

# The Climate Equity Opportunity list

Identifying stock opportunities that respond to the climate challenge

## Highlighted companies

Company	Rating	Curr'cy	Target price	Current price	Potential return (%)
Acciona (ANA.MC)	OW(V)	EUR	94.00	62.29	51%
EDP R (EDPR.LS)	OW(V)	EUR	7.25	4.39	65%
NVC Lighting (2222.HK)	OW(V)	HKD	4.40	3.48	26%
Philips (PHG.AS)	OW	EUR	29.00	22.11	31%
Saft Groupe (S1A.PA)	OW(V)	EUR	32.00	24.89	29%
São Martinho (SMT03.SA)	OW(V)	BRL	21.00	17.20	22%
Siemens (SIEGn.DE)	OW	EUR	95.00	71.78	32%
Veolia (VIE.PA)	OW	EUR	28.00	18.37	52%
Vossloh (VOSG.DE)	OW	EUR	97.00	78.77	23%
Wacker Chemie (WCHG.DE)	OW(V)	EUR	155.00	119.70	29%

Source: HSBC estimates

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## Disclaimer & Disclosures

This report must be read with the disclosures and the analyst certifications in the Disclosure appendix, and with the Disclaimer, which forms part of it

- ▶ **Long-term drivers for climate-change investing are in place: policies to reduce greenhouse gases, energy security, industrial policy and job creation**
- ▶ **We estimate the size of the low-carbon-energy, energy-efficiency and energy-management markets will triple by 2020**
- ▶ **For the next 12 months, we favour energy-efficiency plays and renewable-power providers but are negative on wind and solar**

## Long-term growth, short-term risks

In this report, we combine the macro insights of the HSBC Climate Change Centre of Excellence with the equity coverage of HSBC Global Research and introduce our Climate Equity Opportunity (CEO) list. The CEO list comprises 88 companies that either generate or are likely to generate over the next three years at least 20% of their total revenues from low-carbon energy, energy efficiency and storage, or water and waste.

This note accompanies another report, *Sizing the Climate Economy*, which estimates that the low-carbon energy market will grow to USD2.2trn by 2020. It concludes energy efficiency is the largest opportunity by 2020, and emerging markets offer the fastest growth.

Over the next 12 months, an uncertain macro and regulatory environment will make it challenging for stocks on the CEO list in aggregate. Individual stocks provide opportunity.

We highlight companies that are exposed to positive growth drivers in our energy efficiency themes of industrial, buildings, transport (Siemens, Saft, Vossloh, NVC Lighting, Philips) and/or are exposed to emerging markets that are market share gainers in the climate economy (Sao Martinho). Among the low-carbon power providers we highlight companies with large operating portfolios and diversified pipelines (Acciona, EDPR). Although we are negative on the water and solar sectors on a 12-month view we note leaders from a quality and financial perspective (Veolia, Wacker Chemie).

# HSBC's Climate Service

HSBC Global Research has developed a three-fold response to the investment challenge of climate change

- ▶ Equity: identifying stocks from our global coverage that offer climate investment opportunities
- ▶ Quantitative: providing real investment solutions, enabling investors to incorporate climate change into investment decisions
- ▶ Macro: conducting in-depth research into the scientific, policy and market dimensions of climate change

## Equity research – the Climate Equity Opportunity list

Starting in March 2007 with the publication of *Green is the New Black*, HSBC Equity Research has been steadily expanding its coverage of stocks that derive material revenue streams from alternative energy solutions. HSBC has now identified 88 stocks that have more than 20% of their revenues from the broader climate economy. The bulk of the coverage is through the clean energy team, plus select opportunities in industrials.

## Quantitative research – HSBC Climate Change Indices

In September 2007, HSBC's Quantitative Research team launched its macro quantitative model on investing for Climate Change. This framework permits investors and policy makers to measure and track industrial engagement in the emerging low carbon economy. As a result, HSBC has launched a comprehensive family of Global Climate Change Indices, which allow investors to capture those key companies best

placed to profit from the challenges presented by a changing climate.

The index framework and structure reflects a highly diverse number of climate-related investment themes used by investors to allocate to the sector as part of their Tactical Asset Allocation process, assist those looking to separate stocks exposed to climate opportunities within their portfolios as well as for purposes of benchmarking and reporting obligations, including risk modelling.

## Macro research – the Climate Change Centre of Excellence

In October 2007, the Climate Change Centre of Excellence was established as a focal point within HSBC to identify the long-term commercial implications of the issue. Its research focuses on the macro dimension, investigating the scientific foundations of climate change, geographical vulnerabilities, global policy frameworks and long-term market prospects.

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# Summary

The low-carbon opportunity is defined by two complementary policy trends: taking carbon out of energy by curbing emissions and providing incentives for low-carbon sources of energy, and taking energy out of economic growth by promoting efficiency in buildings, industry and transport. We forecast the low-carbon energy market will triple by 2020. This report draws upon the thematic framework developed by the HSBC Climate Change index and the analysis in the accompanying report *Sizing the Climate Economy* to identify stocks from HSBC's global coverage relating to climate change.

## Plenty to play for long term; short-term headwinds

2010 has been a tough year for the global climate agenda. Policy pessimism after Copenhagen has been compounded by (largely unfounded) doubts over the climate science, along with governments backtracking on commitments in key countries. This has affected the performance of climate-related stocks; the HSBC climate change index is down 11% year-to-date. Nevertheless, the long-term drivers are in place. These include reducing emissions, energy and resource security. They require a step change in economic behaviour, offering growth, employment and trade benefits for those countries that take a lead in climate business.

At a stock level, the drive towards a low-carbon framework offers investment opportunities. Indeed, the analysis in the accompanying report *Sizing the Climate Economy* points to a USD2.2trn market for low-carbon energy production and energy efficiency and energy

management by 2020. In this report, we look at the thematic drivers and HSBC stock coverage relating to the low-carbon economy. Drawing on the thematic framework developed by the HSBC Climate Change index and the analysis in *Sizing the Climate Economy*, we introduce the 'Climate Equity Opportunity' list, 88 companies covered by HSBC analysts globally that are positively exposed to the themes set out in this report.

The outlook for the CEO list as a whole is tough over the next 12 months, in our view, but we have identified pockets of stock opportunity. We think that lukewarm regulatory and policy conditions, uncertain economic backdrops in some regions and austerity measures will hamper stock performance overall in the short term. However, we favour companies that are exposed to the themes of multi-theme energy efficiency, transport efficiency, building efficiency and renewable-power providers and companies with exposure to faster-growth emerging markets.

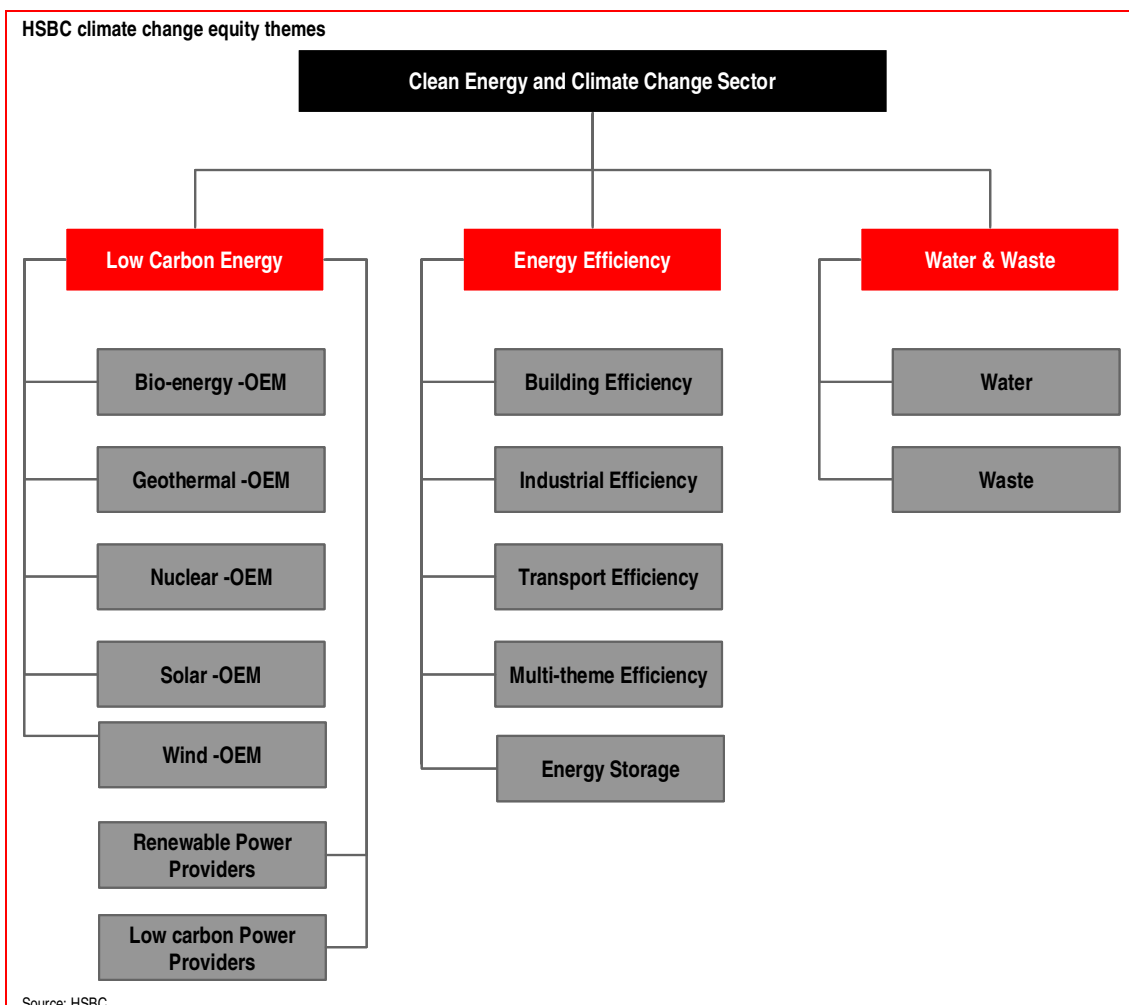
## Introducing the Climate Equity Opportunity (CEO) list

We believe efforts to reduce greenhouse-gas emissions, improve energy security and stimulate industrial innovation are creating a new generation of investment opportunities. In this report, we combine the macro insights from the HSBC Climate Change Centre of Excellence with the equity coverage from HSBC Global Research, as we introduce our Climate Equity Opportunity (CEO) list.

The CEO list comprises 88 companies from HSBC's global equity research coverage that generated at least 20% of their revenues in 2009, or are likely to generate at least 20% of their revenues over the next three years, from the

climate-related themes of low-carbon energy, energy efficiency and storage, and water and waste. We believe these stocks are the best expression of those themes in HSBC's global coverage universe. They are listed on pages 86-87.

In our accompanying report, *Sizing the Climate Economy*, we focus on estimating the market size in 2020 of low-carbon energy production and energy efficiency and energy management. We do not include forecasts for water and waste in that analysis. Along with our utilities analysts, we looked at longer-term drivers in the water and waste industry alongside climate change issues in *Global Water, growth despite recession and balance-sheet constraints*, in March 2010.



We believe our hurdle rate of 20% of climate-related revenues is high enough to suggest a company has taken a strategic decision to invest in products or services related to one of the climate-change themes. In our analysis, we have looked at the sources of revenues in as much detail as possible, using data from our sector analysts and company accounts. We would note, however, that a big issue in identifying climate-change-related stock opportunities is that in many cases only some revenues may be related to 'clean' drivers while the rest comes from 'dirtier' businesses. We have identified a small number of our CEO stocks where a portion of the business is carbon-intensive, and we flag these companies.

The climate change themes are noted below.

## Our strategic view: the low-carbon market will triple by 2020

After the disappointing Copenhagen summit and the slackening of policy momentum in key countries this year, the critical question for investors is whether climate change remains a long-term investment theme or was just a passing phase at the end of a long bull market. In our accompanying report *Sizing the Climate Economy*, we estimate the baseline size of the emerging climate economy and make forecasts out to 2020 for four distinctive scenarios. They are: backlash, where governments renege on current commitments; Copenhagen, where governments stand by existing pledges; green growth, where governments move to the upper limit of current proposals; and conviction, our view of the most likely outcome.

We estimate the market was worth USD740bn in 2009 and forecast it may grow to between USD1.5trn and USD2.7trn in 2020; our conviction forecast is USD2.2trn. This implies an overall revenue CAGR of c11% for 2009-20e

Those estimates cover only low-carbon-energy production, energy efficiency and energy management. Including water and waste and other adaptation themes, the climate economy is likely to be considerably larger.

From this analysis, we draw three strategic investment conclusions.

### (1) Energy efficiency becomes the largest opportunity by 2020

Our conviction scenario projects a USD1.2trn market for energy efficiency and energy management in 2020e, implying a revenue CAGR of c13%. We see two major forces at play. First, we expect greater improvement in energy intensity – particularly for electricity consumption – over the next decade as governments become more assertive about delivering efficiency gains in the building, industrial and transport sectors. It's worth noting that an improvement in energy efficiency further decouples energy consumption growth from GDP growth which potentially has a knock on effect on low carbon installation growth (especially renewables). Second, we believe plug-in hybrid (PHEVs) and full electric vehicles (EVs) will make a breakthrough, with sales growing more than twenty-fold by 2020. As a result, we estimate revenues from transport efficiency – more fuel-efficient conventional vehicles, PHEVs and EVs, and a shift to trains and buses – will rise at an 18% CAGR. By then, they should make up more than half the total efficiency segment, compared with a third today.

### (2) Renewable power offers the biggest opportunity in low-carbon-energy supply

We expect slower growth on the supply side as energy efficiency and regulatory risk eat into volume expansion. In our conviction scenario, we forecast that revenues from supplying low-carbon energy will grow at an 8.6% CAGR to USD1trn

Low-carbon growth: four roads to 2020 – estimated size in USDbn

	2009e Base	2020e scenarios			
		Backlash	Copenhagen	Green Growth	Conviction
Low-carbon energy production	422	774	1,025	1,297	1,043
Energy efficiency and energy management	317	722	1,003	1,410	1,194
<b>Total</b>	<b>740</b>	<b>1,496</b>	<b>2,028</b>	<b>2,707</b>	<b>2,238</b>
CAGR (2009-2020e)		6.6%	9.6%	12.5%	10.6%

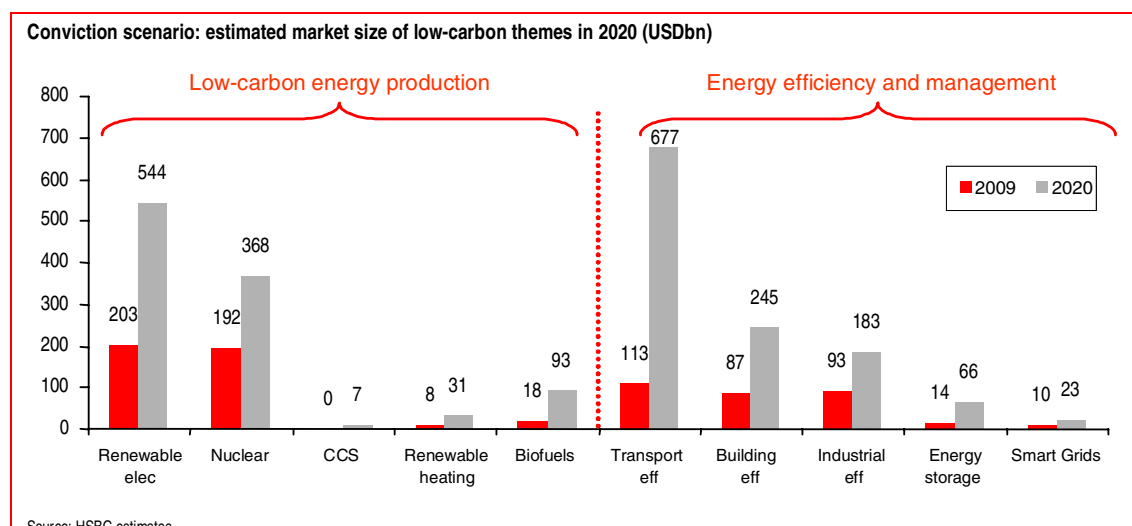
Source: HSBC estimates

energy will grow at an 8.6% CAGR to USD1trn by 2020e. Within this, we forecast that renewable electricity revenues will grow at a CAGR of 9.4% to a market size of USD544bn. As a result, we project a total installed capacity of 750GW for wind and 300GW for solar, implying capacity CAGRs of 5.5% and 16%, respectively. However, the scale of regulatory risk means renewable power has one of the widest dispersions of estimated scenario results, ranging from USD361bn in our backlash scenario to USD679bn in green growth. Long lead times and uncertainty over policy frameworks mean nuclear's share of low-carbon-energy supply falls back by 2020, with a revenue CAGR of just 6%. We also expect limited penetration of carbon capture and storage by 2020. We expect greater scrutiny of both the carbon footprint and wider sustainability of biofuels, which should benefit Brazil as the market leader in low-carbon biofuels.

### (3) Emerging markets offer the fastest growth

Superior economic growth and strengthening regulatory frameworks for low-carbon energy mean emerging markets offer investors the fastest growth through 2020, in our view. We estimate the European Union accounts for 33% of the low-carbon market, followed by the US with 21% and China with 17%. In our conviction scenario, the EU keeps its lead, but its share falls to 27%. China climbs to 24%, with a national CAGR of 14%, and the US share declines to 20%. India overtakes Japan with a CAGR of 14%.

The tables below show the growth rates to 2020 in our conviction scenario in revenues and MW installations in renewable energy. The chart below shows the market size in USDbn in 2009 and 2020 from our analysis in *Sizing the Climate Economy*.





#### Growth rate in market size for various sub-themes

Theme	CAGR (2009-20e)
<b>Global</b>	<b>10.6%</b>
<b>Low-carbon Energy</b>	<b>8.6%</b>
Bio-energy	12%
Geothermal	13%
Low-carbon power	8%
Nuclear	6%
Renewable power	9%
Solar	9%
Wind	10%
<b>Energy Efficiency</b>	<b>13.0%</b>
Building efficiency	10%
Industrial efficiency	6%
Transport efficiency	18%
Multi-theme efficiency	11%
Energy storage	15%
<b>Water &amp; Waste</b>	
Water	6%
Waste	na

Note: market size includes revenue from sale of products and services such as electricity/water  
Source: HSBC estimates

## Our 12-month view

Our *Sizing the Climate Economy* report provides forecasts for low-carbon themes to 2020 and demonstrates the market opportunity. However, macro and regulatory conditions are likely to make the next 12 months challenging. But even within the 12-month view, we are positive on the themes below. In addition, we would look for companies that are exposed to faster economic growth in the East and South relative to the West, where economic jitters prevail.

### Positives

- ▶ **Multi-theme energy efficiency** – Cost savings should make the economics of energy efficiency compelling during the expansionary plus replacement spending cycle as global economic growth improves. In addition, regulatory drivers are supportive. Many companies in the sector are geographically diverse and can capitalise on the differences in growth among emerging and developed market economies.

- ▶ **Transport efficiency** – Countries with faster GDP growth, such as India and China, are more likely to spend on transport infrastructure than the OECD in the medium term, so we would look for companies exposed to these regions. In addition, tighter regulation to combat exhaust pollution is a driver on a global basis.
- ▶ **Building efficiency** – A range of policy measures is driving growth in building efficiency. They include demand-side management policies that require utilities to deliver energy savings; tighter regulations for new buildings; and market-transformation strategies for key energy-using appliances. For example, conventional incandescent light bulbs are being phased out in the EU by 2012.

#### Growth rate in incremental MW installations

Theme	CAGR (2009-20e)
<b>Low-carbon Energy</b>	
Wind	5.5%
Solar	16%
Geothermal	14%
Renewable power	8.4%
Nuclear	21%
Low-carbon power	9%

Note: CAGR s are derived based on incremental installations  
Source: HSBC estimates

- ▶ **Renewable-power providers** – A significant valuation anomaly has opened up, especially for Europe-listed renewable power providers, because of the exaggerated market perception of regulatory risk. Renewable power utilities should also benefit from lower equipment costs.

### Negatives

We think solar, wind and water will face greater headwinds, although for some stocks valuation still offers upside potential.

- ▶ **Solar** – We forecast a 15% decline in demand in 2011, after German tariff cuts pulled demand forward in 2010. We also expect oversupply to weaken prices.



## Valuation summary

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	EV/sales			EV/EBITDA			PE		
							2010e	2011e	2012e	2010e	2011e	2012e	2010e	2011e	2012e
Acciona	ANA.MC	OW(V)	EUR	94	62.29	51%	1.6	1.5	1.5	8.6	7.7	7.1	18.9	14.9	12.5
EDP Renovaveis	EDPR.LS	OW(V)	EUR	7.25	4.39	65%	7.3	6.8	6.1	9.1	8.3	7.4	31.3	26.5	19.9
NVC Lighting	2222.HK	OW(V)	HKD	4.4	3.48	26%	2.6	2.1	1.8	14.5	11.8	9.6	23.6	18.9	15.8
Philips	PHG.AS	OW	EUR	29	22.11	31%	0.8	0.7	0.6	6.1	4.6	3.6	14.9	10.6	8.7
Saft Groupe SA	S1A.PA	OW(V)	EUR	32	24.89	29%	1.2	1.1	0.9	6.6	5.8	5.1	12.8	11.1	10.6
São Martinho	SMTO3.SA	OW(V)	BRL	21	17.2	22%	2.4	2.4	2.1	8.2	7.7	7.7	124.6	56.2	59.8
Siemens AG	SIEGn.DE	OW	EUR	95	71.78	32%	1.0	0.9	0.8	6.9	5.9	5.1	13.1	10.7	9.7
Veolia	VIE.PA	OW	EUR	28	18.37	52%	0.8	0.7	0.7	6.9	6.6	6.3	14.7	13.7	12.8
Vossloh	VOSG.DE	OW	EUR	97	78.77	23%	1.0	0.9	0.8	7.1	6.5	5.9	11.0	10.6	10.0
Wacker Chemie	WCHG.DE	OW(V)	EUR	155	119.7	29%	1.4	1.3	1.2	5.6	4.9	4.3	13.1	11.3	9.9

Source: HSBC, Valuation as of 31 August 2010

- ▶ **Wind** – Likely to be the biggest loser, because of increased energy-efficiency measures, a weak regulatory environment in the US and lower demand for energy. In addition, the industry is oversupplied. Please see our recent report *Becalmed? Is it all over for the global wind markets?* 31 August 2010 for a detailed analysis of the wind sector.
- ▶ **Water** – The sector depends to a degree on government spending, which may affect stocks as governments adopt austerity measures. Most of our covered stocks have stretched balance sheets, which also limit growth opportunities. We consider the likely winners in the sector to be those with both financial and technical abilities and those that are well-placed to take advantage of the long-term drivers in the sector.

