



new energy
finance

**CLEAN ENERGY
LEAGUE TABLES 2006**

**New Energy Finance Limited
71 Gloucester Place
London W1U 8JW
+44 20 7467 3290
info@newenergyfinance.com
www.newenergyfinance.com
www.newcarbonfinance.com**

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1. INTRODUCTION

Investment in clean energy goes mainstream

CLEAN energy transactions reached a record of more than \$100bn in 2006. Of this, \$70.9bn was new investment, while \$29.5bn consisted of M&A activity, leveraged buyouts and the refinancing of assets. Investment has more than doubled in the last two years, from \$27.5bn in 2004 to \$49.6bn in 2005 and \$70.9bn in 2006.

This 43% increase was driven by heightened fears about climate change, fossil fuel depletion and energy security. In addition, there have been a number of significant accelerating factors – the most important of which was the increase in energy prices since 2004. Others include an aging energy infrastructure in the developed world (leading to periodic blackouts), the risk posed by energy supply bottlenecks to fast-growing developing world economies, the advent of a number of new materials and information technologies, and an overall trend toward deregulation of the energy industry worldwide.

Investment in clean energy has taken off in most regions of the world in the last year. The heaviest flows were in the US, Europe and large emerging economies such as China and India. US dominance in terms of money invested in certain asset classes – it is the largest single location for venture capital (VC) and private equity (PE) investment, and for asset financings – will surprise some who have criticised the attitude of US federal government to climate change.

The biggest growth in 2006 was in public market and VC/PE

inflows, which reached \$10.3bn and \$8.6bn respectively, an increase of 141% and 74% compared to 2005. Asset financings grew at a more sedate 22.9%. However, at \$32.2bn, this remains the largest single source of new investment in clean energy, accounting for nearly 40% of the 2006 total of \$70.9bn.

Who is pulling all these transactions together? Which are the most active investors, banks and lawyers in the clean energy sector? In order to shed some light on these questions, New Energy Finance has compiled the definitive 2006 Clean Energy League Tables.

Please note that many transactions within the clean energy sector are small, and may not feature 3rd party advisors. Some of the larger and more established entities will also refrain from using advisors as they feel their knowledge of the market is as good as anyone's and may have in-house advisory teams. Finally, since many clean energy companies are private, some transactions remain highly confidential and are not disclosed.

New Energy Finance prides itself on the fact that no more complete data is available anywhere in the market, and we feel that these tables create invaluable insight for followers of clean energy financial transactions. That is why we have also made interactive and customisable league tables available on our award-winning Desktop Service, which are updated daily – so please make sure you send us the details of all your future deals in order to be represented correctly.

2. PROJECT FINANCE

Introduction & Methodology

INVESTMENT in renewable energy generating assets grew steadily in 2006 to an estimated \$32.2bn from \$28.9bn in 2005, and remains the largest single source of new investment in clean energy.

Scratch beneath the surface however, and a more interesting picture emerges in both 2006 and the final quarter of the year. Analysis of asset financings by type of security reveals a sharp drop in Q4 2006 in the volume of on-balance-sheet financings and growth in project finance. This shift is a consequence of low interest rates in Europe and the availability of cheap finance and increasing competition between banks.

Innovation has also played its part in keeping the project finance market in good health. For example, Econcern, Energy Investment Holdings and Dutch energy supply company ENECO secured EUR 383m (\$484m) financing through MLAs Dexia, Rabobank and BNP Paribas for the 120MW Q7-WP offshore wind farm in what is believed to be the first non-recourse financing for an off-shore wind farm.

Further analysis reveals that wind project refinancing, in particular, is on the increase. In mid-September 2006, Irish asset manager Trinergy mandated RBOS to lead a \$1.4bn syndication to refinance its 648MW wind portfolio and fund further capacity. Across the Atlantic, FPL Energy, the largest wind project operator in the US, mandated BayernLB, Fortis Bank and Mizuho to close a \$830m credit facility in December to refinance three wind projects in Texas.

Solar financings increased in the latter half of 2006. Generous German solar subsidies continued to support new projects, however, Spain produced two very large deals: the \$293m financing of the 20MW Hoya de los Vicentes PV farm by Dexia

Sabadell and WestLB, and the \$233m financing of the 20MW La Magascona solar farm, Trujillo, Spain, by Dexia Sabadell, Banco Santander, Qualitas Equity Partners and individual sponsors.

In its Project Finance League Tables, New Energy Finance tries to capture the long term clean energy exposure of the involved arrangers, hence excludes short term financings such as bridge/construction loans (see Methodology).

Amazingly enough, all of the top 13 MLAs (Table 1) for project finance were European. The Royal Bank of Scotland's involvement in Italian wind farm financings, in particular Trinergy's Project S, established its leading position. Dexia, despite arranging more deals (9), finished second, focusing on Spanish solar projects. HSH Nordbank's involvement in German wind projects earned it third place, even though it arranged most deals during 2006 (12).

Among the syndicated lenders (Table 2), Fortis Bank was the clear leader in the space, with 11 deals breaking \$1.4bn.

Many of the law firms advising these mostly European arrangers were drawn from the leading 'magic circle' London law firms. Linklaters for example advised RBOS on Trinergy's Project S, while Allen & Overy advised Bank of Ireland on the GBP 178m Lakeside Energy Waste-to-Energy Plant financing. However, as many of the clean energy companies, and therefore financings, are smaller by nature, a number of law firms "outside" the magic circle, such as Norton Rose, Milbank Tweed and Jones Day established themselves as serious players within the sector. Hence, we have decided to create two legal advisor tables - one ranking law firms by total volume (Table 3), and the other by number of transactions (Table 4).

PROJECT FINANCE METHODOLOGY

The Project Finance League Tables rank advisors participating in at least one project finance transaction, where a financial institution was involved in raising capital for the project. Bridge/construction loans, turbine supply loans and full recourse corporate loans are not included.

Scores are attributed on a pro-rata basis. For example, if there were two MLAs on a \$400m deal, each will be allocated \$200m.

The tables rank according to total disclosed transaction values for deals syndicated during 2006. For deals where no value has been disclosed, but the capacity (MW) is known, an estimated value has been used based on the average \$development cost per MW or litre for each sector or sub-sector.

Only projects where more than 50% of revenue is deemed to derive from clean energy-related activities are included.

TABLE 1: PROJECT FINANCE - MANDATED LEAD ARRANGERS (BY TOTAL \$m AMOUNT)

