attracting either equity investment or debt financing remains difficult. Uncertainty around long term fiscal incentives have also complicated investment decisions, as evident this March when the Government scaled back some of the FIT subsidies to avoid 'solar farms' emerging.

A number of venture and cleantech funds as well as corporate venturers have however been supportive of the industry. In June, the Carbon Trust, a Government backed fund, invested in ACAL Energy, a developer of unique fuel cell technology along with Sumitomo Corporation and Solvay. This round is expected to allow the business to demonstrate the technology at a prototype level and precedes full scale commercialisation.

Factors stimulating future cleantech M&A

As landfill taxes further escalate the UK waste industry will continue to invest in recycling and treatment operations, often through M&A.

A strengthening banking system will mean that funding for cleantech businesses will become easier, especially once the FIT and various other state programmes become more established and the industry matures. Moreover, a combination of better underlying trading and more sustainable profit forecasts and RHI buys having more free cash and banking headroom is likely to further stimulate M&A in 2012.

Recent transactions

Date	Target	Description	Acquirer	Deal Value (US$m)
Jun 11	ACAL Energy	Fuel Cell systems	Carbon Trust, Solvay, Sumitomo	6
May 11	Enecsys	Invertors for solar	Climate Change Capital	26
Apr 11	3 wind farms Scottish & Southern	Wind farms (96MW)	Infinis Plc	173
Feb 11	Eaga plc	Renewable and energy efficiency	Carillion Plc	306
Dec 10	Clipper Windpower plc	Manufacturer of wind turbines	United Technologies Corp (USA)	69.9
Nov 10	Aquamarine Power	Provider of wave and tidal energy	ABB (Switzerland), Scottish & Southern	11
Nov 10	Beco	Installation photovoltaic (PV)	Kier Group Plc	3
Oct 10	Futur Recycling	Recycling of waste paper	SAICA (Spain)	n/d
Sep 10	SgurrEnergy	Renewable energy services	John Wood Group Plc	n/d
Jul 10	TEG Perth	Anaerobic digestion (AD) plant	Albion Ventures LLP	3

Government support

Renewable Obligation Certificates (ROC)

- The certificate scheme was enacted to dramatically incentivise renewable generation.
- An energy supplier receives one ROC for every 1 Mwh generated from a renewable source. If it generates more than it is obliged to, the supplier is able to sell its excess ROCs to energy companies who have failed to meet their renewable obligation. The current pricing system is 1 Mwh = US$59.
- Has arguably been the principle mechanism for stimulating UK renewable energy investments. ROC will run until 2037.

FIT (Feed-in-tariffs)

- Mandated under the powers of the Energy Act 2008, the feed-in-tariffs scheme was launched in 2010.
- It requires the UK's largest energy suppliers to make regular payments to communities, businesses and households who generate their own electricity from renewable or low carbon sources such as solar electricity panels or wind turbines.
- The premium, which is for power generators of up to <5 MW, will run until 2023. The initiative has so far had a discernable impact on cleantech M&A.

Contacts

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Czech Republic	Netherlands	UK
Denmark	Norway	USA

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Transactions

Mergers Alliance cleantech transactions

Advisor on Development Capital of **Atlantic Energias Renováveis S.A** **Brazil**	Advisor on Development Capital of **Bowersock Mills & Power Company, LLC** to **CIMC** **USA**	Sale of **CEPAration** to **Hyflux** **Netherlands / Singapore**
Sale of **Marubeni Sustainable Energy** to **Korea East-West Power Company** **USA / South Korea**	Acquisition by **SAICA** of **Futur Recycling** **Spain / UK**	Sale of **Gaia Gestao Ambiental** to **Haztec Tecnologia e Planejamento Ambiental S.A** **Brazil**
Acquisition by **Areva** of **PN Rotor GmbH** **France / Germany**	Sale of **Tritronics Private Limited** to **Luminous Power Technologies** **India**	Advisor on Project Finance of **Nisan Enerji** **Turkey**
Sale of **White Rose Environmental** to **Stericycle Inc** **UK / USA**	Acquisition by **SAICA** of **Cutts Recycling** **Spain / UK**	Advisor on Development Capital of **Inovasol** **France**

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Colombia	Mexico	Turkey
Czech Republic	Netherlands	UK
Denmark	Norway	USA