Our highlighted stocks are summarised here and mostly relate to themes we are positive on above. Some, such as Siemens and Veolia, have exposure to a variety of themes. The stocks are a mixture of large and small/midcap, pure play and diversified, and European and emerging market. Company descriptions and investment cases start on page 55.

**Acciona (OW(V), TP EUR94.00) renewable power provider** – Acciona is a restructuring and refocusing story. There is an increasing focus on the renewable energy division and on expansion

overseas. We forecast the renewables and water division combined to contribute 40% to group revenue in 2012e (up from 26% in 2009).

**EDP Renovaveis (OW(V), TP: EUR7.25) renewable-power provider** – EDPR is one of the largest renewable energy utilities worldwide. Its target is to install 1.1-1.2GW gross and 1.0-1.1GW net wind capacity a year over 2010-12. EDPR has one of the largest wind-development pipelines worldwide (c31GW capacity), with exposure to key European growth markets, the US a2010end Spain. It had 1.3GW of capacity under construction at the end of H1 2010.

**NVC Lighting (OW(V), TP: HKD4.40) building efficiency** – NVC Lighting is a pure-play energy-efficient-lighting manufacturer with 100% of its revenue from the energy efficiency theme. NVC is China's largest domestic lighting brand as well as the leader in energy-saving lamp production. HSBC expects NVC to achieve two-year earnings (EPS) CAGR of 21% over 2010e-12e.

**Philips (OW, TP: EUR29.00) building efficiency** – Philips generated c30% of its revenues from green products in 2009, which is likely to increase to 50% by 2015 under its EcoVision4 programme. It is one of the largest lighting companies in the world, with a strong focus on developing energy-efficient lighting and has a target to improve the energy efficiency of its

overall product portfolio by 50%. We expect cost-cutting to deliver margin expansion.

**Saft Groupe (OW(V), TP EUR32.00) energy storage** – Saft is one of the world's leading producers of batteries for industrial applications. Its batteries are made from lithium, nickel and silver components, not from lead. It produces high performance lithium and silver-based batteries for the defence, aerospace and electronic sectors and nickel and lithium-based batteries for a number of industries such as oil and gas, utilities, telecommunications, airlines, transport and railways. In FY2009, it derived c27% of its revenues from batteries used for transportation (rail and electric vehicles) and in solar PV-based applications.

**Sao Martinho (OW(V), TP BRL21.00) bio-energy** – Sao Martinho is a Brazil-based ethanol processor and generated 62% of its revenues from ethanol production in FY2009 (ended March). We expect the mandatory blending of 25% ethanol in gasoline coupled with increasing consumption of blended fuel by flex-fuel fleets in Brazil to drive Sao Martinho's future growth.

**Siemens (OW, TP EUR95.00) multi-theme efficiency** – Siemens is exposed to a range of low-carbon themes, including energy efficiency, building efficiency and renewables, and is also benefiting from a decade of restructuring. We see five drivers of earnings growth for Siemens over the medium term: (1) global economic recovery; (2) operational gearing; (3) improved prospects for Siemens' most cash-generative businesses; (4) cost savings; and (5) increasing competitive advantage from Siemens' ability to cross-finance its growth platforms. Siemens is also a Europe Super Ten equity portfolio constituent.

**Veolia Environment (OW, TP EUR28.00)**

**water** – Veolia offers access to growth through water, waste, energy services and public transport. The company is making a fresh start in 2010: after the end of the recession, new management is focusing on improving margins and returns. In the water segment, it is the largest global operator in the world. It offers a full range of water services and has grown aggressively in the past five years, particularly in markets where water is scarce.

**Vossloh (OW, TP EUR97.00) transport**

**efficiency** – Vossloh is a railway-market play, benefiting from the global resurgence of rail. It has a high exposure in ground infrastructure and high-speed rail, both of which we expect to see greater growth. The company follows a sensible organic and external growth strategy and it commands sound financials, in our view. Recently, Vossloh materially increased its exposure into high-margin rail services by acquisitions that offer significant development potential.

**Wacker Chemie (OW(V), TP EUR155.00) solar**

– Wacker Chemie is a leading producer of polysilicon, a raw material for solar photovoltaic technology, and among the global top three in its key markets, which have high entry barriers and underlying growth rates above GDP. Wacker Chemie posted strong Q2 results and increased its guidance for sales of about EUR4.5bn and EBITDA of more than EUR1.06bn. Although negative on the solar sector as a whole, we believe Wacker offers an attractive valuation.

# Low-carbon energy production themes

# Wind OEMs

- ▶ Wind is the leading scalable, renewable power-generation technology
- ▶ However, the sector faces oversupply and a weakened regulatory framework
- ▶ We expect a market of USD285bn and wind installations of c750GW by 2020

## Reason for inclusion

Wind technology is the leading source of renewable energy for power generation. It has been instrumental in reducing greenhouse-gas emissions by power plants, which account for around 60% of global emissions.

Wind is the cheapest and most scalable renewable power generation technology and has the lowest levelised cost of energy production (LCOE) position (see table below), with a cost comparable to fossil fuel at the current price of carbon. Wind is quick to install, taking weeks or months rather than years, and unlike thermal and nuclear requires no water, a benefit in an increasingly water-constrained world.

LCOE - Full cost comparison of different power generation assets (EUR per MWh)<sup>1</sup>

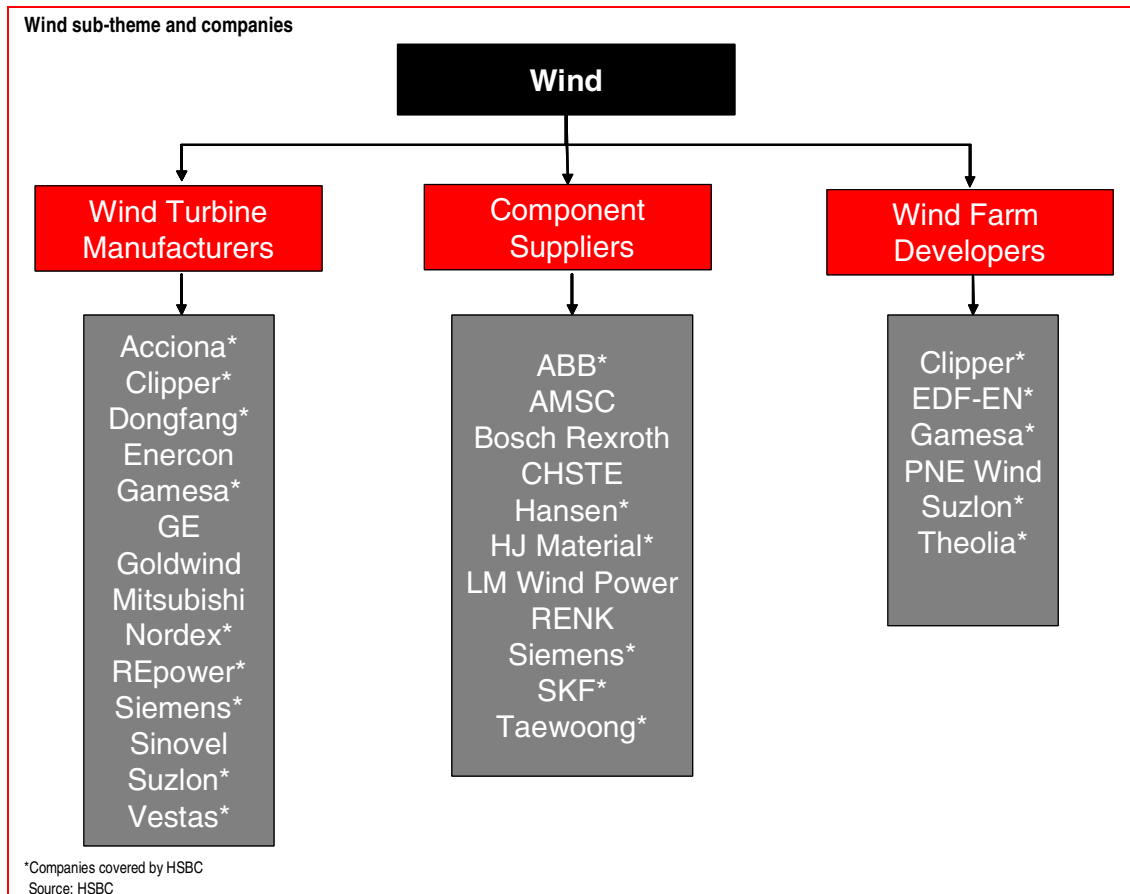
Technology	Plant size (MW)	Investment cost (EURm)	Fixed cost	Fuel cost	O&M	Carbon emission	Full cost
Open Cycle Gas Turbine	40	500	7	41	5	8	61
Combined Cycle Gas Turbine	750	700	9	23	4	6	42
Coal IGCC	480	1,550	20	23	9	9	61
Coal Thermal	1,600	1,100	13	23	5	11	52
Coal CFB	150	1,400	18	24	5	11	58
Lignite	1,000	1,270	15	19	5	12	51
Nuclear	1,000	3,300	40	5	7	0	52
Wind Onshore	100	1,200	43	0	12	0	55
Wind Offshore	200	4,000	125	0	24	0	149
Solar-PV	10	2,750	210	0	14	0	224
Solar-CS	10	4,700	191	0	18	0	209
Biomass	25	2,600	38	40	13	0	91
Geothermal	50	1,760	24	0	19	0	43

1. At average oil, coal, gas and carbon prices for Aug. 2009-Jul. 2010.  
 Source: HSBC, Thomson Reuters Datastream, ECX

## Assumptions for LCOE

Oil (USD/barrel)	76.00
Gas (USD/Mmbtu)	5.30
Coal (USD/tonne)	93.00
Carbon (EUR/tonne)	14.00

Note: At average oil, coal, gas and carbon prices for Aug. 2009 – Jul. 2010.  
 Source: HSBC, Thomson Reuters Datastream, ECX



## What's in the sector?

Generally speaking, the wind sector comprises component manufacturers, manufacturers and assemblers of wind turbines and installers and developers of wind farms. However, most listed companies span only parts of the value chain. Manufacturers increasingly are focusing on making turbines and avoiding wind-farm development. Although in the past some used development as a way to sell turbines and a few still do, we think wind-farm development is a core competence of independent power producers, utilities and developers, so we have excluded them here.

## Key drivers in the sector

Growth in the sector is driven to a large extent by regulation, which was usually a response to efforts to both reduce greenhouse-gas emissions and improve energy security. In the key markets of the US, the EU and China, installation and production targets have been set and tariff structures provide economic returns intended to encourage private investment.

## Country wind feed in tariffs

Country	Wind FIT targets
US	PTC: Income tax credit of USD1.9cents/kWh for electricity produced from qualified wind facilities for the first 10 years
China	CNY 510-610/MWh. Tariffs set on regional basis
India	Generation-based incentives of USD0.01 per kWh of electricity fed into the grid from wind projects
UK	Incentives: Onshore wind at 1 ROC/MWh; Offshore wind and biomass at 1.5 ROC/MWh; Wave, tidal, energy crops, solar at 2 ROC/MWh
Germany	Onshore tariff: EUR8.19cents/kWh for 5 years and EUR5.15 cents/kWh thereafter; Off-shore tariff: EUR9.10cents/kWh, with the basic tariff at EUR6.19cents/kWh for 20 years.
Spain	EUR65.34-78.18 /MWh
France	constant tariff of EUR83/MWh for the first 10 years of operation after which tariff depends on the output and location
Italy	Italy market has forced down the pool plus REC price to EUR 130-160/MWh from EUR 180/MWh. One of the highest tariffs in Europe.
Brazil	feed-in tariffs are about USD86.3- USD97.8/MWh for wind; USD44.9/MWh for bagasse; USD48.5/MWh from wood; and USD56/MWh for mini-hydro

Source: HSBC

## Sector view

Wind equipment manufacturers suffered from the 2008-2009 credit crunch, because wind farms are typically financed using project finance, with high leverage models. The fallout has been a drop in orders for 2010 and excess capacity. Those effects have been exacerbated by the sovereign debt crisis and government austerity measures, especially in the US and the EU. Some governments have backtracked on commitments to stimulate and maintain investments in renewable energy.

Regulatory risk has risen, and the sector has been a poor performer.

Our four scenarios in *Sizing the Climate Economy* forecast a market ranging from USD184bn to USD348bn by 2020. Our conviction scenario estimates a market of cUSD285bn. That includes capital investment of USD120bn and electricity sales of USD165bn. Please see the report for details on the assumptions in the analysis.

### Wind: estimated market size under four scenarios (2020, USDbn)

	Capital investment	Electricity sales	Market size
Backlash	65	119	184
Copenhagen	87	146	233
Green growth	160	188	348
Conviction	120	165	285

Source: HSBC estimates

We estimate that by 2020, total wind installations will reach around 750GW, up from an estimated 158GW at the end of 2009. This lies in a range of 535GW to 862GW under our four scenarios. We expect over 80% of the estimated 750GW will be in Europe, the US and China. In our conviction scenario, we estimate new wind installations will increase at an annual rate of around 70GW in 2020 worldwide, up from 37GW in 2009, or a CAGR of c5.5%. That implies an average annual installation rate of 54GW during the decade.

This is partly because weak electricity demand in the EU and the US means fewer new MWs need to be installed, in our opinion. Excess capacity has led to 5% to 10% price declines. We expect climate revenues overall will grow around 10% per year to 2020, making wind one of the less attractive sectors to invest in.

Consequently, we are somewhat cautious on the equipment makers. We believe strongly that once the regulatory uncertainty settles, orders will recover, project finance will become more available and the stocks will perform well. But that may not happen until H1 2011. As long as uncertainty persists, we believe the equipment makers in aggregate will struggle to perform.

## HSBC coverage of stocks within the wind theme

### HSBC's wind coverage

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Wind	Analyst
Clipper Windpower	CWPR.L	OW(V)	GBP	1.00	0.44	129%	144	100%	Robert Clover
Dongfang Electric Corp†	1072.HK	OW(V)	HKD	30.00	28.35	6%	7,597	>20%	Paul Choi
Gamesa Corp	GAM.MC	N(V)	EUR	5.50	5.30	4%	1,653	100%	Robert Clover
Hansen Transmissions	HSNT.L	OW(V)	GBP	0.95	0.58	65%	591	100%	James Magness
Nordex	NDXGk.DE	OW(V)	EUR	10.00	7.32	37%	621	100%	Burkhard Weiss
REpower Systems	RPWGn.DE	N(V)	EUR	115.00	104.90	10%	1,225	100%	Burkhard Weiss
Suzlon Energy Ltd	SUZL.NS	UW(V)	INR	42.00	46.25	-9%	1,715	100%	Robert Clover
Taewoong	044490.KQ	N(V)	KRW	66000.00	48500.00	36%	672	20%	Keith Hwang
Vestas Wind	VWS.CO	OW(V)	DKK	300.00	219.20	37%	7,612	100%	Robert Clover

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal /oil such as coal based electricity generation or turbine manufacturers  
 Source: HSBC estimates



# Solar (OEMs)

- ▶ Solar is the key small-scale renewable-power-generation technology
- ▶ Demand is strong now, but we believe oversupply and pricing weakness are likely in 2011
- ▶ We focus on the cost leaders in the industry, most of which are Chinese

## Reasons for inclusion

Solar power, like wind, offers consumers, utilities and independent power producers a way to generate power that is virtually emission-free. It is more heavily subsidised than wind, leading demand to grow at a CAGR of more than 49% over the past five years. In addition, oversupply has caused the cost of a PV module to fall more than 50% in the past 18 months. That is bringing the grid parity point, where the cost of generation is equivalent to or less than the retail price of electricity, ever closer, we believe.

Solar PV is largely a domestic or small-industrial power-generation application, used on domestic or commercial roofs, not a utility-scale application. That makes a comparison with retail (domestic) electricity prices more appropriate than one with industrial (commercial) prices. We think grid parity

should be reached over the next 12 months in certain markets such as Italy and California.

## What's in the sector?

Solar can be broken into sub-themes based on a company's position in the supply chain: equipment suppliers, upstream, downstream, integrated players, component suppliers or developers. Equipment suppliers manufacture the systems and machinery that are used in solar fabs. In simplistic terms, upstream companies make silane gas, polysilicon or wafers. Downstream players manufacture cells and modules, as well as market them. Integrated players are active in the whole value chain. We also cover solar installers and developers. There are also a few manufacturers of solar components, such as inverters and glass.

### Grid parity for crystalline PV

Grid parity for solar PV (Residential projects)			Grid parity for solar PV (Utility scale projects)		
Country/region	Year of grid parity (Best case)	Year of grid parity (Bear case)	Country/region	Year of grid parity (Best case)	Year of grid parity (Bear case)
Germany	2011	2015	Germany	2018	After 2020
Spain	2011	2015	Spain	2018	After 2020
Italy	2011	2016	Italy	2018	After 2020
California	2010	2012	California	2016	After 2020
New York	2010	2014	New York	2019	After 2020
India	2014	2018	India	2018	After 2020

Source: HSBC estimates

### Solar feed-in tariffs and incentives

Country	PV system size	FITs for solar power	Digression	Target	Other
Spain	<=20kW Roof mounted or building integrated >20kW <2MW Roof mounted or building integrated <10MW Ground-mounted	0.34 EUR/kWh guaranteed for 25 years 0.32 EUR/kWh guaranteed for 25 years 0.32 EUR/kWh guaranteed for 25 years	5% cut in tariff for new installations as per draft law 25% cut in tariff for new installations as per draft law 45% cut in tariff for new installations as per draft law		Annual capacity cap in next year increases by total percentage depreciation in previous year
Germany	Open space systems	0.32 EUR/kWh guaranteed and constant for 20 years	12% cut in July-Sep quarter 2010, 15% cut in October 2010, 9% p.a. as of 2011		Additional digression of +1% if 3.5GW, +2% if 4.5GW, 3% if 5.5GW is exceeded in 2010
France	Building integrated Solar farms	0.58 EUR/kWh 0.314 EUR/kWh plus 0.063EUR/kWh for less sunny northern regions	Will remain fixed until 2013		Tax credit of up to 50% on material costs of domestic PV systems
Italy	>20kWp	0.36 EUR/kWh (free-standing), 0.40 EUR/kWh (semi-integrated), 0.44 EUR/kWh (integrated), guaranteed and constant for 20 years	30% cut in 2010, 6% in 2012 and 2013 as per draft law		
Greece	>100kWp	0.40 EUR/kWh guaranteed for 20 years (mainland) + 0.05 EUR/kWh on islands	Adjusted bi-annually by an amount equal to a quarter of the annual inflation rate starting Aug 2010		Grants covering 40% of system cost for PV systems with min investment of over EUR100,000
South Korea	>30kWp	0.42 EUR/kWh guaranteed and constant for 15 years			
Japan		Subsidy of JPY70,000 for 1kW for residential solar generation installation			Annual subsidy budget of JPY20.05bn for residential solar projects

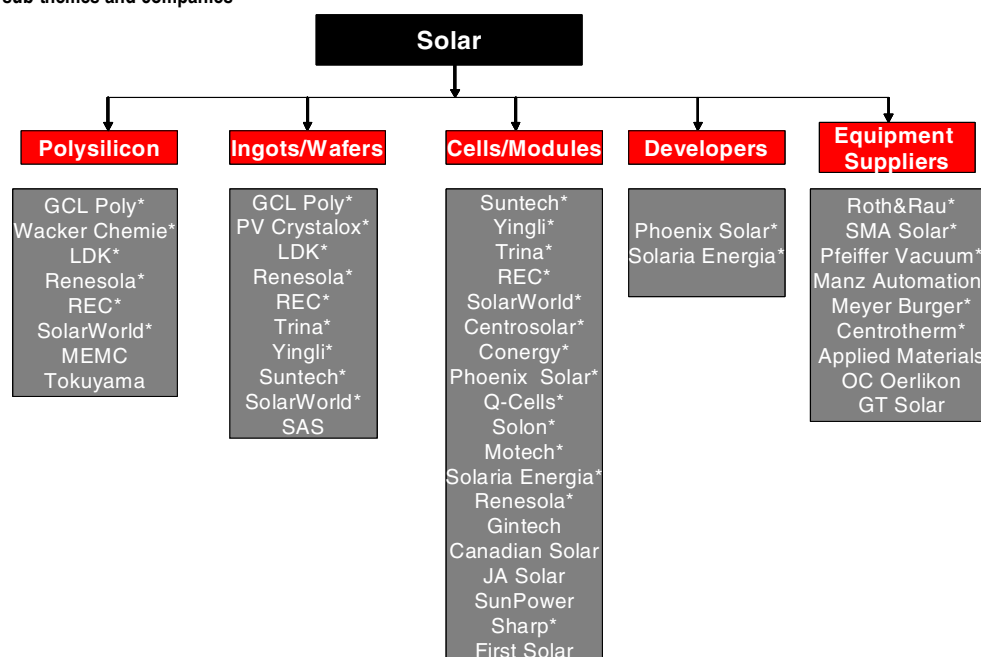
Source: HSBC, Relevant regulators/legislations

## Key drivers in the sector

As with other renewables, growth is driven to a large extent by regulation, with targets for installation and production in the US, the EU and

China. Tariffs are structured to ensure returns that will encourage private investment.