RANK	COMPANY NAME	TOTAL VALUE (\$m) *	NO. OF DEALS	DEAL DESCRIPTION: PROJECT NAME (COUNTRY, TOTAL \$m DEAL VALUE)
1	Royal Bank of Scotland	2,052.3	7	Cornwall Waste to Energy Plant (UK, 191m), Trinergy/Project S (Italy, 1491m), Renomar wind portfolio (Spain, 1100m), Ricigliano-Grottole wind farms (Italy, 203m), IVPC 2000 Wind Farm Refinancing (Italy, 418m), IVPC 6 Wind Farms (Italy, 122m), Derrybrien Financing (Ireland, 83.5m).
2	Dexia SA	1,779.8	9	Granada Andasol Phase II Solar Thermal Financing (Spain, 386m), Buffalo Gap Wind Farm 2 (US, 348m), Camp Springs Wind Energy (US, 228m), Hoya de los Vicentes PV farm (Spain, 293m), La Magascona Solar farm (Spain, 233m), Q7-WP Offshore Wind Farm (Netherlands, 508m), Noble New York State Portfolio (US, 735m), Lake Bonney Stage 2 Wind Farm (Australia, 319m), Granada Andasol Phase 1 Solar Thermal Financing (Spain, 394m).
3	HSH Nordbank	1,260.1	12	Foristar Landfill Gas Portfolio (US, 97.5m), Mars Hill Wind Farm (US, 70m), Hoechst Waste to Energy plant (Germany, 427.5m), Jaenickerdorfer Heide Wind Farm (Germany, 86.8m), Andalusien Sloar Plant Portfolio (Spain, 77.6m), Ridgeside Hollywell windfarm (France, 70.5m), Witzenhausen Waste to Energy Plant (Germany, 173m), Col de la Fageole Wind Farm (France, 21m), Oldenrode Wind Farm (Germany, 91m), Muncheberg Wind Farm (Germany, 11.2m), Grosse Welle, Proetzel and Hiddestorf (Germany, 84.5m), Luebesse-Suelle-Uelitz Wind Farm Aquisition (Germany, 51.8).
4	BNP Paribas	1,054.2	8	Granada Andasol Phase II Solar Thermal Financing (Spain, 386m), Q7-WP Offshore Wind Farm (Netherlands, 508m), Wood River Ethanol Plant (US, 368m), Granada Andasol Phase I Solar Thermal Financing (Spain, 394m), IVPC 2000 Wind Farm Refinancing (Italy, 418m), Ricigliano-Grottole Wind Farm (Italy, 203m), IVPC 6 Wind Farms (Italy 122m). La Citadelle (France, 20m).
5	WestLB	1,024.0	7	Granada Andasol Phase 2 Solar Thermal Financing (Spain, 386m), Buffalo Gap Wind 2 (US, 116m), Plainview Texas Ethanol Plant (US, 330m), Hoya de los Vicentes PV farm (Spain, 293m), White Energy Hereford and Russel Bioethanol plants (US, 273m), Cascade Grain Products (US, 100m), Granada Andasol Phase 1 Solar Thermal Financing (Spain, 394m).
6	Grupo Santander	1,007.4	9	2006 Union Fenosa Project Financing - Acuerdo Marco II (Spain, 375.5m), La Magascona solar farm (Spain, 233m), Castilla la Mancha (Spain, 355m), Robres Wind Farm (Spain, 34m), White Enery Hereford and Russell Bioethanol Plants (US, 273m), Voie Sacree wind farm (France, 108.3m), Renomar wind portfolio (Spain, 1100m), Brandenburg (EHN Rosenthal) Portfolio (Germany, 253m), Forest Creek Wind Project (US, 199.5m).
7	Bayern LB	906.9	5	FPL West Texas Wind Farms Refinancing (US, 830m), Forest Creek Wind Project (US, 199.5m), Maple Ridge Wind Farm Phase 1 (US, 263m), Maple Ridge Wind Farm Phase 2 (US, 274.7m), Horizon Wind Project Financing (US, 386.2m).
8	Societe Generale	869.7	6	Cambridge NE Ethanol Plant (US, 68m), Pinal Ethanol Plant (US, 97.5m), Hereford Bioethanol Plant (US, 269m), Renomar wind portfolio (Spain, 1100m), Madrid NE Ethanol Plant (US, 50m), Panda Sherman Ethanol Plant (US, 263m).
9	HypoVereinsbank (HVB)	728.1	9	Aioliki Ellas Wind Farm (Greece, 62.6m), Buffalo Gap Wind Farm 2 (US, 348m), Fakidis Wind Farm Portfolio (Greece, 52.8m), Panachaiko wind farm (Greece, 51.9m), La Muela Windpark (Spain, 99m), Forest Creek Wind Project (US, 199.5m), Envitec Eolica Parka Miron (Greece, 31.4m), Landfill Portfolio by Viridis (US, 183m), Ktisor Wind Portfolio (Greece, 183m).
10	Sabadell Bank Group	701.4	11	Granada Andasol Phase II Solar Thermal Financing (Spain, 386m), Guijo I and II (Spain, 110.9m), Alcarama I and II (Spain, 71.9m), Hoya de los Vicentes PV farm (Spain, 293m), La Magascona solar farm (Spain, 233m), Gestora Fotovoltaica de Castellon (Spain, 6.9m), Voie Sacree Wind Farm (France, 108.3m), Renomar wind portfolio (Spain, 1100m), Granada Andasol Phase 1 Solar Thermal Financing (Spain, 394m), Parque Eolico Cerro Oliva (Spain, 16.7m), Iber Rioja (Spain, 18.5m).
11	Millennium BCP	550.2	2	Martell - Enersis II Wind (Portugal, 1000m), Spring - Enersis II Hydro (Portugal, 150.5m).
11	Banco Espirito Santo	550.2	2	Martell - Enersis II Wind (Portugal, 1000m), Spring - Enersis II Hydro (Portugal, 150.5m).
13	Fortis Bank	409.2	3	FPL West Texas Wind Farms (US, 830m), Camp Springs Wind Energy Center (US, 226m), Iber Rioja (Spain, 18.5m).
14	Goldman Sachs	384.6	3	Northeast Biofuels (US, 276m), Maple Ridge Wind Farm Phase 2 (US, 263m), Horizon Wind Project Financing (US, 368.2m).
15	Calyon Credit Agricole CIB	380.0	5	Castilla la Mancha (Spain, 335m), Renomar wind portfolio (Spain, 1100m), Brandenburg (EHN Rosenthal) Portfolio (Germany, 253m), Northeast Biofuels (US, 276m), Derrybrien Financing (Ireland, 83.5m).
16	Grupo BBVA	370.9	4	Castilla la Mancha (Spain, 335m), Renomar wind portfolio (Spain, 1100m), Brandenburg (EHN Rosenthal) Portfolio (Germany, 253m), Parco Eolico Ennesse (Italy, 101.7m).
17	Union Bank of California	361.6	1	Fenton Wind Energy Project (US, 361.6m).
18	Barclays Bank	343.6	5	Scout Moor Wind Farm (UK, 130.1m), Midas Wind Farm (Ireland, 62.1m), Sierra de Selva (Spain, 95.4m), El Hinojal wind portfolio (Spain, 67.8m), Richfield Wind Farm Financing (Ireland, 44.3m).
19	Nord LB	319.3	9	Bin Mountain Windfarm (Ireland, 17.5m), North Pickenham Windfarm (UK, 27.7m), Tournafulla Wind Farm Phase 1 (Ireland, 16m), Bindoo Wind Farm (Ireland, 89.3m), Forest Creek Wind Project (US, 199.5m), Merinda Wind (Germany, 52m), Wilsickow II Windfarm (Germany, 18.3m), Hakenstedt II Windfarm (Germany, 30.4m), Unseburg Windfarm (Germany, 28.2m).
20	Bank of Ireland	317.7	1	Lakeside Energy Wastt-to-Energy Plant (UK, 317.m).

* For deals where no value has been disclosed, but the capacity (MW or mLpa) is known, an estimated value has been used based on the average \$ development cost per MW or litre for each sector or sub-sector.

TABLE 2: PROJECT FINANCE - SYNDICATED LENDERS (BY NO. OF PROJECTS)

RANK	COMPANY NAME	NO. OF DEALS	TOTAL VALUE (\$m) *	DEAL DESCRIPTION: PROJECT NAME (COUNTRY, TOTAL \$m DEAL VALUE)
1	Fortis Bank	12	1491.9	Buffalo Group Wind Farm 2 (US, 348m), Fenton Wind Energy Project (US, 361.6m), Trinergy/Project S (Italy, 1491m), Renomar wind portfolio (Spain, 1100m), Sierra de Selva (Spain, 95.4m), Horizon Wind Project (US, 368.2m), Landfill portfolio by Viridis (UK, 183m), Eco2 Portfolio Financing (UK, 174.7m), Lakeside Energy Waste-to-Energy Plant (UK, 317.7m), Prince Township Wind Financing (Canada, 320m), Paul Hills & Rothes (UK, 99.1m), Iber Rioja (Spain, 18.5m).
2	NordLB	9	366.1	Bin Mountain Windfarm (Ireland, 17.5m), North Pickenham Windfarm (UK, 27.7m), Camp Springs Wind Energy Center (US, 226m), Fenton Wind Energy Project (US, 361.6m), Tournafulla Wind Farm Phase 1 (Ireland, 16m), Wilsickow II Windfarm (Germany, 18.3m), Horizon Wind Project (US, 368.2m), Hakenstedt II Windfarm (Germany, 30.4m), Unseburg Windfarm (Germany, 28.2m).
3	Helaba	6	957.2	Fenton Wind (US, 361.6m), Cornwall Waste to Energy plant (UK, 191m), Brandenburg (EHN Rosenthal) Portfolio (Germany, 253m), Bindoo/Ratrussan Wind Farm Phase 2 (Ireland, 89.3m), Maple Ridge Wind Farm Phase 2 (US, 263m), Granada Andasol Phase 1 Solar Thermal Financing (Spain, 394m).
4	Dexia	5	281.9	Camp Springs Wind Energy Center (US, 228m), Fenton Wind Energy Project (US, 361.6m), Project S (Italy, 1491m), Ricigliano-Grottole Wind Farm (Italy 203m), IVPC 6 Wind Farm (Italy, 122m).
5	Natixis	5	112.7	Camp Springs Wind Energy Center (US, 228m), Project S (Italy, 1491m), Ricigliano-Grottole Wind Farm (Italy 203m), El Hinojal Wind Portfolio (Spain, 67.8m), Lakeside Waste to Energy Plant (UK, 317.7m).
5	Banque Federale des Banques Populaires	5	112.7	Camp Springs Wind Energy Center (US, 228m), Project S (Italy, 1491m), Ricigliano-Grottole Wind Farm (Italy 203m), El Hinojal Wind Portfolio (Spain, 67.8m), Lakeside Waste to Energy Plant (UK, 317.7m).
7	Mizuho	4	288.9	Camp Springs Wind Energy Center (US, 228m), Project S (Italy, 1491m), Horizon Wind Project Financing (US, 368.2m), Lakeside Waste to Energy Plant (UK, 317.7m).
8	Sumitomo Mitsui Banking Corporation	3	268.0	Project S (Italy, 1491m), Prince Township Wind Financing (Canada, 320m), Hachiryu Wind Power Project (Japan, 40.6m).
9	Royal Bank of Scotland	3	175.7	Project S (Italy, 1491m), IVPC 6 Wind Farm (Italy, 122m)m, Lakeside Waste to Energy Plant (UK, 317.7m).
10	Bank of Scotland (HBOS)	3	161.6	Project S (Italy, 1491m), IVPC 6 Wind Farm (Italy, 122m)m, Paul Hills & Rothes (UK, 99.1m).

* For deals where no value has been disclosed, but the capacity (MW or mLpa) is known, an estimated value has been used based on the average \$ development cost per MW or litre for each sector or sub-sector.

TABLE 3: PROJECT FINANCE - LEGAL ADVISORS TO ARRANGERS (BY TOTAL \$m AMOUNT)

RANK	COMPANY NAME	TOTAL VALUE (\$m) *	NO. OF DEALS	DEAL DESCRIPTION: PROJECT NAME (COUNTRY, TOTAL \$m DEAL VALUE)
1	Linklaters	1,918.5	2	Hoechst Waste-to-Energy plant (Germany, 427.5m), Project S (Italy, 1491m).
2	Milbank Tweed Hadley & McCloy	1,827.1	8	Mars Hill wind farm (US, 70m), Buffalo Gap Wind Farm (US, 348m), Plainview Texas Ethanol Plant (US, 330m), Camp Springs Wind Center (US, 228m), Fenton wind energy project (US, 361.6m), Boralex Biomass Portfolio (Canada, 27m), Forest Creek Wind Project (US, 199.5m), Maple Ridge Wind Farm Phase 2 (US, 263m).
3	Allen & Overy	851.7	4	IVPC 2000 Wind Farm Refinancing (Italy, 418m), Ricigliano-Grottole Wind Farm (Italy, 203m), IVPC 6 Wind Farm (Italy, 122m), Lakeside Energy Waste-to-Energy plant (UK, 317.7m).
4	Garrigues	780.0	2	Granada Andasol Phase 1 Solar Thermal Financing (Spain, 386m), Granada Andasol Phase 2 Solar Thermal Financing (Spain, 394m).
5	Baker & McKenzie	599.0	3	Northeast Biofuels (US, 273m), Panda Sherman Ethanol plant (US, 263m), Madera County Bioethanol plant (US, 60m).

* For deals where no value has been disclosed, but the capacity (MW or mLpa) is known, an estimated value has been used based on the average \$ development cost per MW or litre for each sector or sub-sector.

TABLE 4: PROJECT FINANCE - LEGAL ADVISORS TO ARRANGERS (BY NO. OF PROJECTS)

RANK	COMPANY NAME	NO. OF PROJECTS	TOTAL VALUE (\$m) *	DEAL DESCRIPTION: PROJECT NAME (COUNTRY, TOTAL \$m DEAL VALUE)
1	Milbank Tweed Hadley & McCloy	8	1,827.10	Mars Hill wind farm (US, 70m), Buffalo Gap Wind Farm (US, 348m), Plainview Texas Ethanol Plant (US, 330m), Camp Springs Wind Center (US, 228m), Fenton wind energy project (US, 361.6m), Boralex Biomass Portfolio (Canada, 27m), Forest Creek Wind Project (US, 199.5m), Maple Ridge Wind Farm Phase 2 (US, 263m).
2	Norton Rose	6	427.1	Ridgeside Hollywell Windfarm (France, 70.5m), EDL UK (UK, 75.3m), Col de la Fageole windfarm (France, 21m), IVPC 2000 Wind Farm Refinancing (Italy, 418m), Fenland windfarm phase II (UK, 31.5m), La Citadelle Wind (France, 20m).
3	Allen & Overy	4	851.7	IVPC 2000 Wind Farm Refinancing (Italy, 418m), Ricigliano-Grottole Wind Farm (Italy, 203m), IVPC 6 Wind Farm (Italy, 122m), Lakeside Energy Waste-to-Energy plant (UK, 317.7m).
4	Baker & McKenzie	3	599.0	Northeast Biofuels (US, 273m), Panda Sherman Ethanol plant (US, 263m), Madera County Bioethanol plant (US, 60m).
5	Jones Day	3	551.6	Guijo I and II Wind (Spain, 111m), Alcarama I and II Wind (Spain, 71.9m), Castilla la Mancha Wind Portfolio (Spain, 335m), Robres Wind Farm (Spain, 33.7m).

* For deals where no value has been disclosed, but the capacity (MW or mLpa) is known, an estimated value has been used based on the average \$ development cost per MW or litre for each sector or sub-sector.

3. PUBLIC MARKETS

Introduction & Methodology

IN 2006, new equity raised by clean energy companies via the public markets rose 140% to \$10.3bn, up from \$4.3bn in 2005 and just \$0.7bn in 2004. Including investor exits, the volume was \$12.3bn. Of this, \$8.0bn was raised on the European markets. Despite high-profile IPOs from US ethanol producers VeraSun, Aventine and others, the US trailed substantially, with just \$2.9bn raised in 2006.

London's Alternative Investment Market (AIM) last year hosted 19 IPOs and 17 secondary offerings of clean energy and carbon-related companies, raising more than \$1.4bn in new funds. There are now approximately 50 clean energy companies trading on AIM. Most are relatively small, but combined they had a market capitalization of \$7.8bn as of January 2007. Twelve of the 50

companies are based in the US. California-based turbine maker Clipper Windpower, for example, chose to list on AIM rather than on any of the US exchanges. Reasons regularly cited by US CEOs for listing overseas include: high costs of listing domestically, particularly in the light of Sarbanes-Oxley, a perceived higher level of sophistication about clean energy on the part of European investors, and a more stable regulatory environment in Europe as evidenced by the fact that the EU is a signatory to the Kyoto Protocol.

The hottest market of the year was Frankfurt, where a total of 15 clean energy deals raised \$2.6bn, including the \$1.5bn IPO of Wacker, one of the global leaders in the production of solar silicon. The deal was placed by UBS and Morgan Stanley.