### Solar sub-themes and companies



\* Companies covered by HSBC Source: HSBC

### Solar feed-in tariffs and incentives (continued)

Country	PV system size	Feed-In tariffs for solar power	Digression	Target	Other
Australia Queensland	<10kVA for single phase power; <30kVA for three phase power	0.44 AUD/kWh	na		Policy valid till 2028. Policy to be reviewed after 10 years or when 8MW systems have been installed, Policy valid till 2028
South Australia	<10kVA for single phase power; <30kVA for three phase power	0.44 AUD/kWh	na		Policy automatically commences 1st July 2009, if not notified earlier
Australian Capital Territory	<10kW; >10kW and <30kW; >30kW	100% or 80% or 75% of 3.88 times the retail electricity tariff respectively	na		Applicable till 2028
Ontario, Canada USA	<10MWp	0.42 CAD/kWh 30% capital subsidy	No inflation index	no cap	Business Energy Tax Credit. Expires on 31/12/2008
		Accelerated depreciation up to 50%, remaining 50% to be claimed over ordinary depreciation schedule			Modified Accelerated Cost-Recovery System + Bonus Depreciation. Expires on 31/12/2008
		USD 1.5cent/kWh in 1993 dollars	Indexed for inflation		Renewable Energy Production Incentive Personal Tax Credit. Expires on 31/12/2008
		30% capital subsidy, subject to max. of USD 2,000			Investment Tax Credit. Expires on 31/12/2008
		30% investment tax credit (8 years for commercial and 6 years for residential)			
California	<50kW in 2008-09, <30kW 2010 onwards	Paid on USD/watt basis, different for Government & Non-profit organisation and Commercial & Residential customers	Tariff decreasing over 10 year period from different levels for different customer class	3000MW new installations by 2016	Expected Performance-Based Buy Down is one time, up-front incentive paid on equipment ratings and installations factors
	>50kW	Paid on USD/kWh basis, different for Government & Non-profit organisation and Commercial & Residential customers	Tariff decreasing over 10 year period from different levels for different customer class		Performance Based Incentive (PBI scheme) is based on actual kWh production. By 2010, all systems over 30kW must be on PBI
India	>1MWp for PV system	Up to INR12/kWh		50MW till 2012	80% accelerated depreciation
	>1MWp for STEG system	Up to INR10/kWh		50MW till 2012	80% accelerated depreciation. Max. capacity of one single project can be 5MW

Source: HSBC, Relevant regulators/legislations

## Sector view

We estimate a market size of USD78bn to USD161bn in 2020. In our conviction scenario, it reaches USD116bn, growing at a revenue CAGR of 9%. That includes capital investment of USD81bn and electricity sales of USD35bn.

### Market size under four scenarios (2020, USDbn)

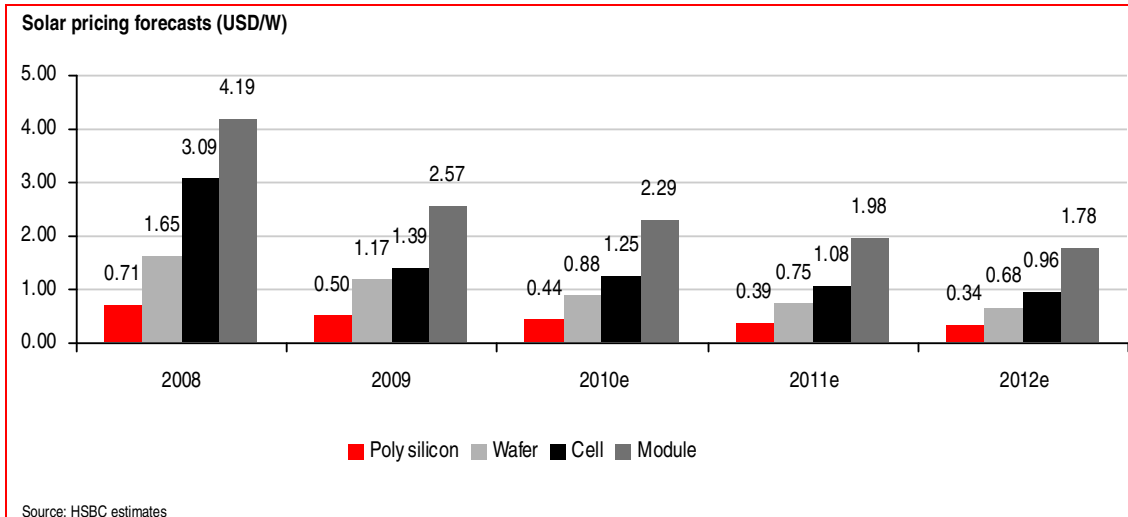
	Capital investment	Electricity sales	Market size
Backlash	54	24	78
Copenhagen	75	30	105
Green growth	122	39	161
Conviction	81	35	116

Source: HSBC estimates

We estimate total solar installations will reach 300GW by 2020, up from an estimated 24GW at the end of 2009. This lies within a range of 210GW to 350GW according to the four scenarios identified in *Sizing the Climate Economy*. We

expect more than 80% of installations will be in the EU, the US and China. The other two key markets are Japan and India, where we expect installations of 42GW, or 15% of the total.

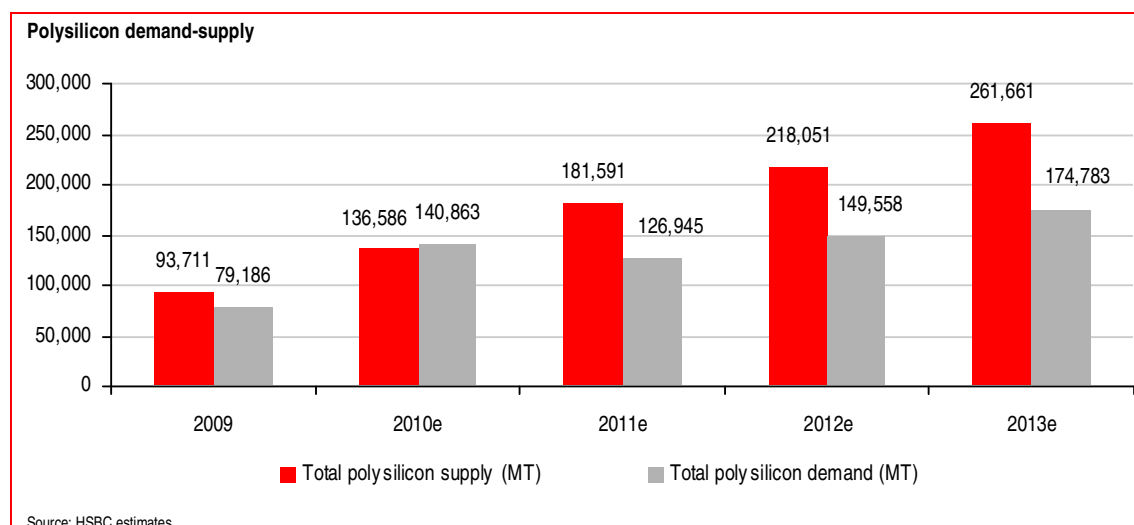
That implies CAGR of 16% in capacity over 10 years, making solar one of the higher-growth segments of the climate industry. However, we expect growth will pause in 2011 and we foresee oversupply across the value chain. Prices have already dropped more than 50% in the last two years. That has put pressure on margins across the value chain, which has been slightly mitigated by increased operating leverage and, for European producers, the euro/dollar exchange rate. We expect this situation to persist in 2011 and 2012.



The global solar market is much more concentrated than the wind market, relying on a smaller number of countries with robust regulatory regimes. Germany accounts for more than 50% of global demand. A few other European countries, among them France, Italy, Spain and the Czech Republic, represent almost 30%. Non-EU countries represent less than 20% of demand, mostly from the US, China and Japan. Despite its strong PV manufacturing base, China accounts for less than 7% of demand.

Austerity measures led Germany to reduce tariffs in July 2010. Cuts have also been proposed in Spain, Italy and the Czech Republic. They have not yet occurred, but they have pulled demand forward – expectations for PV demand in 2010 have doubled since the beginning of the year, to around 13.5GW. This is expected to cause demand to slump 15% in 2011, and we expect the combination of weak demand and oversupply will again put pressure on prices.

As a result, we focus on the cost leaders in the value chain. Structurally, we prefer the Chinese manufacturers to the Europeans, given their better cost position. Our coverage of solar stocks is listed in the table below.



**HSBC's solar coverage**

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Solar	Analyst
Centrosolar	C3OG.DE	OW(V)	EUR	7.50	5.69	32%	147	100%	Burkhard Weiss
Centrotherm PV	CTNG.DE	UW(V)	EUR	25.00	33.50	-25%	900	100%	Christian Rath
Conergy	CGYG.DE	UW(V)	EUR	0.50	0.60	-17%	305	100%	Burkhard Weiss
GCL Poly Energy	3800.HK	UW(V)	HKD	1.20	1.80	-33%	4,091	64%	Shishir Singh
LDK Solar	LDK.N	N(V)	USD	8.00	6.81	17%	895	100%	Shishir Singh
Manz Automation	M5ZG.DE	N(V)	EUR	50.00	49.91	0%	284	55%	Christian Rath
Meyer Burger	MBTN.S	UW(V)	CHF	25.00	27.95	-11%	1,248	100%	Christian Rath
Motech Industries Inc	6244.TWO	UW(V)	TWD	94.06	124.50	-24%	1,463	100%	Shishir Singh
Pfeiffer Vacuum	PV.DE	N(V)	EUR	60.00	61.29	-2%	688	10-20%	Christian Rath
Phoenix Solar	PS4G.DE	N(V)	EUR	35.00	27.80	26%	260	100%	Burkhard Weiss
PV Crystalox	PVCS.L	OW(V)	GBP	0.80	0.56	43%	358	100%	Robert Clover
Q-Cells	QCEG.DE	UW(V)	EUR	6.00	5.12	17%	851	100%	Burkhard Weiss
Renesola	SOLA.L	N(V)	GBP	2.40	2.82	-15%	748	100%	Robert Clover
Renewable Energy Corp	REC.OL	N(V)	NOK	21.00	16.26	29%	1,717	100%	Robert Clover
Roth & Rau	R8RG.DE	N(V)	EUR	25.00	19.86	26%	408	80%	Christian Rath
SMA Solar	S92G.DE	N(V)	EUR	100.00	85.30	17%	3,756	100%	Christian Rath
Solaria Energia	SLRS.MC	UW(V)	EUR	1.60	1.58	1%	203	100%	Robert Clover
SolarWorld	SWVG.DE	OW(V)	EUR	12.50	8.97	39%	1,272	100%	Burkhard Weiss
Solon	SOOG.DE	N(V)	EUR	5.00	3.58	40%	78	100%	Burkhard Weiss
Suntech Power Holdings	STP.N	OW(V)	USD	13.00	7.74	68%	1,361	100%	Shishir Singh
Trina Solar	TSL.N	N(V)	USD	27.00	25.78	5%	1,620	100%	Shishir Singh
Wacker Chemie	WCHG.DE	OW(V)	EUR	155.00	119.70	29%	7,545	25%	Christian Rath
Yingli	YGE.N	N(V)	USD	10.50	11.13	-6%	1,620	100%	Shishir Singh

Source: HSBC estimates

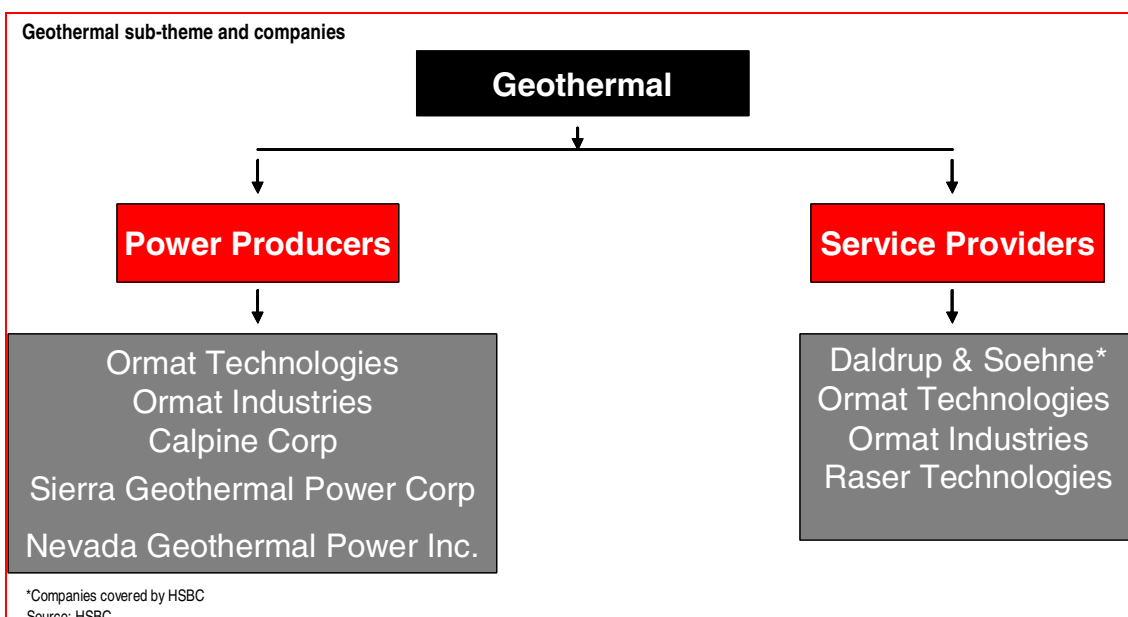
# Geothermal

- ▶ Geothermal is the lowest-cost source of renewable power and the only baseload renewable technology
- ▶ However, the availability of suitable geological locations has limited it to a niche application
- ▶ We expect global capacity to increase from 9GW in 2009 to 26GW in 2020

## Reason for inclusion

Geothermal energy is derived from naturally available resources and emits little greenhouse gas. The technology exploits the difference between surface and underground temperatures to produce heat or steam, which can be used to generate electricity. There are two main types of geothermal technologies – utility-scale and domestic.

Utility-scale technology relies on “hot rocks” – tectonic or magmatic activity about 3,000 metres underground that produces heat or steam, which can be piped to the surface and used for heating or to drive a conventional steam turbine for electricity. Use of the technology is restricted to areas around tectonic fault lines and active volcanoes.



#### Geothermal regulations in key markets

Country	Regulation	Remarks
US	ITC	10% of investment amount No maximum credit limit Includes geothermal heat pumps, equipments used to produce, distribute electricity
	PTC	USD2.2c/kWh The generating plant has to be operational before 1 Jan 2014
	Treasury Grants	10% of investment amount Projects placed in service in 2009 or 2010 If construction began in 2009 or 2010, project commissioning should be before 1 Jan 2017
Germany	The following FIT is available: <10MW >10MW	EUR15.84c/kWh EUR10.40c/kWh For projects commissioned before 1 Jan 2016, FIT is raised by EUR4c/kWh Digression by 1% Digression by 1%
France	The following FIT is available: Mainland Territories	EUR20c/kWh EUR13c/kWh
Italy	The following FIT is available: <1MW	EUR20c/kWh
Malaysia	The following FIT is available:	MYR28-46/kWh Digression by 1%, 21 years
Philippines	Exemption from all taxes except income tax Exemption from payment of import duties and tax on import of machinery, equipments etc Depreciation of capital equipments over 10 years Recovery of operating expenses not exceeding 90% of the gross value in any year Easy repatriation of capital investments and remittance of earnings	

Source: HSBC

Domestic technology uses ground supply heat pumps to extract heat from the sub-soil, which typically stays at a constant temperature of 10 to 16 degrees C. Excess heat can be passed back into the ground in the summer or to a heat extractor to augment existing water heating. The heat pumps are not geothermal in the strict sense of the word; they are heat exchangers underground.

We include within the geothermal sector manufacturers of geothermal equipment, geothermal drillers and service providers, which are shown in the diagram above.

### Key drivers in the sector

Geothermal energy is not regulated as much as solar and wind power, given its geographical restrictions. In some areas, incentives are provided and in some it falls within existing targets and definitions for renewable energy, as shown in the table below. In the UK, for example, installation grants are provided for installing the heat pumps. In suitable areas, tariffs are set to ensure appropriate economic returns on

investment. In addition, on a LCOE basis the cost of geothermal is the lowest at EUR43 per MWh (see table on page 13).

### Sector view

Given the low levelised cost of production, we see good growth potential for geothermal energy. Under our conviction framework of forecasts we estimate that global geothermal capacity will increase from 9GW in 2009 to 26GW in 2020, taking the global geothermal market to USD23bn in 2020 from USD6bn in 2009, a CAGR of 13%. That includes capital investment of USD10bn and electricity sales of cUSD13bn. The US accounts for about 30% of global geothermal capacity addition. Our four scenarios provide a market size range of USD17bn to USD25bn.

A CAGR of 13% to 2020 would make geothermal's growth slightly above average for the climate economy, but in absolute terms, it only represents 1.5% of the market for low-carbon-energy production. It is the only form of renewable baseload electricity generation and a



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HSBC's geothermal coverage

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Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Geothermal	Analyst
Daldrup & Soehne	4DSG.DE	N(V)	EUR	27.00	23.59	14%	163	>80%	Burkhard Weiss

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Source: HSBC estimates

niche but growing technology that is unlikely to see the same kind of supply pressures as wind and solar power. We see it as a source of diversification from the more common forms of renewable energy.

# Nuclear

- ▶ We consider nuclear power a key technology in low-carbon-power generation
- ▶ Policymakers are re-visiting nuclear in the light of carbon-emission constraints, but waste and proliferation issues remain
- ▶ Market size USD368bn by 2020e

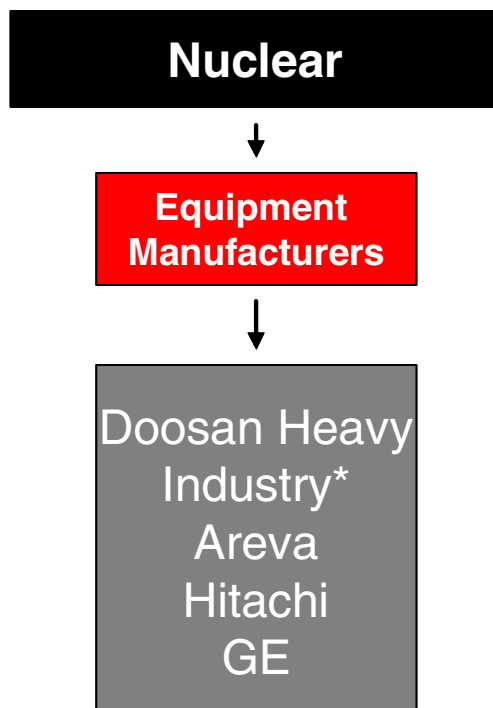
## Reason for inclusion

Some may question including nuclear assets in the CEO universe. Disposing of waste raises environmental issues and proliferation poses a security threat. But nuclear power can displace or replace greenhouse gases from fossil fuel

technologies, and we consider all technologies based on their capacity for reducing carbon emissions.

We struggle to see nuclear making a meaningful contribution to the generation mix from 2010 to 2020, because a new plant would need to be

Nuclear sub-theme and companies



\* Companies covered by HSBC  
Source: HSBC

### Nuclear energy targets in selected countries

Country	Nuclear energy targets
US	Federal loan guarantees for advanced nuclear reactors up to 80% of the project cost
China	70 GWe of capacity is planned to go online by 2020, and 200GWe by 2030
India	20GW nuclear power target by 2020. Aims for 25% of electricity from nuclear power by 2050.
Japan	30-40% share or more for nuclear power in total generation by 2030.
South Korea	27 GWe capacity by 2020, and 35 GWe by 2030
Germany	Phasing out of nuclear energy by 2020 policy has been put on hold by the new government in 2009.
Spain	Phasing out nuclear plants with the last reactor scheduled to close in 2034.
France	In January 2006 the President announced that the Atomic Energy Commission was to embark upon designing a prototype Generation IV reactor to be operating in 2020
Italy	25% of electricity from nuclear power by 2030
Canada	Build 9 new reactors by 2020
Mexico	There is some government support for expanding nuclear energy
Australia	Australia uses no nuclear power, but with carbon constraints on electricity generation likely, it remains a strong possibility as per PM's expert taskforce report.
South Africa	Early in 2007 the Eskom board approved a plan to construct of 20 GWe of new nuclear capacity so that nuclear's contribution to power would rise from 5% to more than 25% by 2025
Russia	FTP Program- 25-30% nuclear share in electricity supply by 2030, 45-50% in 2050

Source: HSBC

breaking ground now, with permits, approvals and construction finance in place, to have a chance of being commissioned by the end of the decade. However, we estimate nuclear could contribute meaningfully from 2020 to 2050.

Within the nuclear sector we would include all manufacturers of nuclear equipment. Operators of nuclear facilities are considered in the section on low-carbon-power producers.

### Key drivers in the sector

Cost and regulation remain the key drivers for nuclear power. Obviously, the technology is politically sensitive, limiting the number of markets. The growth opportunities appear to be in China and India, based on the need for new power in those fast-growing economies. In Europe, existing nuclear assets may be subject to windfall taxes, and political sensitivities make it unclear whether they will be replaced or their operation extended, except in France. The US looks as if it will replace and even expand its nuclear plants, but we expect only modest growth in the next decade. The table above shows nuclear energy targets in selected countries.