Three banks, UBS, Credit Suisse and Morgan Stanley have established a clear lead (Table 5), even placing some deals together. UBS, however, is the truly global winner, placing nine deals on five different stock markets, in four different sectors, and raising more than \$2.2bn in the process. Credit Suisse, in second place, managed six placements, four of which were in the US, and three in the solar sector. Close behind in third place was Morgan Stanley, which placed two out of its three deals in the US stock markets, although its largest deal (Wacker) was in Frankfurt.

When it comes to AIM listings (Table 6), the top three banks were (as expected) UK-based. The top N O M A D (n o m i n a t e d advisor) was once again Numis Securities, listing one IPO, three secondary offerings and one Fund. In second, Collins Stewart advised two IPOs and two secondary offerings, while Sunrise Securities' Infinity Bio-Energy IPO secured it third place.

On the legal side, "magic circle" firms again soaked up the larger deals, with Linklaters advising EDP Energies Nouvelles on their EUR 474m IPO, as well as Freshfields advising Wacker. But as with project finance, law firms such as Norton Rose, McGuire Woods and Pinsent Masons are establishing themselves as serious players, in terms of the number of deals advised. Therefore we have also decided to create two different tables - one by total volume, and one by number of deals for each side of the public market transaction, both the issuer and the underwriter (Tables 7, 8, 9 and 10).

Three banks namely UBS, Credit Suisse and Morgan Stanley have established a clear lead

PUBLIC MARKET METHODOLOGY

The Public Markets League Tables rank the organisations that advised an issuing company on at least one equity listing on a public stock exchange during 2006.

The tables rank according to total transaction values.

Values are attributed on a pro rata basis. For example, if there are two Lead Managers on a \$200m deal, each would be allocated \$100m. The calculation is performed taking into account only deals where the involved parties have been confirmed.

Only companies where more than 50% of revenue is deemed to derive from clean energy-related activities are included.

TABLE 5: PUBLIC MARKETS - GLOBAL COORDINATOR/LEAD MANAGER/ BOOKRUNNER (BY TOTAL \$m AMOUNT)

RANK	COMPANY NAME	TOTAL VALUE (\$m)	NO. OF LISTINGS	DEAL DESCRIPTION: COMPANY (COUNTRY OF DOMICILE, EXCHANGE, TOTAL \$m DEAL VALUE)
1	UBS	2,296.6	9	US BioEnergy Corp (US, NASDAQ Global Market, 161m), Petrotec (Germany, Frankfurt SE, 137m), Itron (US, NASDAQ Global Market, 345m), Babcock & Brown Wind Partners Group (Australia, Australian SE, (Quoted Fund) (91.7m), Distributed Energy Systems (US, NASDAQ Global Market, 7.5m), REC Group (Norway, Oslo SE, 1159.6m), O2Diesel Corp (US, AMEX, 6.5m), Wacker (Germany, Frankfurt SE, 1451.8m), Energy Conversion Devices (NASDAQ Global Market, 394.5m)
2	Credit Suisse	1,648.8	6	First Solar (NASDAQ Global Market, 495m), Verbio (Germany, Frankfurt SE, 351m), SunPower Corp (US, NASDAQ Global Market, 237.5m), Q-Cells (Germany, Frankfurt SE, 791m), Rentech (US, AMEX, 120m), Hexcel Corp (US, NYSE, 428m)
3	Morgan Stanley	1,196.9	3	First Solar (US, NASDAQ Global Market, 459m), VeraSun Energy (US, NYSE, 483m), Wacker (Germany, Frankfurt SE, 1451.8m)
4	Goldman Sachs	773.9	5	Jiangsu Linyang Solarfun (China, NASDAQ Global Market, 150m), Aventine (US, NYSE, 389.5m), Nordex (Germany, Frankfurt SE, 212.6m), Ormat Technologies (US, NYSE, 135m), Hexcel Corp (US, NYSE, 428m)
5	Lehman Brothers	582.2	5	Canadian Solar (China, NASDAQ Global Market, 115.5m), Clipper (US, AIM, 96.7m), VeraSun Energy (US, NYSE, 483m), SunPower (US, NASDAQ Global Market, 237.5m), Ormat Technologies (US, NYSE, 135m)
6	ABG Sundal Collier	579.8	1	REC Group (Norway, Oslo SE, 1159.6m)
7	Numis Securities	502.2	5	Temple Capital Partners (UK, AIM (Quoted Fund), 195.3m), Renewable Energy Generation (UK, 84.6m), Azure Dynamics (Canada, 3.26m), Trading Emissions, Ecoenergy International (US, 105m)
8	Allianz	382.5	3	D1 Oils (UK, AIM, 95m), Verbio (Germany, Frankfurt SE, 351m), Vestas (Denmark, Copenhagen SE, 224m)
9	Deutsche Bank	368.6	3	Canadian Solar (China, NASDAQ Global Market, 115.5m), CropEnergies (Germany, Frankfurt SE, 284.7m), ErSol Solar Energy (Germany, Frankfurt SE, 26.2m)
10	CLSA Asia-Pacific Markets	332.8	1	PNOC-Energy Development Corp (Philippines, Philippine SE, 332.8m).

TABLE 6: PUBLIC MARKETS - AIM NOMINATED ADVISORS (BY TOTAL \$m AMOUNT)

RANK	COMPANY NAME	TOTAL VALUE (\$m)	NO. OF LISTINGS	DEAL DESCRIPTION: COMPANY (COUNTRY OF DOMICILE, EXCHANGE, TOTAL \$m DEAL VALUE)
1	Numis Securities	502.2	5	Temple Capital Partners (UK, AIM (Quoted Fund), 195.3m), Renewable Energy Generation (UK, 84.6m), Azure Dynamics (Canada, 3.26m), Trading Emissions (UK, 312.7m), Ecoenergy International (US, 105m).
2	Collins Stewart	319.1	4	Infinity Bio-Energy (Bermuda, 512m), Biofuels Corp (UK, 14.7m), CAP-XX (Australia, 30.5m), PolyFuel (US, 17.9m).
3	Sunrise Securities	256.0	1	Infinity Bio-Energy (Bermuda, 512m).
4	Cenkos Securities	179.3	2	Climate Exchange (UK, 22.9m), Trading Emissions (UK, 312.7m).
5	KBC Peel Hunt	103.2	4	Turbo Power Systems (UK, 11.7m), Solar Integrated Tech (US, 20.3m), Oxford Catalysts (UK, 26.8m), Camco International (UK, 44.4m).
6	Lehman Brothers	96.7	1	Clipper (US, 96.7m).
7	Allianz	95.0	1	D1 Oils (UK, 95m).
8	ABN AMRO	83.1	1	Low Carbon Initiative (UK, 83.1m).
9	Grant Thornton International	78.8	1	Renewable Power and Light (UK, 78.8m).
10	Canaccord Capital Corp	72.7	4	Catalytic Solutions (US, 30.2m), Protonex Tech (US, 16.2m), QuestAir Technologies (Canada, 17.9m), Clean Air Power (US, 17.4m).

TABLE 7: PUBLIC MARKETS - LEGAL ADVISORS TO UNDERWRITER (BY TOTAL \$m AMOUNT)

RANK	COMPANY NAME	TOTAL VALUE (\$m)	NO. OF LISTINGS	DEAL DESCRIPTION: COMPANY (COUNTRY OF DOMICILE, EXCHANGE, TOTAL \$m DEAL VALUE)
1	Freshfields Bruckhaus Deringer	1685.5	3	Petrotec (Germany, Frankfurt SE, 137m), Clipper (US, AIM, 96.7m), Wacker (Germany, Frankfurt SE, 1451.8m)
2	Linklaters	691.0	1	EDF Energies Nouvelles (623.5m)
3	Holland & Knight	579.8	1	REC Group (Norway, Oslo SE, 1159.6m)
3	Schjodt	579.8	1	REC Group (Norway, Oslo SE, 1159.6m)
5	Fried Frank Harris Shriver and Jacobsen	512.0	1	Infinity Bio-Energy (Bermuda, AIM, 512m)

TABLE 8: PUBLIC MARKETS - LEGAL ADVISORS TO UNDERWRITER (BY NO. OF LISTINGS)

RANK	COMPANY NAME	NO. OF LISTINGS	TOTAL VALUE (\$m)	DEAL DESCRIPTION: COMPANY (COUNTRY OF DOMICILE, EXCHANGE, TOTAL \$m DEAL VALUE)
1	Freshfields Bruckhaus Deringer	3	1685.5	Petrotec (Germany, Frankfurt SE, 137m), Clipper (US, AIM, 96.7m), Wacker (Germany, Frankfurt SE, 1451.8m)
2	Pinsent Masons	3	85.7	Proton Power Systems (Germany, AIM, 8.8m), ReneSola (China, AIM, 50m), Oxford Catalysts (UK, AIM, 26.8m)
3	Skadden	2	425.5	US BioEnergy (US, NASDAQ Global Market, 161m), Itron (US, NASDAQ Global Market, 345m)
4	Shearman & Sterling	2	334.7	Jiangsu Linyang Solarfun (China, NASDAQ Global Market, 150m), CropEnergies (Germany, Frankfurt SE, 284.7m)
5	Sidley Austin	2	329.0	Brasil Ecodiesel (Brazil, Sao Paulo (BOVESPA), 175m), VeraSun Energy (US, NYSE, 483m).

TABLE 9: PUBLIC MARKETS - LEGAL ADVISORS TO ISSUER (BY TOTAL \$m AMOUNT)

RANK	COMPANY NAME	TOTAL VALUE (\$m)	NO. OF LISTINGS	DEAL DESCRIPTION: COMPANY (COUNTRY OF DOMICILE, EXCHANGE, TOTAL \$m DEAL VALUE)
1	Herbert Smith	413.0	1	China Agri-Industries Holdings (Hong Kong, HKEX, 413m).
2	Baker & McKenzie	411.9	2	Energy Conversion Devices (US, NASDAQ Global Market, 394.5m), Clea Air Power (US, AIM, 17.4m)
3	Norton Rose	146.8	4	Catalytic Solutions (US, AIM, 30.2m), Low Carbon Initiative (UK, AIM, 83.1m), Protonex Tech (US, AIM, 16.2m), Development Capital Management (UK, AIM, 17.3m)
4	Latham & Watkins	132.5	2	CEEG Nanjing PV-Tech (China, NASDAQ, 94m), Canadian Solar Inc (China, NASDAQ Global Market, 115.5m)
5	Mintz, Levin, Cohn, Ferris, Glovsky and Popeo	97.5	1	EnerNOC (US, NASDAQ, 97.5m).

TABLE 10: PUBLIC MARKETS - LEGAL ADVISORS TO ISSUER (BY NO. OF LISTINGS)

RANK	COMPANY NAME	NO. OF LISTINGS	TOTAL VALUE (\$m)	DEAL DESCRIPTION: COMPANY (COUNTRY OF DOMICILE, EXCHANGE, TOTAL \$m DEAL VALUE)
1	Norton Rose	4	146.8	Catalytic Solutions (US, AIM, 30.2m), Low Carbon Initiative (UK, AIM, 83.1m), Protonex Tech (UK, AIM, 16.2m), Development Capital Management (UK, AIM, 17.3m).
2	Baker & McKenzie	2	411.9	Energy Conversion Devices (US, NASDAQ Global Market, 394.5m), Clean Air Power (UK, AIM, 17.4m).
3	McGuire Woods	2	32.0	Ethanex Energy (US, OTC Bulletin Board, 20m), Alternative Energy Sources (US, OTC Bulletin Board, 12m).
4	Gleiss Lutz	1	91.5	Schmack Biogas (Germany, Frankfurt SE, 91.5m).
5	Latham & Watkins	1	38.5	Canadian Solar Inc (China, NASDAQ Global Market, 115.5m).

4. VENTURE CAPITAL

Introduction & Methodology

OF the total \$8.6bn VC/PE deal volume for 2006, new investment totalled an estimated \$7.1bn (excluding private equity buy-outs and investor exits on OTC markets) — a leap of 167% from \$2.7bn in 2005.

A number of events increased awareness of climate change and helped push clean energy up the political agenda. The US mid-term elections in November confirmed that the environment and clean energy is now firmly embedded as a mainstream issue, while Sir Nicholas Stern, the former chief economist of the World Bank, pulled the issue into sharp focus when he published a report putting a price on climate stabilisation. A number of high-profile clean energy investments from the likes of Richard Branson, Vinod Khosla and Bill Gates also helped draw attention to the sector.

The three largest sectors for venture capital and private equity finance in 2006 were biofuels, solar and wind, accounting for \$834m, \$878m and \$704m respectively.

The lion's share of this money, particularly in wind, was used to increase generating capacity. In solar, however, a significant minority of the cash – around 40% – went into developing new technologies, compared with around 20% in biofuels.

Venture capitalists and private equity investors were interested in the full range of generation and energy saving technologies. New Energy Finance estimates that investors put \$297m into demand-side efficiency ventures, \$168m into smart distribution, \$140m into power storage and \$116m into fuel cell companies.

Of 366 deals where both the investors and investees were confirmed, 236 investments were in US companies, 96 into EMEA companies and 34 into AsiaOceania-based companies.

In order to gain a better understanding of which types of VC/PE investors are most active in the clean energy sector, NEF has compiled two different sets of league tables - one according to amount invested, the other according to number of transactions. The reasons for this are that PE buyout companies tend to dominate the tables ranked by amount invested, while earlier stage investors dominate the tables ranked by number of deals.

The All Investors League Table (Table 11), adds up both lead and non-lead investors according to total disclosed amount invested. 3i Group finished first with five deals totaling \$263m, the most significant being its \$209m PE buyout of two service divisions from Gamesa. Irish infrastructure investor NTR finished second, investing \$178m in two deals, most notably its \$316m joint investment in Airtricity together with Ecofin, which finished third.

Looking at the league table according to the total number of investment rounds (Table 12), the top five VC/PEs were US-based. Draper

Fisher Jurvetson was most active, participating in 12 funding rounds in mainly early-stage, US-based companies. Khosla finished second - all but two of its ten investments were in US biofuels companies. Goldman Sachs finished an impressive third, even though half of its investments were late stage PE deals. EnerTech, Chrysalix and Emerald funded eight rounds each, but as EnerTech invested the largest (disclosed) amount, it finished fourth.

The legal houses advising the recipients of these investments (see Table 13) were dominated by US law firms. Orrick finished top with four investment rounds, closely followed by Wilson Sonsini Goodrich & Rosati.

Of 366 League Table deals where both the investors and investees were confirmed, 236 investments were in US companies, 96 into EMEA companies and 34 into AsiaOceania-based companies

VC/ PE METHODOLOGY

The Venture Capital & Private Equity Tables rank organisations that participated in, or advised on, at least one clean energy venture capital and/or private equity fund raising during 2006.

If the nominal amount of the fundraising is undisclosed, the deal is included in the tables ranked by total number of deals, but will not bear any value in the tables ranked by total amount.

When more than one investor or advisor is involved, amounts are allocated where disclosed. Otherwise, they are allocated on a pro rata basis. For example, if there are two investors on a \$4m deal, where one party placed 75% while the other placed 25%, they will get \$3m and \$1m credit each. If allocations are not disclosed, each party will receive \$2m. Both participants will be credited with one transaction. As many transactions only disclose total amount invested and participants, the tables ranked by amounts may over- or understate an individual investors' actual placement in a fundraising.

Only investments in companies that are deemed to derive more than 50% of revenue from clean energy-related activities have been included.