### Sector view

We estimate a market size ranging from USD350bn to USD389bn by 2020. Our conviction view is a market of USD368bn by 2020, implying a CAGR of 6%. This includes annual capital investment of USD50bn and annual electricity sales of USD318bn. We estimate total nuclear installations will reach c525GW by 2020 from an estimated c375GW at the end of 2009. Of the estimated 150GW of new capacity additions, we expect c40% will come in China and c14% in India.

Volatile commodity prices and commitments to cut emissions mean nuclear power is back in favour with governments for the first time in more than 20 years. The major obstacles are the up-front cost, which accounts for much of the cost of production, and an extremely long investment period. Lack of turn-key contract operators, a dearth of engineers, and concerns over safety have raised the cost of nuclear power so much that a new reactor is only a little cheaper to run than a conventional fossil-fuel plant at current fossil fuel and carbon costs. Our levelised cost of energy analysis shows the cost of generating electricity from nuclear is around EUR52 per MWh, which comes in at the low end of the scale and makes it attractive. However, that assumes plants are built

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**HSBC's nuclear coverage**

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Nuclear	Analyst
Doosan Heavy Industry†	034020.KS	OW(V)	KRW	110,000	68,800	60%	6,071	>10%	Tarun Bhatnagar

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal /oil such as coal based electricity generation or turbine manufacturers  
 Source: HSBC estimates

on time and on budget. Recent history suggests overruns are likely, which raises questions about nuclear's ability to add meaningfully to the generation mix outside China and India by 2020.

Our coverage of nuclear stocks is listed in the table above.

# Renewable-power providers

- ▶ RPPs represent the pure-play renewable-power generators; they are focusing on developing wind assets but are also involved in hydro, solar and geothermal
- ▶ Growth drivers come from regulation targeting greenhouse gas reduction and safeguard energy security
- ▶ We favour the large RPPs, not the independent producers, and believe regulatory and sovereign risk concerns have been overdone in the EU

## Reason for inclusion

Renewable Power Providers (RPPs) include both utilities and independent power providers. They are power-generation and energy companies that have made a strategic commitment to develop their renewable-power-generation business.

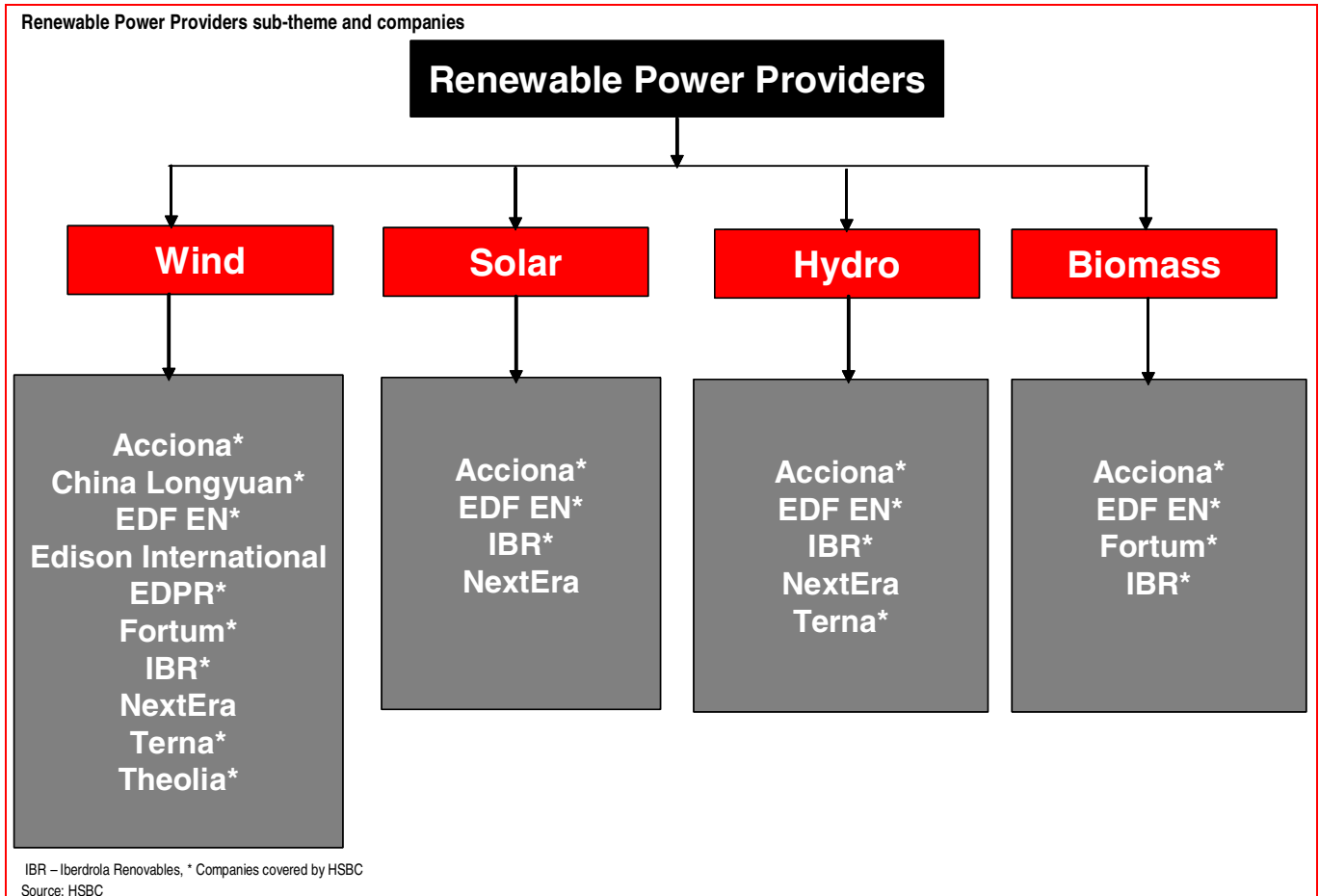
Utilities with some exposure to renewable power generation or which are also low-carbon or nuclear specialists we consider separately, as low-carbon power providers. We believe they have different regulatory and market price drivers, and consequently different valuation profiles.

The RPPs have focused exclusively on various renewable-power technologies, mostly wind, solar, hydro, mini-hydro, geothermal, marine and biomass power. Using such technologies to generate electricity should be emission-free. If it replaces fossil fuel generation, greenhouse gases will be reduced.

Generally speaking, most listed companies both develop and operate and maintain renewable assets. Some development, construction and maintenance can be outsourced, but increasingly operators of renewable-power-generation assets regard the development and maintenance as core competences as well.

## Key drivers in the sector

Growth in the sector is largely driven by regulation that grew out of efforts to curb greenhouse gases and safeguard energy security. The US, the EU and China have set targets for renewable-energy installations and production and put in place tariffs aimed at reaching those targets by providing appropriate economic returns for private investment. Utilities build and invest in response to those targets and to legal requirements that they build a certain amount of renewable assets or generate a portion of their power from renewable sources. A second key driver is the



availability of financing to build power plants. Most of the companies are just three to five years old; they are generally asset-poor but pipeline-rich. Legislative drivers are the same as those driving wind, solar (see pages 14 and 17 for wind and solar feed-in tariffs), geothermal, biomass and other renewable-energy technologies.

## Sector view

In our conviction scenario, we estimate about 1,000GW of renewable electricity-generation capacity will be added from 2010 to 2020, excluding nuclear and large hydropower plants. The cumulative installed capacity of renewable technologies in 2020 is estimated to be c1,355 GW vis-à-vis c355GW in 2009, implying a CAGR of c13%.

We estimate that about 75% of the new capacity addition will be in wind and solar technologies. We forecast new capacity for those technologies will increase at CAGRs of c5.5% and 16%, respectively. By 2020, we expect installed wind and solar capacity to reach c750GW and c300GW respectively. If the growth of the RPPs matches that of renewable installations, the category will be one of the above-average growth sectors in the low-carbon economic framework.

In addition, we believe the fallout from the credit crisis in the EU and US and the reduced access to project finance (and reduced order flow affecting the wind manufacturers) has created some interesting valuation anomalies. The crunch has affected in particular small and mid-sized developers. They were less well-capitalised before the credit crisis and consequently have found it

**HSBC's renewable power provider coverage**

Company	Ticker	Rating	Currency	Target price	Current price	Potential return	Market cap (USDm)	Revenue from Renewable Power	Analyst
Acciona	ANA.MC	OW(V)	EUR	94.00	62.29	51%	5,024	26%	James Magness
China Longyuan Power†	0916.HK	N(V)	HKD	8.30	7.85	6%	955	28%	Shishir Singh
EDF EN	EEN.PA	N(V)	EUR	34.00	30.74	11%	3,025	100%	James Magness
EDP Renovaveis	EDPR.LS	OW(V)	EUR	7.25	4.39	65%	4,860	100%	James Magness
Iberdrola Renovables	IBR.MC	OW(V)	EUR	3.50	2.58	36%	13,835	100%	James Magness
Terna Energy SA	TENr.AT	OW(V)	EUR	5.00	3.40	47%	472	45%	Vangelis Karanikas
Theolia	TEO.PA	N(V)	EUR	1.00	1.70	-41%	217	100%	Robert Clover

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal /oil such as coal based electricity generation or turbine manufacturers  
Source: HSBC estimates

harder to get financing than the larger utility names.

In the EU, the larger quoted utilities generally could still find financing, either from parent companies or from the market, and could still build plants in their core EU and US markets. Companies in China had few problems accessing finance.

Our coverage of the sector is given in the table above.



# Low-carbon power providers

- ▶ The LCPPs are non-pure-play utilities exposed to low-carbon power generation through renewables, hydro or nuclear power
- ▶ To be included in the CEO list, they must generate more than 20% of their revenues from renewables
- ▶ Many have conventional ‘dirty’ power-generation assets as well

## Reason for inclusion

Utilities and IPPs form the group we call low-carbon-power providers (LCPPs). They are power generation and energy companies that have made a strategic commitment to generate at least 20% of their revenues from the renewable, low-carbon, nuclear or carbon-capture-and-storage side of their businesses. Most are conventional utilities that are expanding into lower-carbon power generation. Pure-play renewable-power utilities are included in the RPP group, because we believe the two groups have different regulatory and market price drivers, and consequently different valuation profiles. The LCPPs have focused on fossil-fuel power generation but have also invested directly in nuclear power or carbon capture or indirectly in renewable-power generation through part-owned RPP subsidiaries. To the extent their renewable-power generation replaces fossil-fuel generation, greenhouse gases should be reduced.

## Key drivers in the sector

Regulation helps drive growth in the low-carbon-power part of the sector, as part of the effort to

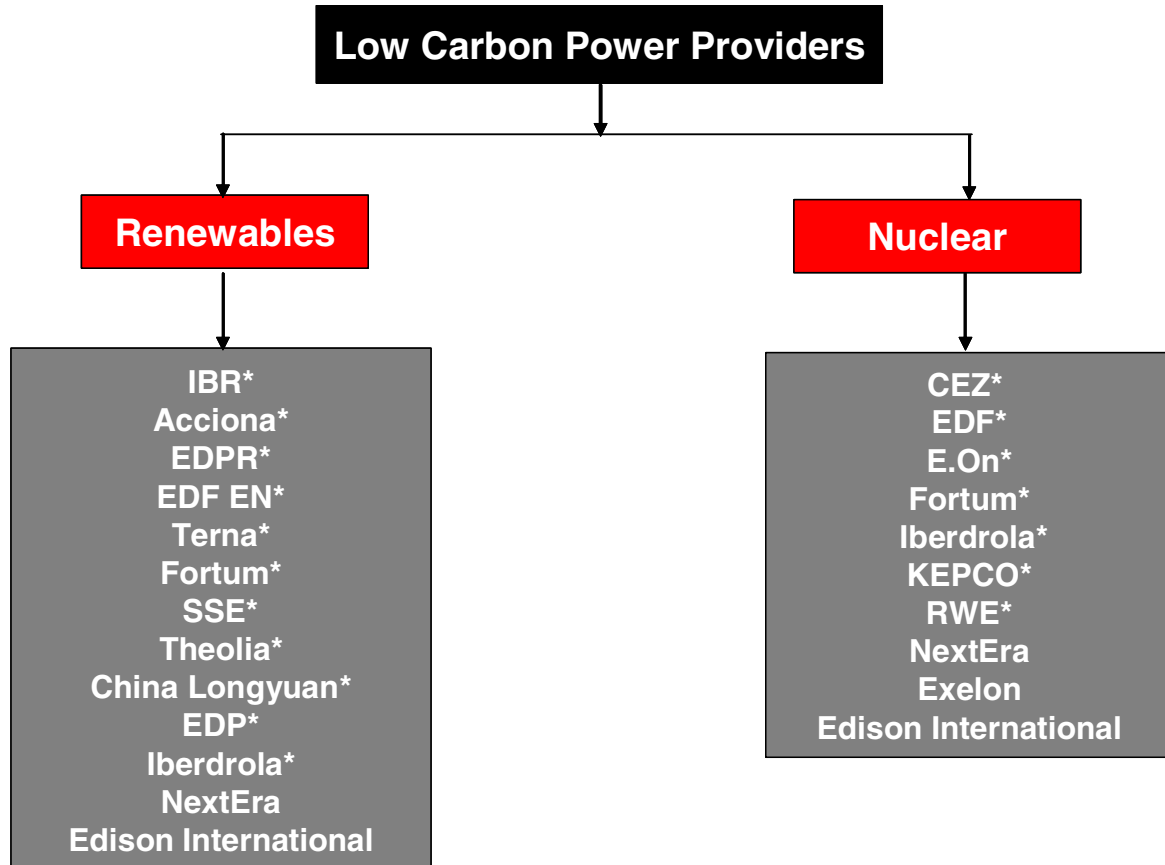
reduce greenhouse gases. Tariffs in the US, the EU and China are structured to encourage private investment. The availability of financing is the second key driver.

## Sector view

Investment drivers for LCPP stocks are the same as those for pure utilities. The current rating for the sector from our equity strategists is Underweight. Our European utilities analysts Adam Dickens, Verity Mitchell and José Lopez note the following negative drivers for Europe:

- ▶ The unexpected impact of US shale gas production has removed the US as a reliable customer for liquefied natural gas imports. That has created a glut in Europe and a liquid spot market where prices are determined by market forces, putting pressure on wholesale gas margins and clean spark spreads.
- ▶ Nuclear power generators are targets for windfall taxes as austerity programmes are introduced. Visibility is lacking on new investment in conventional generation, given the increased use of wind power, which will

Low-carbon power providers sub-theme and companies



IBR – Iberdrola Renovables, SSE – Scottish & Southern, \* Company covered by HSBC  
Source: HSBC

inevitably cut the load factor of combined-cycle gas turbine units in particular. Spain, which had Europe's largest over-capacity even before taking account of the country's abundant wind-farm capacity, is a precursor of what may happen elsewhere.

- Sector balance sheets are relatively indebted, bringing rights issues (National Grid, Enel, Gas Natural) and reducing the certainty of

dividend growth required for the sector to maintain some defensive attraction.

Our coverage of LCPP stocks is listed in the table below. A number of the European stocks are the partially quoted (typically around 25%) independent renewable-power units of European utilities, such as Iberdrola Renovables at Iberdrola and EDF Energies Nouvelles at EDF.

HSBC's low-carbon power providers coverage

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from LCEP*	Analyst
EDF	EDF.PA	UW	EUR	39.00	31.43	24%	73,744	86%	Adam Dickens
EDP†	EDP.LS	OW	EUR	3.20	2.40	33%	10,649	51%	Jose A Lopez
Fortum OYJ	FUM1V.HE	OW	EUR	21.00	18.17	16%	20,484	67%	Adam Dickens
Iberdrola	IBE.MC	N	EUR	6.26	5.56	13%	37,974	39%	Jose A Lopez
KEPCO†	015760.KS	N	KRW	36500.00	29150.00	25%	15,598	40%	Paul Choi

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal/oil such as coal based electricity generation or turbine manufacturers  
Source: HSBC estimates

# Bioenergy

- ▶ The bioenergy opportunity extends beyond just biofuels for transport
- ▶ Its potential is constrained by competition for raw materials
- ▶ We expect a market potential of USD176bn by 2020

## Reasons for inclusion

Biomass is part of the carbon cycle, in which atmospheric CO<sub>2</sub> helps to grow plants through photosynthesis and the plants are then used to produce electricity, gas, or another fuel. This means bio-energy may become a widely available, renewable and carbon-neutral source of energy.

## What's in the sector?

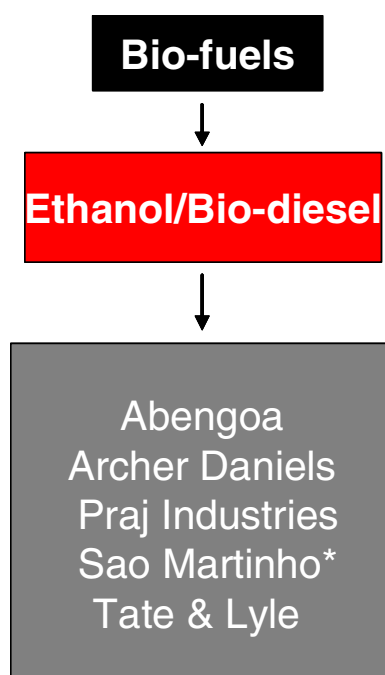
Various issues affect biofuel stocks, such as the life-cycle of greenhouse-gas emissions and the

substitution effects of raising crops for fuel instead of food, because different feedstocks and different production processes have varying carbon footprints. We do not include biofuels based on corn ethanol or palm oil because there is insufficient carbon benefit.

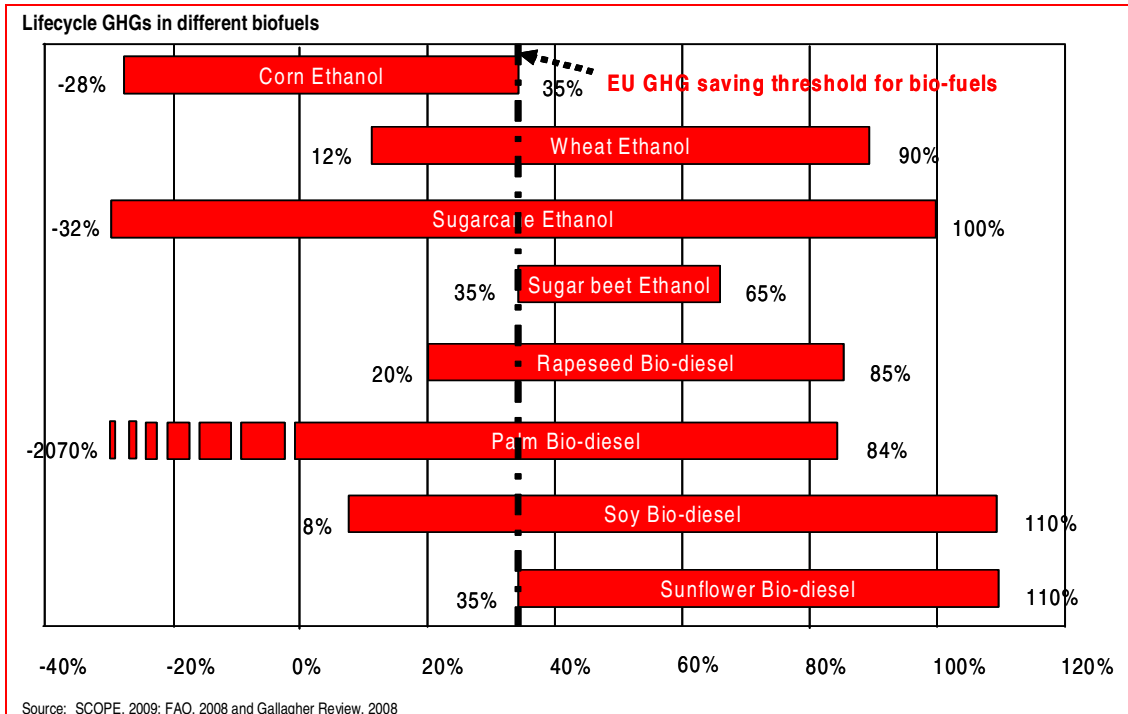
## Key drivers in the sector

Sector drivers are a combination of production and blending targets, which vary from region to region. In the EU, biofuels are part of the overall

Bio-fuels sub-theme and companies



Note: HSBC coverage stocks above are sugar based \* Company covered by HSBC.  
Source: HSBC



target for renewable energy. However, the potential of biofuels is constrained by competition for raw materials, particularly with the food industry, and by the relative carbon footprints of different feedstocks and production processes. The chart below shows the latest assessments of the range of relative carbon benefits or costs of different feedstocks. We have taken the EU's target for biofuels to achieve a 35% improvement on fossil fuels as our baseline. On the chart below, a negative reading indicates the process adds to emissions. Consequently, we have excluded corn ethanol and palm biodiesel from our estimates. In the chart below, emission reduction potential for ethanols are measured relative to gasoline, and the emission reduction potential of biodiesels is

relative to diesel, ie a negative value denotes a higher emission compared to either gasoline or ethanol, depending on the feedstock.

## Sector view

Many country targets are already being implemented. We currently see few upside catalysts for the sector as a whole, however. Our coverage is given below.