TABLE 11: VC/PE - ALL INVESTORS (BY TOTAL DISCLOSED \$m AMOUNT INVESTED)

RANK	COMPANY NAME	INDICATIVE* AMOUNT INVESTED (\$m)	NO. OF DEALS	DEAL DESCRIPTION: COMPANY (COUNTRY, TOTAL \$m DEAL VALUE)
1	3i Group	262.7	5	Electrawinds (Belgium, 39.8m), DeepStream Technologies (UK, 15.4m), Ocean Power Delivery (UK, 24.2m), Gamesa (Spain, 209m), Konarka Technologies (US, 20m).
2	NTR	178.0	2	Ethanol Grain Processors (US, 40m), Airtricity (Ireland, 316m).
3	Ecofin	158.0	1	Airtricity (Ireland, 316m).
4	Goldman Sachs	135.9	8	Intellon Corp (US, 18m), Accelergy Corp (US, 25m), Jiangsu Shunda Semiconductor Development (China, 100m), Gridpoint Intelligent Energy Management (US, 21m), SunEdison (US, 26.1m), Bedminster International (Ireland, 10m), Current Communications Group (US, 130m), Iogen Corp (Canada, 27m).
5	Khosla Ventures	107.9	9	Mascoma Corp (US, 30m), Amyris Technologies (US, 20m), Cilion (US, 160m), Range Fuels (US, 3.3m), Altra Inc (US, 120m), Altra Inc (63.5m), Stion Corp (US, 3.15m), Cilion (US, 40m), Mascoma (US, 4m).
6	Good Energies	80.4	4	Changzhou Trina Solar Energy Co (China, 40m), Jiangsu Linyang Solarfun Co (China, 53m), Ecostream (Netherlands, 49m), Concentrix Solar (Germany, undisc.), Konarka Technologies (US, 20m).
7	Birch Hill Equity Partners	62.4	1	Biox Corp (Canada, 62.4m).
8	Kleiner Perkins Caufield & Byers	60.4	6	Mascoma Corp (US, 30m), Miasole Inc (US, 35m), Amyris Technologies (US, 20m), Altra Inc (US, 120m), Altra Inc (US, 63.5m), GreatPoint Energy (US, 15m).
9	Virgin Fuels	60.0	2	Ethanol Grain Processors (US, 40m), Airtricity (Ireland, 316m).
9	Western Milling	60.0	2	Cilion (US, 160m), Cilion (US, 40m).

* See note on VC/PE methodology (page 10)

TABLE 12: VC/PE - ALL INVESTORS (BY NO. OF DISCLOSED DEALS)

RANK	COMPANY NAME	NO. OF DEALS	INDICATIVE* AMOUNT INVESTED (\$m)	DEAL DESCRIPTION: COMPANY (COUNTRY, TOTAL \$m DEAL VALUE)
1	Draper Fisher Jurvetson	12	28.7	Reva Electric Car (India, 20m), Intematic Corp (US, 16.5m), Fat Spaniel Technologies (US, 7m), Deeya Energy (US, 7.5m), Deeya Energy (US, 7.5m), CoalTek (US, 5m), CoalTek (US, 5m), Ember Corp (US, 12m), Tesla Motors (US, 40m), Miartech (Caymans, 6m), Miartech (Caymans, 6m), Konarka Technologies (US, 20m).
2	Khosla Ventures	10	107.9	Mascoma (US, 30m), Amyris Technologies (US, 20m), Cilion (US, 160m), Range Fuels Inc (US, 3.3m), Altra Inc (US, 120m), Altra Inc (US, 63.5m), Stion Corporation (US, 3.15), Cilion (US, 40m), Mascoma Corp (US, 4m), Transonic Combustion (US, undisc.).
3	Goldman Sachs	9	135.9	Green Earth Fuels (US, undisc.), Intellon Corp (US, 18m), Accelergy Corp (US, 25m), Jiangsu Shunda Semiconductor Development (China, 100m), Gridpoint Intelligent Energy Management (US, 21m), SunEdison (US, 26.1), Bedminster International (Ireland, 10m), Current Communications Group (US, 130m), Iogen Corp (Canada, 27m).
4	EnerTech Capital	8	19.4	Atraverda (UK, 4m), Intellon Corp (US, 18m), The NanoSteel Company (US, 3.1m), Current Communications Group (US, 130m), Atraverda (UK, 3m), WellDog (US, 6.5m), Comverge (US, 5.5m), Franklin Fuel Cells (US, 2.4m).
5	Chrysalix Energy	8	17.2	Fat Spaniel Technologies (US, 7m), EnerWorks (Canada, 3.65m), Cyrium Technologies (Canada, 1.5m), Angstrom Power (Canada, 18m), H2Gen Innovations (US, 10.6m), H2Scan LLC (US, 3.6m), ReliOn Inc (US, 20m), ExRo Technologies (Canada, 0.18m).
6	Emerald Technology Ventures	8	4.8	CTP Hydrogen (US, 0.15m), Cellex (Canada, 13.6m), PEMEAS Fuel Cell Technologies (Germany, 7.68m), Oceanlinx (Australia, 3.4m), Ocean Power Delivery (UK, 24.4m), Hyradix (US, 5.5m), Vaperma (Canada, 6.2m), STM Power (US, 8.7m).
7	Vantage Point Venture Partners	7	37.1	Mascoma (US, 30m), Bright Source Energy (US, 10m), The Beam (US, 5.1m), Miasole Inc (US, 35m), Angstrom Power (Canada, 18m), Tesla Motors (US, 40m), SolarCentury (UK, 10.2m).
8	Nth Power	7	14.7	Accelergy Corp (US, 25m), Soliant Energy (US, 8m), H2Gen Innovations (US, 10.6m), Lion Cells (US, 3.6m), Comverge (US, 5.5m), Seattle Biodiesel (US, 7.5m), Nanogram Corp (US, 18.7m).
9	Kleiner Perkins Caufield & Byers	6	60.4	Mascoma (US, 30m), Miasole (US, 35m), Amyris Technologies (US, 20m), Altra inc (US, 120m), Altra Inc (US, 63.5m), GreatPoint Energy (US, 15m).
10	3i Group	5	262.7	Electrawinds (Belgium, 39.8m), DeepStream Technologies (UK, 15.4m), Ocean Power Delivery (UK, 24.2m), Gamesa (Spain, 209m), Konarka Technologies (US, 20m).

* See note on VC/PE methodology (page 10)

TABLE 13: VC/PE - LEGAL ADVISOR TO TARGET (BY NO. OF DISCLOSED DEALS)

RANK	COMPANY NAME	NO. OF DEALS	INDICATIVE* AMOUNT INVESTED (\$m)	DEAL DESCRIPTION: COMPANY (COUNTRY, TOTAL \$m DEAL VALUE)
1	Orrick	4	109.5	Accelergy Corp (US, 25m), Soliant Energy (US, 8m), Nanosolar (US, 75m), Enviro-Control (UK, 1.4m).
2	Wilson Sonsini Goodrich & Rosati	3	54.5	SolFocus (US, 32m), Solaria (US, 22m), Solaria (US, .55m).
3	Araoz y Rueda	2	211.8	DC Wafers (Spain, undisc.), Gamesa Energia (Spain, 209m).
4	Allen & Overy	2	12.8	SolarCentury (UK, 10.2m), SolarCentury (UK, 2.6m).
5	Skadden	1	316.0	Airtricity (Ireland, 316m).

* See note on VC/PE methodology (page 10)

5. MERGERS & ACQUISITIONS

Introduction & Methodology

IN 2006, mergers and acquisitions (M&A) in clean energy reached an estimated \$29.5bn, down slightly from 2005's tally of \$30.0bn. Of this, \$16.9bn accounted for 'pure' M&A transactions, meaning actual change of company ownership, as opposed to project acquisitions.

This was in contrast to overall global M&A activity, where global announced M&A deals reached a record of \$3.8tn in 2006, surpassing the previous record set in 2000, according to Thomson Financial. A large part of this increase was driven by private equity buyouts, which accounted for almost 20% of global M&A volume in 2006. The energy sector overall, and the European power sector in particular, contributed to much of this activity.

The easing of clean energy M&A activity in 2006 may be due to a lack of acquisition opportunities.

There was a sharp fall across a number of deal types. Project acquisitions were off some 47% year-on-year, PE management buyouts were down 46%, and the level of corporate M&A technology deals was 77% lower.