### HSBC's bio-energy coverage

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Bio-energy	Analyst
Cosan SA†	CSAN3.SA	OW(V)	BRL	30.00	22.89	31%	5,308	76%	Pedro Herrera
São Martinho	SMT03.SA	OW(V)	GBP	21.00	17.20	22%	1,107	62%	Pedro Herrera

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal /oil such as coal based electricity generation or turbine manufacturers  
Source: HSBC estimates

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# Energy efficiency

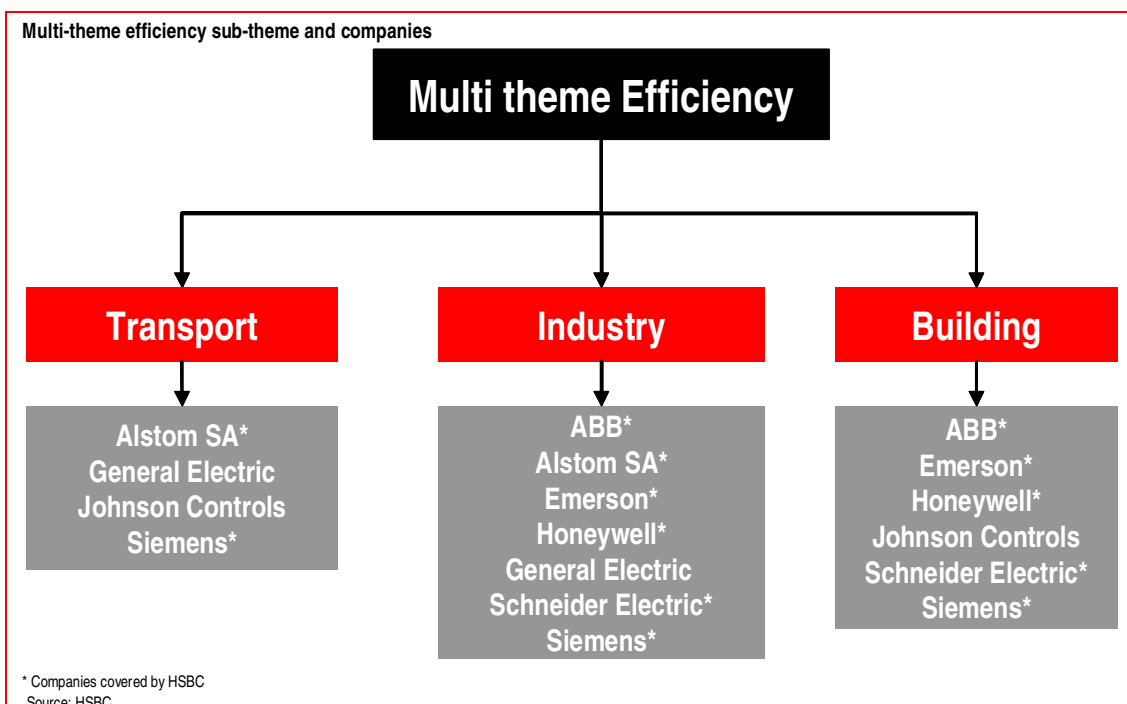
# Multi-theme energy efficiency

- ▶ We expect energy efficiency to become the biggest single opportunity by 2020
- ▶ The sector incorporates companies exposed to energy efficiency in different industries
- ▶ Economic and regulatory drivers are expected to generate a 12% revenue CAGR and a market size of USD1.2trn in 2020

## Reasons for inclusion

Energy efficiency is the cheapest way of curbing emissions and can target a wide range of industries and processes. Efficiency has already improved a great deal: 1bn kilowatt hours

produced about twice as much GDP in 2007 as in 1980, according to the International Energy Agency: USD3.25bn of GDP, compared with USD1.6bn. We expect this to increase to USD4.25bn by 2020.



This category captures companies with exposure to more than one of the efficiency themes of industrial, building or transport efficiency (which we look at in the following pages). Here, we include the companies that are exposed to more than one sub-category; indeed they may also have businesses that serve the renewables segment.

## What's in the sector?

The total market comprises industrial, transport and buildings efficiency. Our analysis in *Sizing the Climate Economy* points to a range of USD722bn to USD1.4trn for the combined energy efficiency sectors in 2020. Our conviction case scenario is for a market worth USD1.2trn. Process efficiencies can span a wide range of industries and segments, and in this segment we include companies with exposure to the different segments within energy efficiency.

## Key drivers in the sector

The drivers throughout the sub-categories are compatible, namely favourable economics and regulation driving the market for energy-efficient products and services. Energy-efficiency investments can have short pay-back periods and negative net abatement costs – the fuel-cost savings over the lifetime of the capital stock often outweigh the additional capital cost of the efficiency measure, even when future savings are discounted.

## Sector view

We are positive on multi-industry efficiency. The cost savings make the economics are compelling for replacement-cycle spending economic growth improves. Many companies in the sector are geographically diverse, so they can capitalise on the different growth rates in emerging and developed markets. Our current equity strategy bias towards industrials and energy is also positive for this category. However, one risk that climate investors should be aware of is that large conglomerates may be involved in 'dirtier' industries like coal-fired power generation as well as efficiency processes. We have not incorporated carbon risk into our analysis, but have denoted the higher carbon risk companies in our coverage tables. Our coverage of the sector is given in the table below.

HSBC's multi-theme energy efficiency coverage

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Multi-theme energy efficiency	Analyst
ABB	ABB.VX	N	CHF	23.00	19.62	17%	45,083	49%	Colin Gibson
Alstom†	ALSO.PA	OW(V)	EUR	70.00	37.64	86%	14,052	38%	Colin Gibson
Emerson Electric Co	EMR.N	N	USD	50.00	46.65	7%	35,100	19%	Tarun Bhatnagar
Honeywell International	HON.N	UW	USD	40.00	39.06	2%	30,163	38%	Alok Katre
Schneider Electric	SCHN.PA	OW	EUR	98.00	83.69	17%	28,685	29%	Matt Williams
Siemens AG	SIEGn.DE	OW	EUR	95.00	71.78	32%	83,276	19%	Colin Gibson

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal/oil such as coal based electricity generation or turbine manufacturers  
 Source: HSBC estimates



# Industrial efficiency

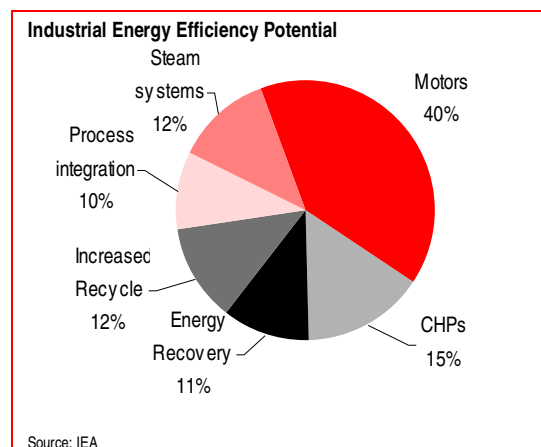
- ▶ Industry is a large CO<sub>2</sub> contributor
- ▶ The most energy-intensive sectors are iron and steel, cement, chemical and petrochemical, pulp and paper and aluminium
- ▶ We estimate the market to be worth USD183bn by 2020

## Reasons for inclusion

Delivering low-carbon economic growth involves two inter-related steps: first, reducing the amount of energy needed by the economy (energy efficiency) and second, reducing the amount of pollution involved in energy production (carbon productivity). The simplest way to reduce global emissions is to reduce the amount of energy that industry consumes: industrial use accounts for almost a third of global energy demand and close to 40% of worldwide CO<sub>2</sub> emissions. Although the global economy has already tended to become more energy- and carbon-efficient as new technologies have already entered the system, we expect industrial energy efficiency markets to continue to grow. Here, we include companies that generate more than 20% of revenues from products and services related to industry.

## What's in the sector?

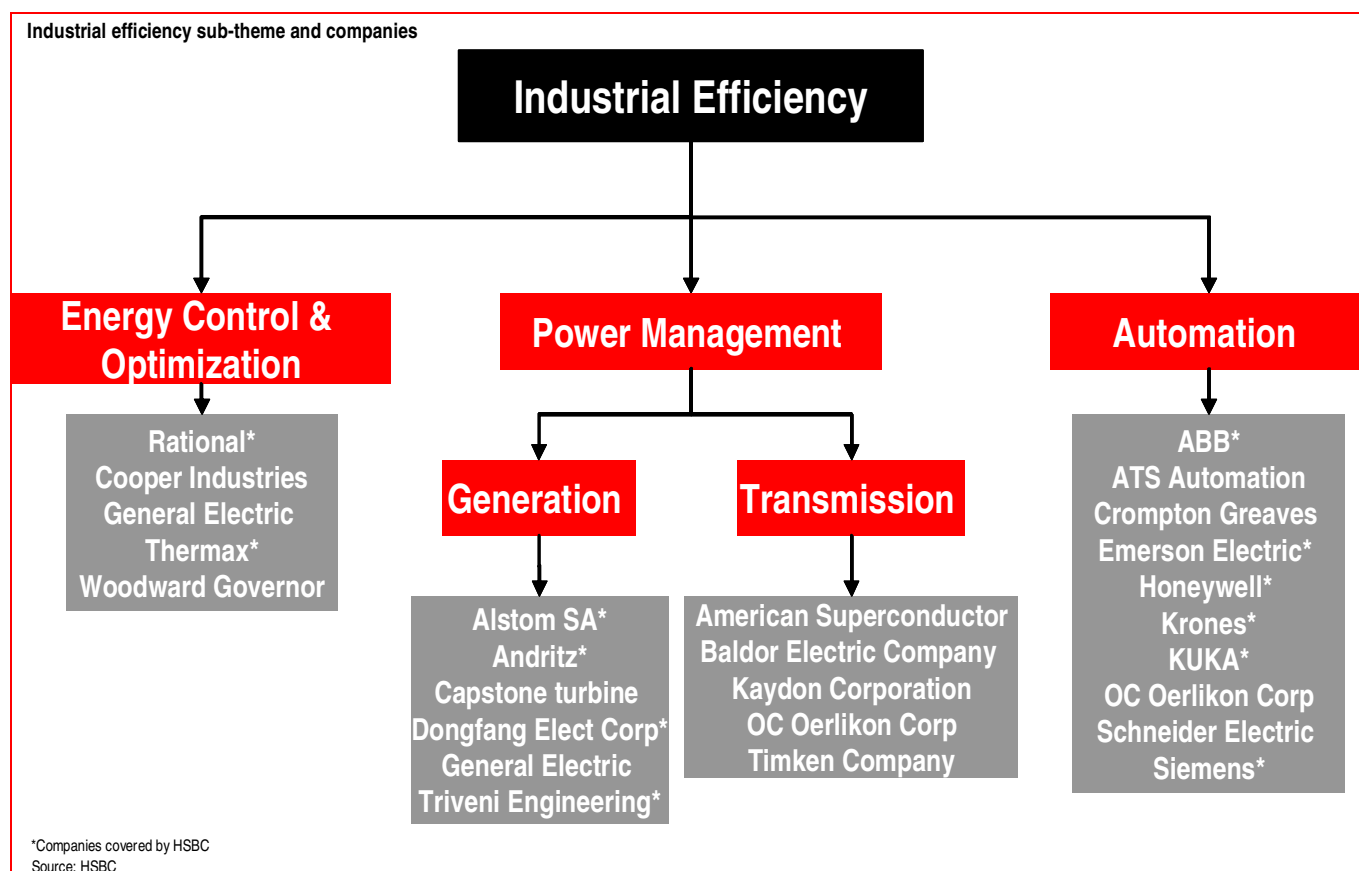
The sector includes companies that are developing new systems or equipment to improve industrial or manufacturing process efficiency, by generating heat and power and increasing the efficiency of motor-driven systems at the same time, for example, or developing process automation and control systems. They are focused on equipment purely for industrial sectors.



## Key drivers in the sector

Regulatory drivers have been implemented for industrial efficiency over the years. An EU agreement in 1997, for example, led to the introduction of three efficiency bands and labelling for motors, which succeeded in replacing inefficient motors. The US Department of Energy requires efficiency ratings to be displayed on motor nameplates. Some countries provide incentives for energy-efficiency projects, eg Denmark, offers USD7.7/kW for energy-efficient motors.

We expect regulatory drivers to continue to play a role as countries target greenhouse gas reduction by implementing energy performance standards. Higher fuel prices drive the replacement cycle towards more fuel-efficient products.



## Sector view

We are positive on industrial efficiency because it benefits from both regulatory and economic drivers, and tends to be a cost saver for many businesses. In Sizing the Climate Economy, we forecast a range of USD154bn and USD217bn. Our conviction case points to a market of USD183bn for industrial efficiency. We would focus on companies that are poised to benefit from the faster economic growth in emerging markets where possible. In addition, our equity strategy bias is currently towards industrials.

### HSBC's industrial efficiency coverage

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Industrial efficiency	Analyst
Krones	KRNG.DE	N(V)	EUR	46.00	42.58	8%	1,630	70%	Richard Schramm
KUKA	KU2G.DE	N(V)	EUR	13.50	12.48	8%	537	>35%	Richard Schramm
Rational	RAAG.DE	OW(V)	EUR	142.00	142.95	-1%	2,063	80%	Richard Schramm
Thermax India†	THMX.BO	N(V)	INR	750.00	758.15	-1%	1,919	20%	Suman Guliani

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal/oil such as coal based electricity generation or turbine manufacturers  
Source: HSBC estimates

# Transport efficiency

- ▶ Transport consumes more than half the oil used worldwide
- ▶ It produces 14% of the world's greenhouse gas emissions
- ▶ Fuel efficiency, low-carbon vehicles and shifting to mass transit should form a USD677bn market by 2020e

## Reasons for inclusion

Transport causes about 14% of global emissions now, which is expected by the IEA to rise to 17% by 2030. By that time, more than 60% of transport emissions will come from passenger cars and small commercial vehicles, according to the United Nations Conference on Trade and Development. Making cars more fuel-efficient is a key to curbing emissions.

## What's in the sector?

Transport efficiency includes fuel efficiency, shifting to mass transit and using low-carbon vehicles. Fuel efficiency includes companies that supply efficient engineering systems and that manufacture lighter, energy-efficient components, components for electric vehicles, or parts for cleaner forms of transport, such as bicycles. Shifting to mass transit involves buses, trains and trams, which are less carbon-intensive. Low carbon vehicles include hybrids, plug-in hybrids and pure electric vehicles (see *Hybrid and electric vehicles*, Niels Fehre, October 2009). However, no auto equipment manufacturers are included in our list because revenues from electric vehicles do not meet our 20% threshold yet, and we do not expect them to in the next three years. In our fuel efficiency analysis we include companies that supply efficient engineering systems,

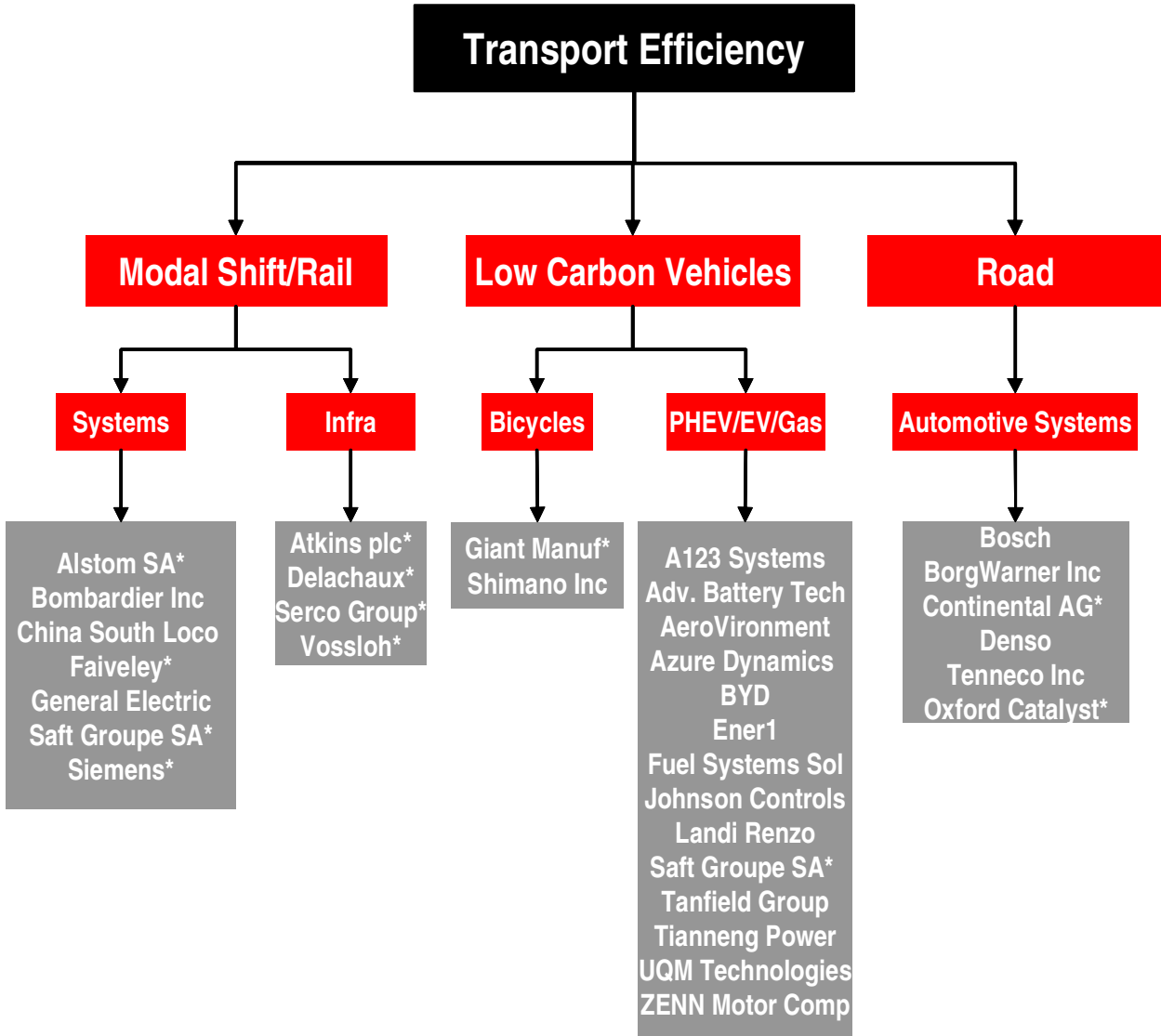
manufacturers of lighter and energy efficient component parts or components for electric vehicles, or parts that are supplied to cleaner forms of transport (such as bicycles), or suppliers of metals into autos. The diagram below shows the sub-categories and their relevant companies.

## Key drivers in the sector

Regulation plays a key role in the move towards more fuel-efficient transport. Governments can shift consumer behaviour by imposing higher taxes on cars with bigger engines, for example. We believe these initial incentives will drive sales of the first generation of PHEVs and EVs from 2011-12; we expect significant growth in EVs after 2015 as prices decline and more products are launched. The table below shows the global incentives for plug-in hybrids (PHEV) and pure electric vehicles (EV).

In the future, we think it is likely more efforts will be made to target emissions from ships and planes, which could push people towards lower-carbon transport such as rail. As governments reduce their budgets, however, the spending needed to provide infrastructure for low-carbon transport may decline. The chart on page 42 shows the different carbon intensities of different modes of transport.

Transport efficiency sub-theme and companies



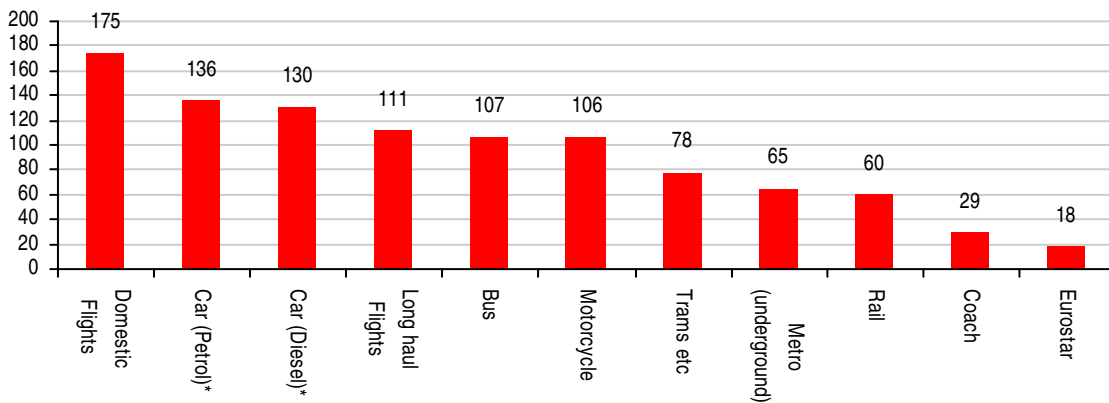
\* Company covered by HSBC  
 Source: HSBC

Global targets and incentives for PHEV/EV

Country	Target	Cash Incentives		Registration Tax Exemption (USD)	Road Tax Exemption (USD)	Value Added Tax Exemption (USD)	
		USD per EV	Budget allocation (USDbn)				Others/plans
<b>Africa</b>							
South Africa	Plans to promote battery production and EV production	-	-	Green tax on normal cars from September 2010	No	No	No
<b>Asia</b>							
Australia	Still at early stages with plans to have first cars on road by 2012	-	-	-	No	No	No
China	2011: 0.5m annual production	879-8,800	1.5	-	No	Yes	No
India		15% discount in Delhi		Excise duty waived for EVs in 2010 Union Budget and on batteries	Yes	Yes	Yes
Japan	2020: 50% market share next gen vehicles	2,000	-	-	336	Yes	Yes
S. Korea	2012: 30,000	-	-	-	860	344	11
<b>North America</b>							
Canada	2018: 0.5m			Plans for new infrastructure for electric charging stations, and special lanes for slow moving electric cars	No	No	No
Mexico	-	-	-	Agreement with Japanese auto giant Nissan on recharging infrastructure for electric vehicles in 2011	No	No	No
US	2015: 1m PHEV stock	4,000	2.8	cUSD1.5bn in grants to batteries; cUSD500mn grants to produce electric drive components and cUSD400mn for test demonstrations	No	No	No
<b>South America</b>							
Brazil	-	-	-	Alternative fuel vehicles already extremely popular and government concentrating to promote EVs by developing charging infrastructure	-	-	-
<b>Europe</b>							
Denmark	2020: 0.2m	-	0.047	Plans to subsidise fleet lease of EVs	Yes	Yes	No
France	2020: 2m	6,984	0.542		Yes	No	No
Germany	2020: 1m	-		Plans under development to promote EV from 2012	NA	Yes	No
Israel	2012: 0.04 to 0.1m	-	-	70 to 100 recharge stations will open by 2011	Yes	No	No
Italy	-	4,888	-	Plans to subsidise electric two-wheelers along with charging stations	No	Yes	No
Spain	2014: 1m	8,155	0.332		Yes	No	No
UK	2020: 1.2m	8,073	0.386		No	Yes	No

Source: Government websites, Frost & Sullivan, HSBC

CO2 emission of different modes of transport (gCO2/passenger km)\*\*



\*Considering average car occupancy rate of 1.52 passengers per car for UK from EEA 2007. \*\*Not life cycle emissions  
Source: HSBC, <http://www.defra.gov.uk/environment/business/reporting/pdf/passenger-transport.pdf> (2008)

## Sector view

We are positive on transport efficiency because it represents the largest opportunity in energy efficiency. We expect the market to grow at an 18% CAGR and reach USD677bn by 2020. We think countries with faster GDP growth, such as India and China, are more likely to invest in transport infrastructure than countries in Western Europe over the medium term, so we would look for companies exposed to those regions.

### HSBC's transport efficiency coverage

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Transport	Analyst
Atkins WS	ATKW.L	N	GBP	8.00	6.80	18%	1,049	xx	Matthew Lloyd
Delachaux SA	DELX.PA	OW	EUR	60.00	50.13	20%	830	56%	Christophe Quarante
Faiveley SA	FAIP.PA	OW	EUR	72.00	60.82	18%	1,112	100%	Christophe Quarante
Giant Man'ftg	9921.TW	OW	TWD	98.87	116.00	-15%	1,339	86%	Herald van der Linde
Oxford Catalyst	OCG.L	OW(V)	GBP	1.00	0.73	37%	68	100%	Charanjit Singh
Serco Group	SRP.L	N	GBP	6.10	5.82	5%	4,403	xx	Matthew Lloyd
Vossloh	VOSG.DE	OW	EUR	97.00	78.77	23%	1,479	59%	Juergen Siebrecht

Source: HSBC estimates

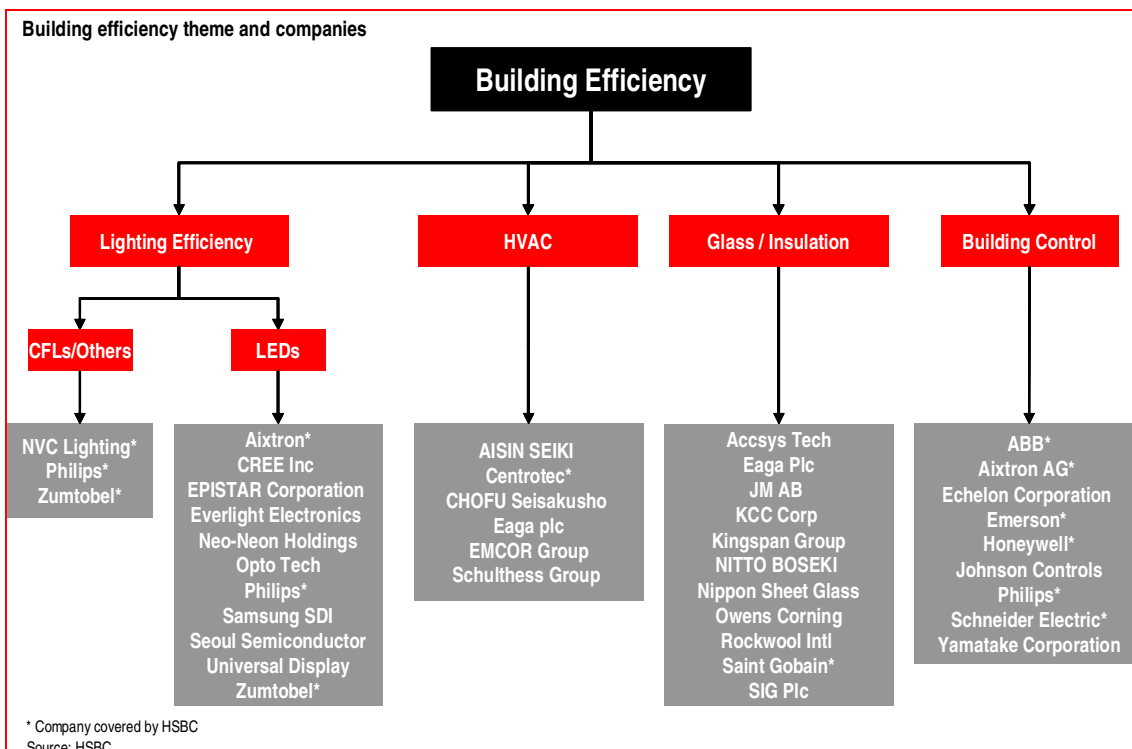
# Building efficiency

- ▶ Building efficiency is one of the most interesting investment themes in the CEO universe
- ▶ The two biggest market segments by 2020 are insulation and lighting, at USD79bn each
- ▶ We expect the fastest growth in HVAC, a 10-year CAGR of 14%

## Reason for inclusion

Building emissions account for over 40% of global emissions. Since many buildings in the developed world pre-date energy-efficiency regulation, improving building efficiency is a relatively cheap and easy way to reduce emissions. Building controls or insulation, for example, can offer payback periods of just three to five years.

The building industry offers products, such as advanced insulation and glass, that control the transfer of heat into and out of buildings; more efficient lighting, which relies on the use of light emitting diodes, compact fluorescent lamps and sensors; and directional lighting and smart systems that can manage power consumption in buildings.



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### Building energy efficiency in selected countries

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Country	Building Energy Efficiency targets
Australia	Phase-out of all incandescent bulbs by 2009 with full enforcement of new lighting standards by 2009-2010
China	11th Five Year Plan (2006-2010) sets a target of reducing energy consumption from lighting and HVAC in public buildings by 50%; from 2006 on incandescent lighting is to be phased out
EU	Energy Performance of Buildings Directive (2009) sets a target of reducing energy consumption by 5% to 6% from 2009 by 2020. It requires all new buildings to be nearly zero-energy buildings by 2020. By 2018, all public buildings will be nearly zero-energy buildings. Member states will list incentives from technical assistance and subsidies to low-interest loans by mid-2011. It also sets minimum energy-efficiency and functionality requirements in an attempt to phase out incandescent lamps between 2009 and 2012.
France	All new homes and buildings are to undergo an energy performance evaluation and receive an energy performance certificate stating the level of energy consumption and greenhouse-gas emission
India	Energy Conservation Building Code has set a minimum requirement for building envelope components, lighting, HVAC, electrical systems, water heating and pumping systems
Japan	Basic Program for Housing has set a target of energy saving measures for 40% of housing by 2015
UK	20% improvement in energy efficiency in new buildings, relative to 2002 regulations
US	The Energy Policy Act (2005) mandates a 35% drop in energy use from 2005 by 2010 for all existing federal buildings, promotes energy efficient technological innovation through low interest loans and tax credits, promotes energy-efficient technological innovation through low-interest loans and tax credits. The Energy Independence and Security Act (2007) establishes a zero-energy commercial buildings initiative. Under this initiative a national goal is set to achieve zero-net-energy use for new commercial buildings built after 2025. It requires that total energy use in federal buildings be reduced 30% from 2005 by 2015. To assist energy efficiency and conservation strategies it authorizes the Energy Efficiency and Conservation Block Grant (EECBG) Program with a budget of over USD2.7 billion.

Source: HSBC. \*Not covered by HSBC

We split the building-efficiency sector into four main segments: insulation, efficient lighting, building controls and heating, ventilation and air conditioning, or HVAC.

Building efficiency is unashamedly low technology compared with power generation, but insulation and efficient lighting will probably provide equally compelling emission-reduction stories.

### Key drivers in the sector

Public policy on greenhouse gases is increasingly focusing on building efficiency, since it is a fairly cheap and easy way to reduce emissions. The key challenge is not to make new buildings more efficient but to retrofit existing buildings. This is as much a financing challenge as it is a logistical and compliance one. Efficient lighting is much simpler to achieve: simply phase out incandescent bulbs and replace them with LEDs and CFLs. LEDs consume 75% less energy and last 25 times longer than incandescent bulbs; CFLs consume 66% less energy and can last 10 times longer than incandescent lighting.

The world population is forecast to grow from 6bn to 9bn by 2050. Migration to urban areas is expected to increase and building regulation is likely to get tougher. Greater demand for building efficiency is likely to be one result. Regulatory drivers are set out in the table above.

### Sector view

We expect the total building efficiency market to reach USD245bn in our conviction scenario for 2020 with the two largest contributors being insulation and efficient lighting. We expect the HVAC and building-controls markets to be about half the size of lighting and insulation.

We believe the four sub-segments are among the most compelling investment stories in the climate-change universe, with a combination of solid growth backed by strong regulation. Generally speaking, austerity in the developed world is pushing efficiency more than renewable energy. It is just cheaper to use less energy than to build new wind farms, and it reduces emissions.



**HSBC's Building efficiency coverage**

<b>Company</b>	<b>Ticker</b>	<b>Rating</b>	<b>Currency</b>	<b>Target price</b>	<b>Current price</b>	<b>Potential return (%)</b>	<b>Market cap (USDm)</b>	<b>Revenue from Building efficiency</b>	<b>Analyst</b>
Aixtron	AIXGn.DE	OW(V)	EUR	34.00	19.60	73%	2,514	91%	Christian Rath
Centrotec	CEVG.DE	OW(V)	EUR	16.00	14.02	14%	298	66%	Burkhard Weiss
NVC Lighting Holding	2222.HK	OW(V)	HKD	4.40	3.48	26%	1,367	100%	Ken Ho
Philips	PHG.AS	OW	EUR	29.00	22.11	31%	27,668	30%	Matt Williams
Saint Gobain	SGOB.PA	N(V)	EUR	31.00	29.04	7%	19,561	26%	John Fraser-Andrews
Zumtobel	ZUMV.VI	N(V)	EUR	15.00	13.10	15%	723	70%	Svenjo Behrens

Source: HSBC estimates

# Energy storage

- ▶ Cleaner and more environmentally-friendly energy storage required
- ▶ We estimate the energy-storage market will reach USD63bn in 2020
- ▶ The key drivers are hybrid and electric vehicles

## Reasons for inclusion

Energy storage is important because enabling a low-carbon economy means shifting to cleaner energy. Unfortunately, some cleaner energy sources tend to be intermittent, so storage is required to match supply with demand. In addition, demand for electricity storage devices is likely to increase as product ranges such as electric vehicles grow. The global energy market is looking for cleaner and more environmentally-friendly storage than conventional lead acid, nickel cadmium and metal hydride batteries. The industry faces two main challenges: high cost and technical imperfections.

The biggest share of the global storage market is taken by rechargeable batteries, according to Frost & Sullivan, and they are expected to maintain their dominance at least in the next decade. Lead acid has the largest share of the rechargeable-batteries market and Frost & Sullivan expect it to remain the largest market. The secondary lithium market is expected to grow the fastest.

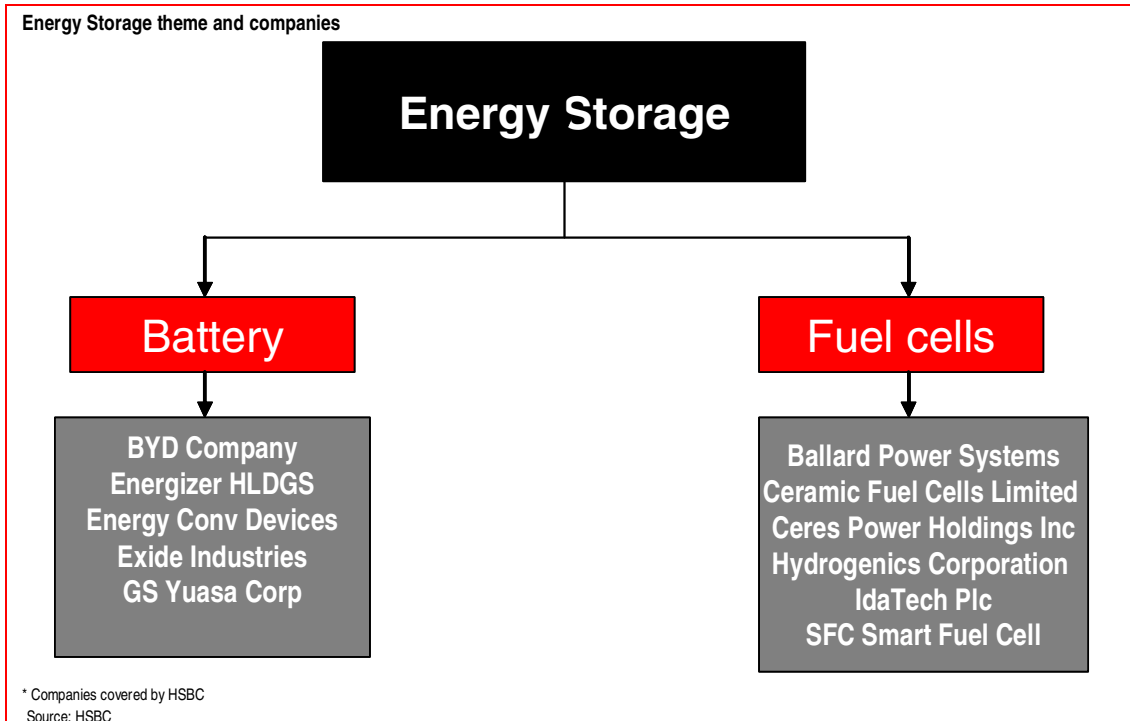
In the overall storage market, fuel cells are expected to grow the fastest over the next five years. They are also energy sources, which release the energy stored in natural gas or hydrogen fuel to create electricity. Fuel cells are available commercially, but are only just now being developed and deployed. Significant challenges

for mass deployment include both cost and performance issues. We doubt fuel cells will be a leading technology for mass markets in the next decade. However, they might be deployed in niche markets like distributed power generation.

## Key drivers in the sector

Regulatory issues, operating cost and consumer demand are among the main drivers in storage. As governments introduce policy measures such as higher taxes on gas guzzlers, demand for hybrids and electric vehicles should increase. The growth in these markets will be important for the size of the battery market.

Governments around the world are investing in R&D on utility-scale storage, such as lithium ion and flow batteries. Alternative storage technologies such as compressed air energy storage and flywheels for frequency regulation are also being researched. The US alone has earmarked cUSD2.4bn for electric vehicles and advanced batteries under the American Recovery and Reinvestment Act of 2009. The EU has the European Green Cars Initiative to provide cost-based loans to car producers and suppliers to finance innovation like electric vehicles. The EU is also spending cEUR10.5m on various energy-storage research projects over the next couple of years.



## Sector view

Hybrid and electric vehicles are likely to provide long-term drivers, but we prefer fuel-efficiency plays over energy storage. We do not see a strong demand catalyst for batteries in the coming months. Under our four scenarios, we estimate a market size range of USD46bn to USD105bn. Our conviction scenario is USD63bn. For fuel cells our conviction forecasts point to a USD3bn market.

### HSBC's energy storage coverage

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Fuel cell	Analyst
Saft Groupe	S1A.PA	OW(V)	EUR	32.00	24.89	29%	793	27%	Pierre Bosset
SFC Energy	F3CG.de	N(V)	EUR	6.00	5.72	5%	52	83%	Christian Rath

Source: HSBC estimates

# Water/Waste themes

# Water

- ▶ Water stress is expected to affect 0.4bn to 1.7bn people by 2025
- ▶ Fresh-water consumption worldwide has more than doubled since World War II and is likely to rise a further 25% by 2030
- ▶ Population growth, agriculture and industry drive increased demand

## Reasons for inclusion

Water is a climate-change theme because global warming is likely to lead to water shortages and extreme weather events such as increased rainfall and flooding. Water stress already exists in some regions such as the Middle East, and drought has been a feature in Australia since 2003. Climate change is likely to exacerbate the problem. At the same time, growth in population, agriculture and industry is driving increased demand. Currently, 70% of water use is for agriculture, 20% by industry and 10% for consumption.

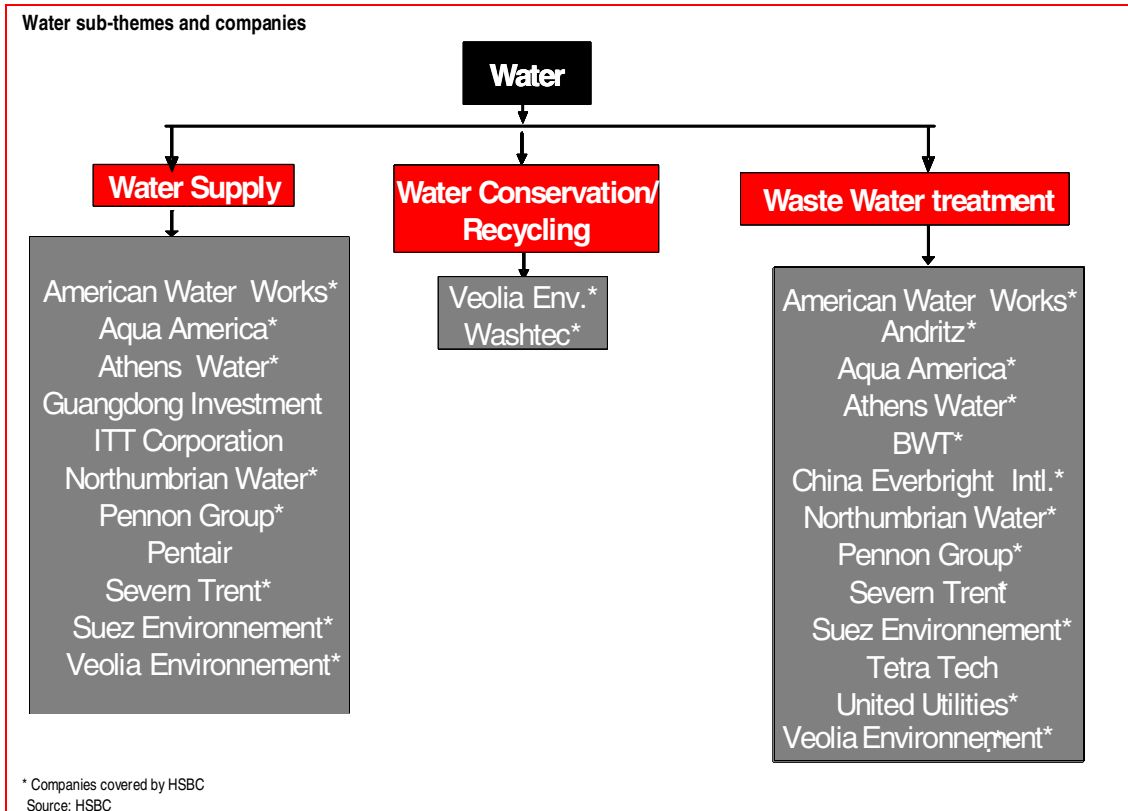
Long-term scenario analysis for water forecasts is outside the scope of our accompanying report, *Sizing the Climate Economy*.

## What's in the sector?

We break the sector down into three categories: water supply, water conservation and recycling and advanced water treatment. Water supply and waste-water services offer the largest investable opportunity. We highlight both HSBC coverage and other stocks related to the theme in the chart below.

We divide our coverage of water companies into two groups:

- ▶ The three French water and waste companies, Seche Environnement, Suez Environnement and Veolia Environnement, which have international operations and are more geared to international water scarcity and to global economic recovery, and Severn Trent Services, which despite its relatively small size (cGBP30m of operating profit in 2010e) has operations in Australia, China, MENA, Southern Europe and the US.
- ▶ Domestically-focused companies, which include the UK water companies (except for Severn Trent), American Water Works, Aqua America, Athens Water and Seche (Saur). Aqua America and American Water Works have considerable scope to grow in the US in our view, because it is a key market for consolidation.



## Key drivers in the sector

The significant demand drivers for water-related investment range from improving demand management with smart meters to improving the supply of water by minimising leakage and building adequate infrastructure to creating more efficient irrigation systems. (See *Global Water, growth despite recession and balance sheet constraints*, Verity Mitchell, March 2010.) But water is a capital-intensive business, and capital constraints remain a negative for companies. Environmental legislation is driving investment to improve water and water-treatment standards, but for the most part companies are cash-flow negative (after dividends). Government budgetary constraints further restrict opportunities in global water for now.

Among the regional growth drivers are the Australian government's commitment in May 2008 to spend cAUD13bn to ensure water

supplies in the changing climate; Victoria, South Australia, Canberra and Western Australia are already looking for new private players. In China, economic development, urbanisation, stimulus and the drought in many parts of the country as growth drivers. In India, the key driver is the revised National Water Policy adopted on 1 April 2002, which makes drinking water a priority. It also advocates private-sector participation. In France, a robust regulatory market with provisions for affermage and concessions provides growth opportunities; in the UK, the key growth drivers are climate change, regulation and an ageing water and sewerage infrastructure. In the UAE and Saudi Arabia, water demand is multiple times higher than the supply, which represents a key opportunity for water companies in these cash-rich countries. An additional driver in Saudi Arabia is huge government investment in the water sector. UAE also has a potential project pipeline of 20 desalination projects, which

represents a significant opportunity. An ageing infrastructure and fiscal stimulus represent the key growth drivers in the US.

## Sector view

We are negative on the water sector on a 12-month investment horizon for the following reasons:

- ▶ Government and municipal budgetary constraints are restricting opportunities. Many projects are on hold, waiting for stimulus money or project finance.
- ▶ Waste water and water reuse are still too low a priority in many parts of the world. Our analysis of significant opportunities excludes many parts of the world with acute water scarcity.