The New Energy Finance League Tables exclude PE buyouts and project acquisitions (covered in Section 4), as well as many acquisitions of utilities, which tend not to be included as clean energy is not the main driver of such companies. However, a handful of large deals do dominate, and the tables confirm that the big banks are now deeply involved in the clean energy sector.

The large majority of acquisitions – 95% of the total value –

were expansion deals where one company buys up a similar or rival business to achieve scale and take advantage of synergies.

The two tables rank according to total amount, one lists financial advisors to the target and one advisors to the acquirer.

In the advisors to target table (see Table 14), Credit Suisse finished top with three transactions, most notably Acciona's EUR 1.4bn acquisition of Corporacion Eolica. UBS finished second advising Hansen Transmissions on its takeover by Suzlon's subsidiary, AE Rotor Holding, while Citi finished close behind having advised Applied Films Corp on its takeover by

Applied Materials for \$464m.

S o m e w h a t different banks advised acquirers (see Table 15). Indian YES Bank

The large majority of acquisitions – 95% of the total value – were capacity expansion deals where one company buys up a similar or rival business to take advantage of synergies.

took the lead by virtue of having advised Suzlon on its acquisition of Hansen Transmissions International. Morgan Stanley came second having advised Applied Material's takeover of Applied Films for \$464m, followed by ABN AMRO which advised EDP on its takeover of Agrupacion Eolica for \$458m.

Law firms advising acquirers were dominated by US firms (see Table 16), with Varnum Riddering & Howlett clinching top spot having advised Applied Materials. DLA Piper finished second owing to its involvement in EDP's acquisition of Agrupacion Eolica, while Kirkland & Ellis' advice to Bayard Group's purchase of Cellnet earned it third place.

M&A METHODOLOGY

The M&A League Tables rank organisations that advised the target or acquirer in at least one clean energy M&A transaction during 2006.

The tables rank according to total disclosed transaction values.

Values are attributed on a pro rata basis. For example, if there are two Advisors on a \$200m deal, each would be allocated 100m.

The calculation is performed taking into account only deals where the involved parties have been confirmed.

Private equity-sponsored buyouts and project acquisitions have not been included.

Only deals involving companies that are deemed to derive more than 50% of revenue from clean energy-related activities have been included.

TABLE 14: M&A - FINANCIAL ADVISOR TO TARGET (BY TOTAL \$m AMOUNT OF DEALS)

RANK	COMPANY NAME	AMOUNT INVESTED (\$m)	NO. OF DEALS	DEAL DESCRIPTION: COMPANY (COUNTRY, TOTAL \$m DEAL VALUE)
1	Credit Suisse	2,163.5	3	Alliant Energy New Zealand (NZ, 296m), EnerTad (Italy, 193,5m), Corporacion Eolica Cesa (Spain, 1822m).
2	UBS	565.0	1	Hansen Transmissions International (Belgium, 565m).
3	Citi	464.0	1	Applied Films Corp (US, 464m).
4	Banco Espirito Santo	458.8	1	Agrupacion Eolica (Spain, 458.8m).
5	Morgan Stanley	352.5	1	Cellnet (US, 705m).
5	Goldman Sachs	352.5	1	Cellnet (US, 705m).
7	Harris Williams & Co	196.0	1	Genscape (US, 196m).
8	Vitali Romagnoli Piccardi e Associati	192.0	1	TAD Energia Ambiente (Italy, 192m).
9	First NZ Capital	148.0	1	Alliant Energy New Zealand (NZ, 296m).
10	Mosaic Capital	120.0	1	Silicon Recycling Services (US, 120m).

TABLE 15: M&A - FINANCIAL ADVISOR TO ACQUIRER (BY TOTAL \$m AMOUNT OF DEALS)

RANK	COMPANY NAME	AMOUNT INVESTED (\$m)	NO. OF DEALS	DEAL DESCRIPTION: COMPANY (COUNTRY, TOTAL \$m DEAL VALUE)
1	YES Bank	565.0	1	Hansen Transmission International (Belgium, 565m).
2	Morgan Stanley	464.0	1	Applied Films Corp (US, 464m).
3	ABN AMRO	458.8	1	Agrupacion Eolica (Spain (458.8m).
4	Cherry Tree Securities	235.0	1	Cellnet (US, 705m).
4	Deloitte Touche Tohmatsu	235.0	1	Cellnet (US, 705m).
4	Macquarie Bank	235.0	1	Cellnet (US, 705m).
7	Winvest Financing Service	212.0	3	Cridasa (Brazil, 30m), Usina Alcana (Brazil, 72m), Coopernavi (Brazil, 110m).
8	Enterprise Ventures Srl	193.5	1	EnerTAD (Italy, 193.5m).
9	Lehman Brothers	98.0	1	Greenlight Energy (US, 98m).
10	Jefferies Group	70.0	1	Royster-Clark Nitrogen (US, 70m).

TABLE 16: M&A - LEGAL ADVISOR TO ACQUIRER (BY TOTAL \$m AMOUNT OF DEALS)

RANK	COMPANY NAME	TOTAL AMOUNT (\$m)	NO. OF DEALS	DEAL DESCRIPTION: COMPANY (COUNTRY, TOTAL \$m DEAL VALUE)
1	Varnum Riddering & Howlett	464.0	1	Applied Films Corp (US, 464m).
2	DLA Piper	458.8	1	Agrupacion Eolica (Spain, 458.8m).
3	Baker & McKenzie	352.5	1	Cellnet (US, 705m).
3	Kirkland & Ellis	352.5	1	Cellnet (US, 705m).
5	Tozzini, Freire, Teixeira a Silva Advogados	212.0	1	Cridasa (Brazil, 30m), Usina Alcana (Brazil, 72m), Coopernavi (Brazil, 110m).

6. APPENDIX 1 - CLEAN ENERGY SECTOR DEFINITIONS

New Energy Finance's analysis divides the clean energy industry into the following 16 sectors:

RENEWABLE ENERGY & BIO-ENERGY SECTORS

1. Biofuels

Liquid transportation fuels including biodiesel and bioethanol. These can be derived from a range of biomass sources, including sugar cane, rape seed (canola), soybean oil or cellulose. Our database excludes producers of base biomass, but includes suppliers of everything from the processing technologies and equipment, through the logistics of distribution, to manufacturers of energy systems which are specially adapted for the use of biofuels and products, and the services on which they depend.

2. Biomass, solid waste and biogas

Production and consumption of solid and gaseous fuels derived from biomass. Solid biomass for the energy sector can include a number of specially-grown crops, such as elephant grass or coppiced willow, but it can also consist of crop residues such as straw. We include in this sector processors of other waste matter for energy generation, such as sewage waste, chemical by-products and biogas produced from municipal waste, as their exploitation often involves the same technologies as grown-for-purpose biomass. Increasingly we are seeing developers, generators and utilities enter this sector.

3. Geothermal

Geothermal power has long played a part in the energy mix of countries with obvious geothermal resources, such as Iceland and Japan. Recent advances in two areas, however, mean that geothermal energy can play an increasing role worldwide: new drilling techniques allow users to tap into resources that had been too deep to access; and new ways of extracting useful power from lower temperature geothermal fields allow productive use of resources that could not have been used economically in the past.

4. Mini-Hydro (<50MW)

There may seem little new about hydroelectric power. Indeed at New Energy Finance we don't cover large-scale hydroelectric power projects. However, there are interesting developments in small-scale and low-head hydro power, and even very small scale hydro solutions. Hydroelectric power is undergoing a renaissance and has a lot to contribute to the deployment of renewable energy globally.

5. Marine

The marine sector covers all technologies relating to extraction of energy from the sea. Possibilities include waves and tide, either via tidal barrages or tidal flow generators. Note that exploitation of marine biomass would be categorised in biomass, rather than in this sector.