- ▶ All the companies we cover are also constrained by their balance sheets, except Aqua America, in our view. This limits their growth opportunities.

Catalysts to growth are the deleveraging of balance sheets, regulatory support and availability of debt capital, including project finance. Although the long-term macro climate-change dynamic is positive for the sector as a whole, short-term obstacles lead us to a stock selection stance for now. We consider financially stable and technically competent companies as best-placed to capitalise on the long-term positive drivers in the water sector.

Our water coverage and ratings are shown below.

### HSBC's water coverage

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Water	Analyst
American Water Works	AWK.N	OW	USD	25.00	22.58	11%	3,946	100%	Verity Mitchell
Andritz	ANDR.VI	OW	EUR	56.00	48.00	17%	2,496	32%	Svenjo Behrens
Aqua America	WTR.N	OW	USD	21.00	19.88	6%	2,729	100%	Verity Mitchell
Athens Water & Sewerage	EYDr.AT	N	EUR	6.30	5.00	26%	676	98%	Paris Mantzavras
BWT	BWTV.VI	N(V)	EUR	20.00	17.97	11%	407	100%	Burkhard Weiss
China Everbright Internat	0257.HK	OW(V)	HKD	4.90	3.50	40%	1,639	21%	Ken Ho
Northumbrian Water Group	NWG.L	N	GBP	3.50	3.30	6%	2,628	100%	Verity Mitchell
Severn Trent	SVT.L	UW	GBP	12.70	12.95	-2%	4,712	100%	Verity Mitchell
Suez Environnement	SEVI.PA	OW	EUR	22.00	12.70	73%	7,892	26%	Verity Mitchell
United Utilities	UU.L	OW	GBP	6.40	5.71	12%	5,968	98%	Verity Mitchell
Veolia Environnement	VIE.PA	OW	EUR	28.00	18.37	52%	11,595	63%	Verity Mitchell
WashTec	WSUG.DE	N(V)	EUR	10.00	7.90	27%	152	100%	Burkhard Weiss

Source: HSBC estimates

# Waste

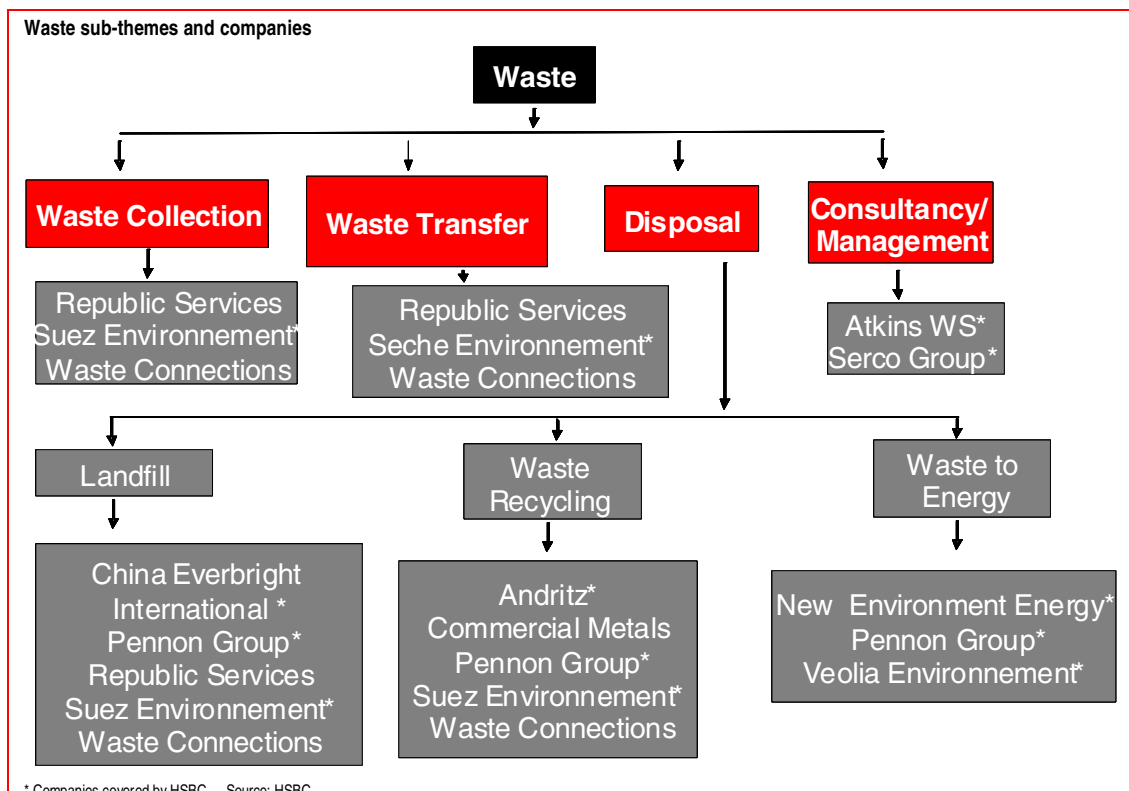
- ▶ Waste was a cUSD55bn market in 2009
- ▶ Waste contributes only about 5% of greenhouse gases globally
- ▶ EUR8bn to be invested in waste by 2030 according to UNCTAD

## Reasons for inclusion

Waste typically generates carbon dioxide and methane, both of which are greenhouse gases, with the sector contributing around 5% of global greenhouse gases. The emissions result largely from landfill and waste water. Technologies to mitigate emissions from waste include landfill methane recovery, waste incineration with energy recovery, composting of organic waste, controlled

waste-water treatment and recycling and waste minimisation.

Long-term scenario analysis for waste forecasts is outside the scope of our accompanying report *Sizing the Climate Economy*.





## What's in the sector?

Waste management comprises mainly the collection, transport, and disposal of waste materials. Market segments include disposal of municipal waste to waste recycling and from landfill to waste to energy. In addition, some support-services companies are adding environmental consulting, which can include waste management advice. Some of the water companies are also involved in waste, which are included on the diagram above. The different categories and stocks related to those categories are shown below.

## Key drivers in the sector

Globally, there is an increasing shift from landfills to waste recycling. However, a recent study from the United Nations Conference on Trade and Development<sup>1</sup> suggests an additional EUR8bn needs to be invested in waste management by 2030. The key industry drivers are GDP and population growth. Regulation, such as landfill taxes, is also a driver.

## Sector view

Although waste is important in the climate-change framework over the long term, the amount of greenhouse gas it accounts for is limited and other areas have a greater priority. Spending on waste services is also likely to be constrained by austerity measures in the current economic framework.

### HSBC's waste coverage

Company	Ticker	Rating	Currency	Target price	Current price	Potential return (%)	Market cap (USDm)	Revenue from Waste	Analyst
New Environment Energy	3989.HK	OW(V)	HKD	2.80	0.50	460%	55	na	Ken Ho
Pennon Group	PNN.L	N	GBP	6.20	5.73	8%	3,109	100%	Verity Mitchell
Seche Environnement	CCHE.PA	N(V)	EUR	63.00	54.00	17%	592	100%	Murielle Andre-Pinard

Source: HSBC estimates

<sup>1</sup> World Investment Report 2010, Investing in a Low-carbon economy

# Company section

# Acciona (ANA SM)

- ▶ Exposure to wind and water theme
- ▶ Acciona gives investors exposure to high-growth wind, solar thermal and water desalination industries
- ▶ We have an Overweight (V) rating with a target price of EUR94

## Climate change revenues

Acciona is a restructuring and refocusing story. There is an increasing focus on the renewable energy division and an increased focus on expansion overseas. We forecast the renewables and water division combined to contribute 40% to group revenue in 2012e (up from 26% in 2009).

## Investment case

We believe Acciona has witnessed unjustified share price weakness due to wider market concerns over sovereign risk in Southern Europe (owing to its exposure to the Spanish construction and real estate markets). Acciona's share price is down more than 33% since the beginning of 2010 and down 37% from its peak of EUR96 in mid-January. It has underperformed its local market IBER35 by over 15% since January this year. In our view, this is overdone as Acciona is increasing its international presence, and so reducing its Spanish exposure.

### Exposure to:

- ▶ **High-growth wind industry:** Acciona is the fourth largest wind-farm developer/owner globally with 5.4GW (net) wind operating capacity and a development pipeline of 24GW
- ▶ **STEG industry:** Acciona currently has 114MW operational and 150MW under construction of solar thermal electric

generation assets. This makes Acciona one of only a few major global STEG players

- ▶ **Water desalination:** Acciona is a global leader in water treatment and desalination. Acciona Water is one of Acciona's fastest growing business areas and has good exposure to the fast-growing Australian and higher-growth European markets.

## Valuation

To emphasise Acciona's embedded value, we value all its non-renewable/environmental divisions at zero. We value it using our SOTP valuation methodology, valuing its operational and under-construction assets and probability-weighted development pipeline separately.

Using our basic SOTP methodology and year- and country-specific WACC, EMRP and RFR for each of its key wind markets, we arrive at our target price of EUR94.0. This represents a 51% potential return which is above our -1.5%-18.5% Neutral band for volatile European stocks. Thus we rate the stock Overweight (V).

## Risks

Risks to our rating include: changes to tariff regimes in Acciona's markets; inability to raise capital; a longer-than-expected downturn in the European (in particular Spanish) construction and real estate industries.

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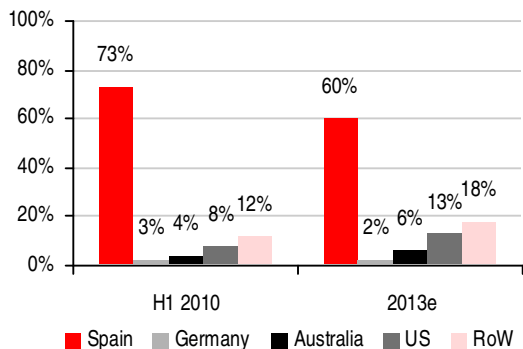
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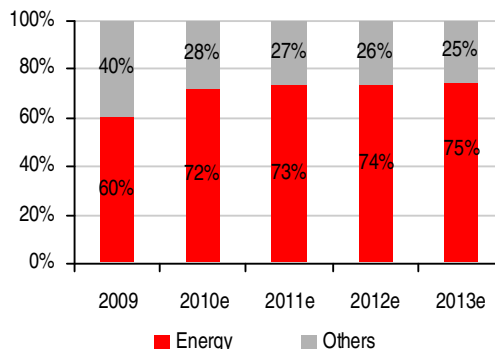
## Acciona in pictures

Acciona – geographical split of net installed wind capacity



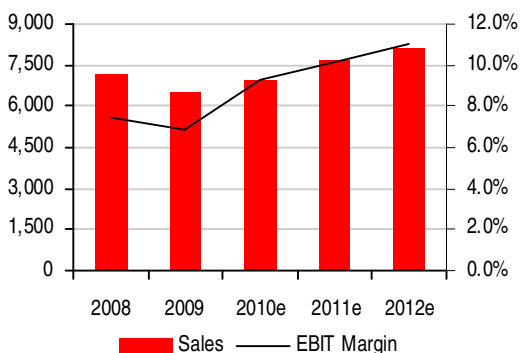
Source: Company data, HSBC estimates

Acciona – Contribution of Energy division to group EBITDA (HSBC forecast)



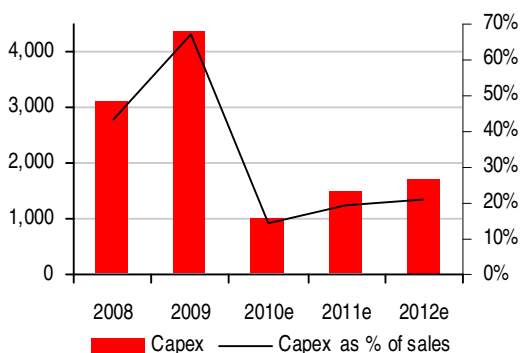
Source: Company data, HSBC estimates

Sales (EURm) and EBIT margin (2008-2012e)



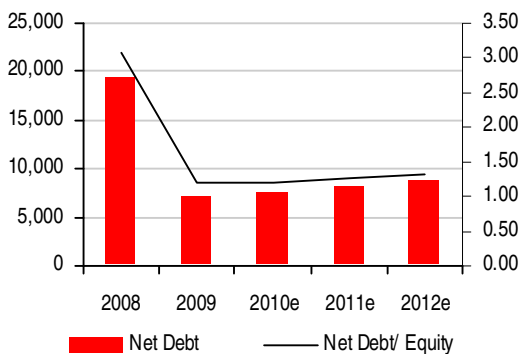
Source: Company data, HSBC estimates

Capex (EURm) and capex as % of sales (2008-2012e)



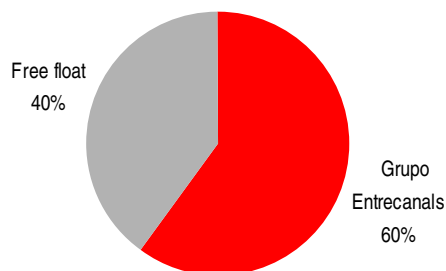
Source: Company data, HSBC estimates

Net cash (EURm) and net debt/equity ratio (2008-2012e)



Source: Company data, HSBC estimates

Shareholder structure



Source: Company data

## Financials & valuation: Acciona

Overweight (V)

### Financial statements

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Profit &amp; loss summary (EURm)</b>				
Revenue	6,512	6,983	7,675	8,124
EBITDA	1,043	1,269	1,495	1,707
Depreciation & amortisation	-595	-620	-714	-810
Operating profit/EBIT	448	649	781	897
Net interest	-214	-315	-369	-405
PBT	214	334	412	492
HSBC PBT	214	334	412	493
Taxation	-44	-100	-124	-148
Net profit	1,262	205	260	310
HSBC net profit	107	205	260	310

### Cash flow summary (EURm)

Cash flow from operations	10,712	819	952	1,158
Capex	-4,372	-1,007	-1,491	-1,702
Cash flow from investment	-4,229	-1,036	-1,519	-1,736
Dividends	62	-51	-65	-78
Change in net debt	-12,220	268	633	656
FCF equity	-3,734	-187	-539	-544

### Balance sheet summary (EURm)

Intangible fixed assets	1,596	1,596	1,596	1,596
Tangible fixed assets	10,838	11,225	12,002	12,893
Current assets	6,325	6,878	7,286	7,515
Cash & others	1,451	1,451	1,451	1,451
Total assets	20,532	21,473	22,657	23,777
Operating liabilities	4,856	5,375	5,732	5,964
Gross debt	8,716	8,984	9,617	10,272
Net debt	7,265	7,533	8,166	8,821
Shareholders funds	5,758	5,911	6,106	6,339
Invested capital	12,452	12,873	13,701	14,589

### Ratio, growth and per share analysis

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Y-o-y % change</b>				
Revenue	-9.7	7.2	9.9	5.9
EBITDA	-2.5	21.7	17.8	14.2
Operating profit	-16.4	44.9	20.3	14.8
PBT	-35.3	56.1	23.4	19.4
HSBC EPS	-62.1	91.3	27.0	19.4

### Ratios (%)

Revenue/IC (x)	0.4	0.6	0.6	0.6
ROIC	2.1	3.6	4.1	4.4
ROE	2.1	3.5	4.3	5.0
ROA	-0.3	-0.5	-0.4	-0.2
EBITDA margin	16.0	18.2	19.5	21.0
Operating profit margin	6.9	9.3	10.2	11.0
EBITDA/net interest (x)	4.9	4.0	4.1	4.2
Net debt/equity	119.8	121.2	127.3	132.8
Net debt/EBITDA (x)	7.0	5.9	5.5	5.2
CF from operations/net debt	147.4	10.9	11.7	13.1

### Per share data (EUR)

EPS Rep (fully diluted)	20.33	3.30	4.19	5.00
HSBC EPS (fully diluted)	1.72	3.30	4.19	5.00
DPS	0.43	0.82	1.05	1.25
Book value	90.60	93.02	96.08	99.75

### Valuation data

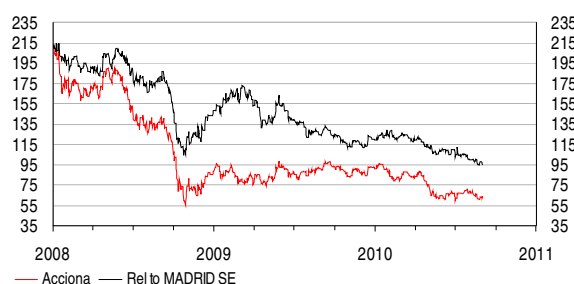
Year to	12/2009a	12/2010e	12/2011e	12/2012e
EV/sales	1.6	1.6	1.5	1.5
EV/EBITDA	10.2	8.6	7.7	7.1
EV/IC	0.9	0.8	0.8	0.8
PE*	36.1	18.9	14.9	12.5
P/Book value	0.7	0.7	0.6	0.6
FCF yield (%)	-110.6	-5.5	-16.0	-16.1
Dividend yield (%)	0.7	1.3	1.7	2.0

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (EUR)	62.29	Target price (EUR)	94.00	Potentl return (%)	50.9
Reuters (Equity)	ANA.MC	Bloomberg (Equity)	ANA SM		
Market cap (USDm)	5,032	Market cap (EURm)	3,959		
Free float (%)	40	Enterprise value (EURm)	10908		
Country	Spain	Sector	Construction & Engineering		
Analyst	James Magness	Contact	44 20 7991 3464		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010

# EDPR (EDPR PL)

- ▶ Exposure to wind theme
- ▶ Trading at a greater discount to the fair value of operating and construction assets than the other wind-farm developers
- ▶ We have an Overweight (V) rating with a target price of EUR7.25

## Climate change revenues

EDPR is a leading pure-play wind-farm developer, earning 100% of its revenue from the wind business. It has one of the largest wind development pipelines worldwide, at c31GW (net/gross), and a target to install 1.0-1.1GW (net) of wind capacity per annum during 2010-12e.

## Investment case

On our conservative estimates, EDPR is currently trading at a 22% discount to the fair value of its assets (both operating and under construction). By comparison, for Acciona, the discount is 7% while IBR is trading at a 4% premium. We believe this differential is unjustified.

EDPR estimates the temporary cut in wind premium in Spain until 2012 will have a limited impact on its earnings until then, given the current spot and forward pool prices.

The company has said the agreement with Vestas for 1.5GW (plus an option for a further 600MW) will enable it to reduce its capex/MW by 10% from 2009-10 levels for 2011-12.

EDPR has underperformed its local Portuguese market by some 11% in the past three months – a weaker performance than those of the other wind farm developers. Iberdrola Renovables and

Acciona have underperformed the IBEX35 by some 8% to 9% while EDF EN has outperformed its local market by 2% over the same period.

## Valuation

We value EDPR using our SOTP-based valuation methodology, valuing its operational assets, under-construction assets and the probability-weighted development pipeline separately.

Using our basic SOTP methodology and year- and country-specific WACC, EMRP and RFR for each of EDPR's main wind markets, we derive a fair value of EUR7.26 per share which we round down to EUR7.25 to arrive at our target price. As the potential return of 65% lies above our -1.5%-18.5% Neutral band for volatile European stocks, we continue to rate the stock Overweight (V).

## Risks

The key downside risks to our view are changes to tariff regimes in EDPR's markets; country risk; inability to raise the capital that will be necessary to develop its pipeline; and inability to secure PPA for its operational projects in the US.