6. Solar

The Solar sector covers all technologies that capture energy directly from the sun, either using a photo-voltaic (PV) material, or via a passive technology such as a concentrator or stirling engine. The solar energy sector is already substantial - cost reductions through new technologies or through increased manufacturing scale should see it breaking into new areas of energy demand over the coming decades.

7. Wind

Wind is the renewable technology that has had the biggest impact on our energy usage patterns over the past decade. The next decade will see continued activity, particularly in developing countries and offshore. The Wind sector includes components and subassemblies for wind turbines as well as manufacturers of turbines themselves. A big part of this sector, however, consists of the various developers, generators, utilities and engineering firms that have sprung up to exploit opportunities to build wind farm around the world.

POWER ARCHITECTURE SECTORS

8. Generation Efficiency

This sector covers technologies that result in a step-change improvement in the generating efficiency or reduction in greenhouse gas emissions of existing power generation equipment. Important technologies in this sector include breakthroughs in motor or generator design, as well as software, sensor and control technologies which result in step-change improvement. This sector includes breakthrough CHP technologies (i.e. that are more than just relocating traditional generating equipment closer to heat users).

9. Smart Distribution

As sources of power supply become more variable (many renewable sources are intermittent), and the importance of reducing grid losses becomes higher with higher power costs, so the significance of improving power distribution will grow. This sector includes a number of technologies that target such improvement, from the forecasting of renewable resource availability, through software to balance supply and demand or find grid faults, to technology that allows peak shifting or intelligent meter reading.

10. Power Storage

Many renewable energy and emerging energy technologies are either intermittent, or have response curves that are unable to follow the dynamic demands that will be put on them when deployed. Batteries and other energy storage technologies therefore become key enablers for any shift to these technologies. We call the sector electricity storage in order to underline the fact that hydrogen storage is in the Hydrogen sector, even though we include here mechanical technologies like flywheels that are straight potential replacements for batteries.

11. Energy Efficiency and Demand Reduction

Power efficiency and demand reduction approaches may not strictly be part of the renewable energy and energy technology industry, but they are highly relevant to investors in the space. Shifts in our sources of energy over the coming 20 years must be accompanied by wholesale improvement in our energy efficiency. This sector covers a range of technologies that reduce the use of energy in retail and commercial buildings, including advanced insulation, building components and intelligent systems for managing power consumption. It also includes technologies focused on reducing the use of energy in a wide variety of industrial processes.

12. Carbon Capture and Sequestration

Given the very substantial energy appetites of China, India and the US, and the substantial amounts of coal and natural gas available in those countries, it is highly unlikely that they will move rapidly enough to clean and renewable energy sources. One type of technology may allow us to continue using these fuels without adding to the emissions of CO₂. Carbon capture and sequestration technologies involve the separation of CO₂ from the exhaust stream from the burning of fossil fuels, and its long-term storage, either in depleted oil and gas fields, under the ocean or elsewhere.

HYDROGEN & FUEL CELL SECTORS

13. Hydrogen

The hydrogen sector covers everything from the production and storage of hydrogen, through its distribution and the various technologies and applications in which it can be used. Hydrogen is not, of course, a renewable fuel source - it is only a carrier of energy, in the same way electricity is not a source but a carrier of power. But if produced renewably hydrogen looks like a promising candidate to replace fossil fuels in transport as these are depleted, and governments and corporations are investing accordingly.

14. Fuel Cells

Many observers believe that fuel cells will lie at the heart of any post-fossil energy architecture. Although they have been around for 150 years and their performance is not in doubt, their high manufacturing costs and low reliability mean that they have yet to capture any mass markets. A large number of companies and research initiatives are hoping to change that over the coming decade. We draw a distinction between the hydrogen industry and the fuel cell sector: fuel cells can burn a variety of hydrocarbon fuels, and hydrogen can be used by other systems, such as internal combustion engines. There is, however, substantial crossover between the two sectors.

OTHER SECTORS

15. Carbon Markets

The ratification of the Kyoto Protocol gave a boost to the European Emissions Trading Scheme (EU-ETS). Elsewhere in the world other carbon markets are emerging, whether as a result of regulation or for voluntary trading. The carbon market is not part of the clean energy industry, but will significantly influence its development. The main companies participating in the energy-relevant aspects of the carbon market are logged in this sector.

16. Services & Support

The rapid growth of the clean energy industry will require the development of a complete sector of service companies dedicated to serving the needs of technology and equipment suppliers, owners of renewable energy and biofuels assets, and so on. In this sector we put providers of information and research (such as ourselves), specialised clean energy financial services companies, consultants and the like.

6. APPENDIX 2 - NEW ENERGY FINANCE SERVICES

New Energy Finance is a specialist provider of information and research to investors in renewable energy, low carbon technology and carbon emission credits. We offer a range of services which include the following:

- **New Energy Finance Insight.** New Energy Finance's premier member-driven research services combine deep analysis with rapid-response analysis on breaking developments. Core components of the service include:
 - **Analyst Reactions** giving timely insight on market events, political and regulatory changes.
 - **Research Notes** analysing long term regional and sectoral trends.
 - **Focus Reports** analysing and defining the market for clean energy investment, market size and asset valuation by sector, technology, country and region.
 - **Analyst Access** providing rapid response to quick questions about the market, value chain or deal activity.
 - **Dedicated Annual Research Presentation** for member-institution boards, staff and/or customer groups.
 - **New Energy Finance Insight Services cover the following sectors:**
 - **Core Sectors:** Wind, Solar, Biofuels, Biomass & Waste, USA, China, VC/PE, Public Markets, Assets & Infrastructure.
 - **Additional Sectors:** Marine, Hydrogen & Fuel Cells, Mini-Hydro, Energy-Smart Buildings, Geothermal, Carbon Services, Power Storage, M&A, Australia, Brazil, India, Canada, Israel
- **New Energy Finance Desktop.** The award winning portal to the world's most comprehensive database of investors, opportunities and transactions in clean energy, covering 15,000 organisations (including start-ups, corporates, venture capital and private equity providers, banks and other investors), 11,000 people and 6,000 transactions.
- **New Energy Finance Newswatch & Alerts.** Bundled with the New Energy Finance Desktop, the Newswatch service sends you a daily email with your tailored selection of clean energy investment news. The Alert service allows you to set a flag on any company, fund, person or project you want to track, and receive an alert by email whenever there is any relevant news.
- **New Energy Finance Briefing.** Consists of weekly and monthly round-ups of all important clean energy financial developments. The weekly Briefing reviews mergers, IPOs, project financings, venture capital investments, contracts, among other things and takes a glance at the carbon markets. The monthly Briefing takes a closer look at the trends affecting the clean energy industry with in-depth commentary, features and analysis.
- **New Energy Finance Network Events.** New Energy Finance arranges lunches, breakfasts, round-tables and workshops, as well as seminars for subscribers to learn about opportunities and to meet each other.
- **New Energy Index (ticker symbol NEX).** The first global index of clean energy companies to be calculated and quoted in real time.
- **New Carbon Finance.** Subscription-based service providing price forecasting for the carbon pricing in the European Emissions Trading Scheme and nascent US markets, based on a fundamental supply / demand / abatement cost-based models that has been proven as a resource for traders and participants in global carbon markets.
- **Contract Research.** Provide real-time charting that creates time-lines of investment volume by country, sector and asset class, and real-time league tables, which identify top developers, investors, debt providers and service providers.
- **Consulting.** Dedicated consultancy services to help corporate and financial investors make informed decisions. Types of work include: country, policy and technology assessments; deal-flow development; opportunity screening; economic due diligence; strategic and business planning; policy evaluation.

FURTHER ENQUIRIES SHOULD BE DIRECTED TO:

Tobias Troye - Associate

tobias.troye@newenergyfinance.com

+44 20 7467 2531

For information and costs for the production of league tables for individual geographies or sectors, please contact sales@newenergyfinance.com.
Hard copy reprints of this report are available from New Energy Finance at a cost of £9.95 + VAT (€14.95, \$19.95) plus packing and postage.
For information on these league tables, their usage and the methodology used to produce them, please contact Tobias Troye.