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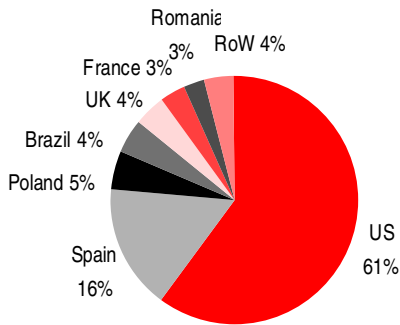
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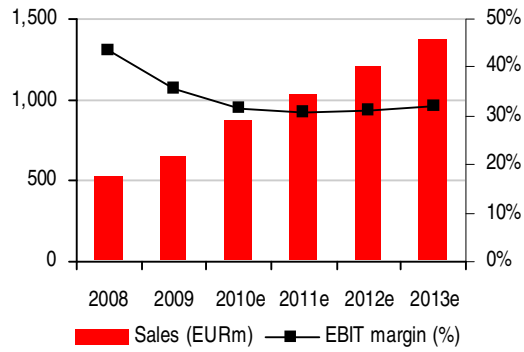
## EDP Renovaveis in pictures

**EDPR – Geographical split of development pipeline and under construction assets (MW) as of H1 2010**



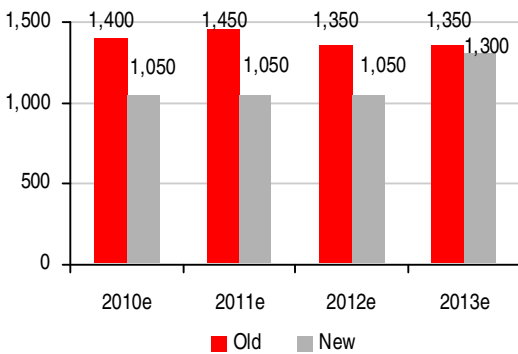
Source: Company data, HSBC estimates

**Sales and EBIT margin development (2008-13e)**



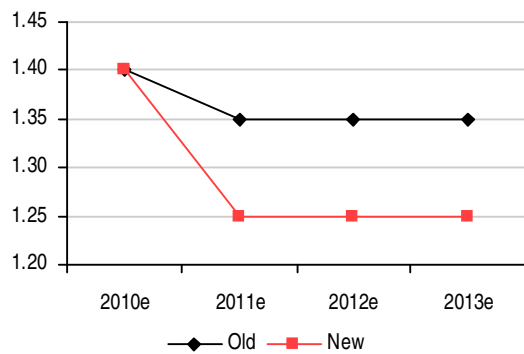
Source: Company data, HSBC estimates

**EDPR – Net wind installations forecast: HSBC new vs old (MW)**



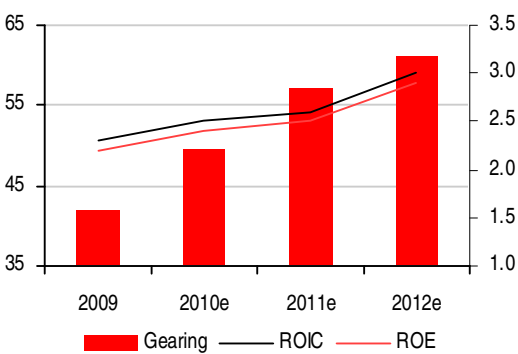
Source: HSBC estimates

**EDPR – Capex per MW forecast: HSBC new vs old (EURm/MW)**



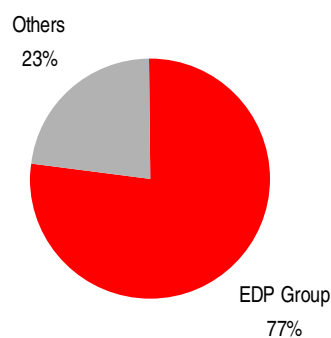
Source: HSBC estimates

**Balance sheet ratios**



Source: Company data, HSBC estimates

**Shareholder structure (June 2010)**



Source: Company data

## Financials & valuation: EDP Renovaveis

Overweight (V)

### Financial statements

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Profit &amp; loss summary (EURm)</b>				
Revenue	648	891	1,040	1,205
EBITDA	543	716	849	995
Depreciation & amortisation	-312	-444	-521	-578
Operating profit/EBIT	231	272	329	417
Net interest	-72	-99	-125	-147
PBT	163	174	204	271
HSBC PBT	163	174	204	271
Taxation	-45	-49	-57	-76
Net profit	115	122	145	192
HSBC net profit	115	122	145	192

### Cash flow summary (EURm)

Cash flow from operations	542	950	901	1,031
Capex	-1,963	-1,450	-1,354	-1,326
Cash flow from investment	-1,963	-1,450	-1,354	-1,326
Dividends	0	0	-29	-38
Change in net debt	998	440	482	333
FCF equity	-1,421	-499	-453	-294

### Balance sheet summary (EURm)

Intangible fixed assets	1,336	1,336	1,336	1,336
Tangible fixed assets	8,635	9,641	10,475	11,222
Current assets	1,105	1,090	1,117	1,147
Cash & others	444	444	444	444
Total assets	11,294	12,285	13,145	13,923
Operating liabilities	2,950	3,376	3,637	3,925
Gross debt	2,673	3,114	3,595	3,928
Net debt	2,230	2,670	3,152	3,484
Shareholders funds	5,220	5,345	5,463	5,620
Invested capital	7,683	8,248	8,847	9,337

### Ratio, growth and per share analysis

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Y-o-y % change</b>				
Revenue	21.8	37.5	16.7	15.8
EBITDA	23.9	31.9	18.6	17.2
Operating profit	-0.3	17.9	20.6	27.1
PBT	-1.8	6.7	17.5	32.9
HSBC EPS	9.8	7.0	18.1	32.9

### Ratios (%)

Revenue/IC (x)	0.1	0.1	0.1	0.1
ROIC	2.3	2.5	2.8	3.3
ROE	2.2	2.3	2.7	3.5
ROA	1.6	1.1	1.2	1.4
EBITDA margin	83.7	80.3	81.6	82.6
Operating profit margin	35.6	30.6	31.6	34.7
EBITDA/net interest (x)	7.5	7.3	6.8	6.8
Net debt/equity	41.9	49.0	56.6	60.8
Net debt/EBITDA (x)	4.1	3.7	3.7	3.5
CF from operations/net debt	24.3	35.6	28.6	29.6

### Per share data (EUR)

EPS Rep (fully diluted)	0.13	0.14	0.17	0.22
HSBC EPS (fully diluted)	0.13	0.14	0.17	0.22
DPS	0.00	0.00	0.03	0.04
Book value	5.98	6.13	6.26	6.44

### Valuation data

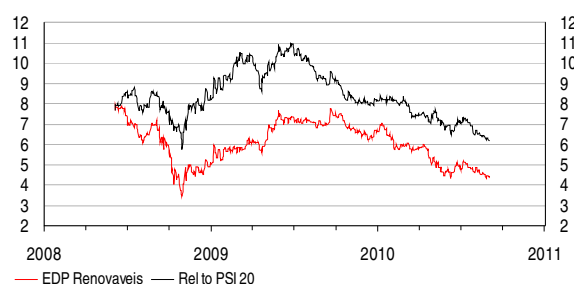
Year to	12/2009a	12/2010e	12/2011e	12/2012e
EV/sales	9.4	7.3	6.8	6.1
EV/EBITDA	11.3	9.1	8.3	7.4
EV/IC	0.8	0.8	0.8	0.8
PE*	33.4	31.3	26.5	19.9
P/Book value	0.7	0.7	0.7	0.7
FCF yield (%)	-36.7	-12.9	-11.7	-7.6
Dividend yield (%)	0.0	0.0	0.8	1.0

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (EUR)	4.39	Target price (EUR)	7.25	Potentl return (%)	65.1
Reuters (Equity)	EDPR.LS	Bloomberg (Equity)	EDPR PL		
Market cap (USDm)	4,868	Market cap (EURm)	3,829		
Free float (%)	100	Enterprise value (EURm)	6547		
Country	Portugal	Sector	Independent power producers		
Analyst	James Magness	Contact	44 20 7991 3464		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010



# NVC Lighting (2222.HK)

- ▶ Exposure to building efficiency theme
- ▶ Leader in energy-saving lighting product market in China
- ▶ We have an Overweight (V) rating and a target price of HKD4.4

## Climate change revenues

NVC Lighting is a pure play energy-efficient lighting products manufacturer with 100% of its revenue from energy efficiency theme. NVC is China's largest domestic lighting brand as well as the leader in energy-saving lamp production. HSBC analyst forecast NVC to achieve two-year earnings (EPS) CAGR of 21% over 2010e-12e.

## Investment case

According to the China Association of Lighting Industry, NVC is:

- ▶ China's largest domestic lighting brand supplier, based on 2009 revenue
- ▶ The largest producer of energy-saving lamps, T4 and T5 battens and electronic ballast in China, based on 2008 production volume

NVC has a full product range. Unlike most of its domestic peers, which specialise solely in lamp production, NVC offers a full product range, from luminaires to lamps and electronic components. This capability of providing full lighting solutions opens up NVC's universe of target customers from buyers of OEM/ODM products to procurers for commercial and government projects.

NVC has cultivated a large, nationwide sales network (2,461 retail outlets at end-2009). This is

organised and monitored through 36 regional distributors.

NVC has a recognised national brand. On the back of its massive sales network, NVC has built a well-recognised national brand. This success anchors NVC's pricing power, supporting customer loyalty and placing domestic competitors – which are mostly traditional OEM/ODMs – under constant pricing pressure.

## Valuation

From our universe of 16 regional and global industrial peers, we derive various market cap-weighted average PEs. We apply the Asian average PE of 24x to NVC's 2011e earnings to arrive at a target price of HKD4.4. This represents a 26% potential return, which is above our -1.5%-18.5% Neutral band for volatile Hong Kong stocks. Hence we rate the stock Overweight (V).

## Risks

Risks to our forecast include: capacity constraints; maintaining relationships with distributors

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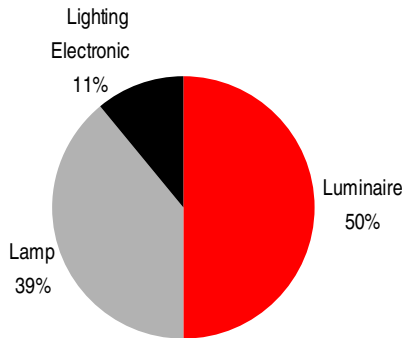
**Ken Ho\***  
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\*Employed by a non-US affiliate of HSBC Securities (USA) Inc, and is not registered/ qualified pursuant to FINRA regulations

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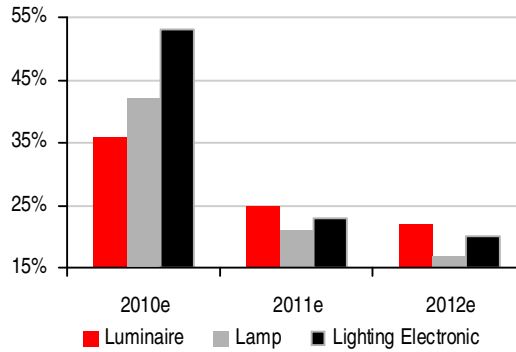
## NVC Lighting in pictures

Revenue by products (2009 revenue: RMB2,089m)



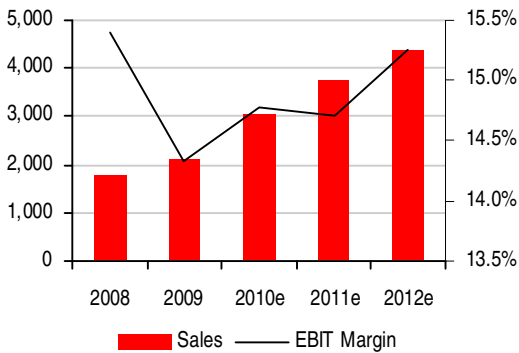
Source: Bloomberg

Product segments – y-o-y sales volume growth (%) (2010e-12e)



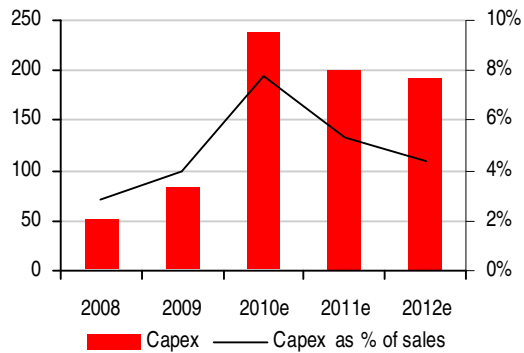
Source: HSBC estimates

Sales (RMBm) and EBIT margin (2008-2012e)



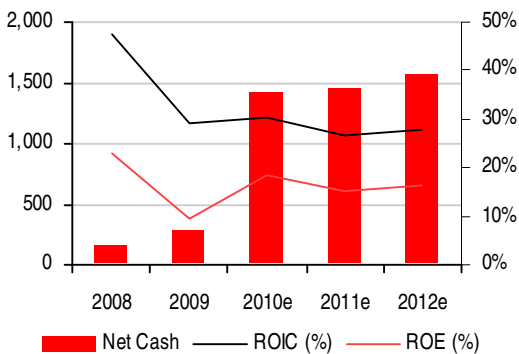
Source: Company data, HSBC estimates

Capex (RMBm) and capex as % of sales (2008-12e)



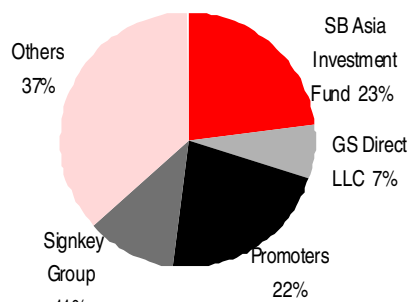
Source: Company data, HSBC estimates

Net cash (RMBm) and balance sheet ratios (2008-12e)



Source: Company data, HSBC estimates

Shareholder structure



Source: Company data

## Financials & valuation: NVC Lighting Holding Ltd

Overweight (V)

### Financial statements

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Profit &amp; loss summary (CNYm)</b>				
Revenue	2,089	3,076	3,762	4,393
EBITDA	365	542	663	800
Depreciation & amortisation	-66	-87	-110	-130
Operating profit/EBIT	299	454	554	670
Net interest	-55	6	20	21
PBT	137	460	574	691
HSBC PBT	137	460	574	691
Taxation	-37	-63	-79	-97
Net profit	88	382	477	573
HSBC net profit	88	382	477	573

### Cash flow summary (CNYm)

Cash flow from operations	287	250	421	527
Capex	-83	-238	-200	-192
Cash flow from investment	-5	-198	-178	-170
Dividends	0	-153	-191	-229
Change in net debt	-123	-1,143	-40	-115
FCF equity	130	22	246	362

### Balance sheet summary (CNYm)

Intangible fixed assets	593	580	569	559
Tangible fixed assets	542	713	823	905
Current assets	1,280	2,765	3,146	3,598
Cash & others	323	1,444	1,474	1,583
Total assets	2,430	4,072	4,553	5,077
Operating liabilities	1,137	874	1,061	1,225
Gross debt	44	22	12	7
Net debt	-279	-1,422	-1,462	-1,576
Shareholders funds	1,121	3,034	3,320	3,664
Invested capital	955	1,739	2,003	2,253

### Ratio, growth and per share analysis

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Y-o-y % change</b>				
Revenue	17.2	47.3	22.3	16.8
EBITDA	22.9	48.5	22.4	20.6
Operating profit	9.1	51.8	21.8	21.0
PBT	-2.0	235.2	24.6	20.5
HSBC EPS			24.8	20.1

### Ratios (%)

Revenue/IC (x)	2.6	2.3	2.0	2.1
ROIC	29.1	30.5	26.5	28.0
ROE	9.6	18.4	15.0	16.4
ROA	6.4	12.5	11.5	12.3
EBITDA margin	17.5	17.6	17.6	18.2
Operating profit margin	14.3	14.8	14.7	15.3
EBITDA/net interest (x)	6.7			
Net debt/equity	-24.4	-46.3	-43.3	-42.1
Net debt/EBITDA (x)	-0.8	-2.6	-2.2	-2.0
CF from operations/net debt				

### Per share data (CNY)

EPS Rep (fully diluted)	0.00	0.13	0.16	0.19
HSBC EPS (fully diluted)	0.00	0.13	0.16	0.19
DPS	0.00	0.05	0.06	0.08
Book value	0.00	1.02	1.12	1.24

### Valuation data

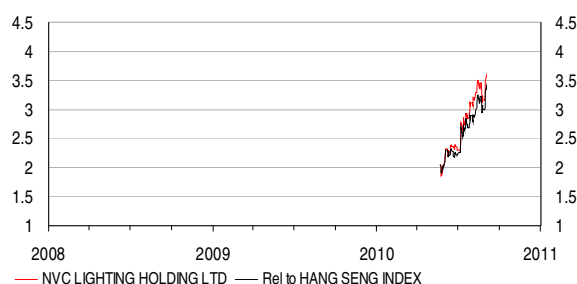
Year to	12/2009a	12/2010e	12/2011e	12/2012e
EV/sales	4.3	2.6	2.1	1.8
EV/EBITDA	24.7	14.5	11.8	9.6
EV/IC	9.4	4.5	3.9	3.4
PE*	-	23.6	18.9	15.8
P/Book value	-	3.0	2.7	2.5
FCF yield (%)	1.4	0.2	2.7	3.9
Dividend yield (%)	0.0	1.7	2.1	2.5

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (HKD)	3.48	Target price (HKD)	4.40	Potential return (%)	26.4
Reuters (Equity)	2222.HK	Bloomberg (Equity)	2222 HK		
Market cap (USDm)	1,366	Market cap (HKDm)	10,625		
Free float (%)	29	Enterprise value (CNYm)	7867		
Country	Hong Kong	Sector	Electrical equipment		
Analyst	Ken Ho	Contact	+852 2996 6593		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010

# Philips (PHIA NA)

- ▶ Exposure to building efficiency theme
- ▶ Focus is now on Vision 2015 targets
- ▶ We have an Overweight rating and a target price of EUR29

## Climate change revenues

Philips generated c30% of total revenues from green products in 2009 and expects the proportion to reach 50% in 2015. The company targets a 50% improvement in the energy efficiency of its overall product portfolio. Philips is a world leader in lighting, and with lighting accounting for nearly a fifth of the world's energy consumption, we expect Philips to play a key role in the building efficiency industry.

## Investment case

Vision 2015, Philips' medium-term targets, which will be announced in September 2010, is now the markets' focus for Philips. We believe Vision 2015 targets will represent solid sequential improvements. We would not be surprised by a commitment to a 12% to 14% group EBITA margin, like-for-like sales growth of 6% to 7% a year and the possibility of additional return-based targets, as well as a commitment to EPS growth.

In lighting, Philips faces the coming LED revolution from a position of strength, but the solid state lighting business effectively introduces a building technology division into the mix. Greater exposure to the construction sector is likely to increase cyclicality, but we believe the potential for margin expansion offsets this. We forecast significant volume growth in LEDs, coupled with equally significant price erosion; as a net buyer of LEDs, Philips should do well.

## Valuation

We value Philips using MACC (market-assessed cost of capital). Philips now trades at a MACC of 15.5%. This implies a 540bp risk premium (valuation discount) to the sector median of 10.1%. Although Philips' broad spectrum of activities is not always directly comparable with the capital goods sector median, we do believe a 540bps risk premium is too high, given Philips' restructuring and growth prospects in both EM & DM, in both the near and medium term. Our target price of EUR29 implies a target MACC of 12.6%.

Under our research model, for stocks without a volatility indicator, the Neutral band is 5ppt above and below the hurdle rate for Europe ex-UK stocks of 8.5%. This translates into a Neutral band of 3.5% to 13.5% above the current share price. Our 12-month target price of EUR29 implies a potential return of 31%, which is above the Neutral band; thus, we rate the stock Overweight.

## Risks

Risks to our forecasts include: risk of malfunction in healthcare products; brand management risk (damage [to the brand image] could reduce pricing power); failure to broaden the product range and deliver on planned cost savings; failure to exploit the potential in emerging markets.

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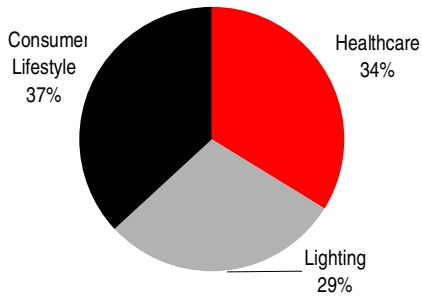
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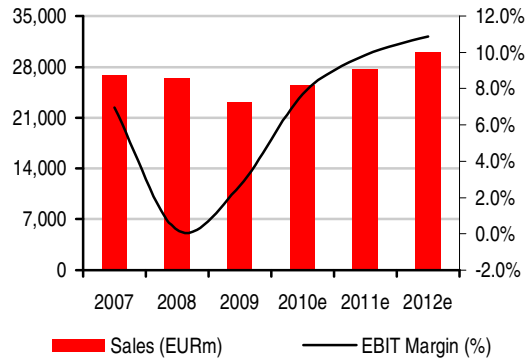
## Philips in pictures

Sales by division (2009)



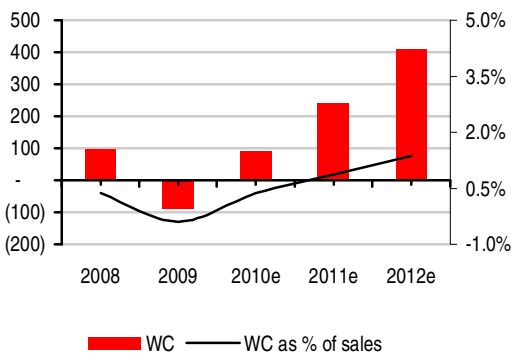
Source: Company data

Sales and EBIT margin\* (2007-2012e)



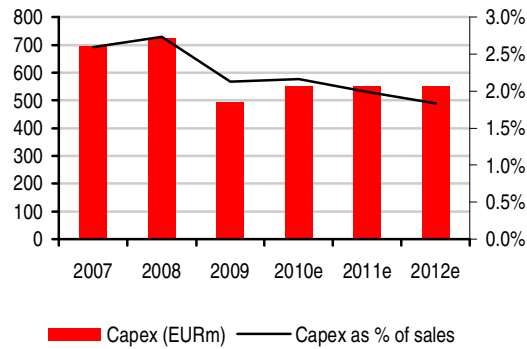
\* EBIT margin including restructuring charges and other one-offs  
 Source: Company data, HSBC estimates

Working capital (EURm) (2008-12e)



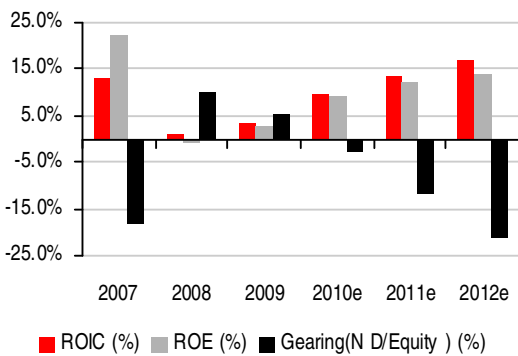
Source: Philips, HSBC estimates

Capex (2007-12e)



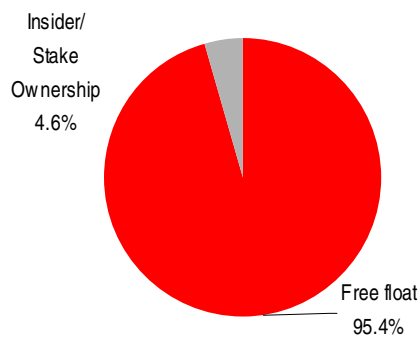
Source: Philips, HSBC estimates

Balance sheet ratios (2007-12e)



Source: Company data, HSBC estimates

Shareholder structure (August 2010)



Source: Factset

## Financials & valuation: Philips

Overweight

### Financial statements

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Profit &amp; loss summary (EURm)</b>				
Revenue	23,189	25,417	27,597	30,076
EBITDA	2,083	3,351	4,111	4,667
Depreciation & amortisation	-1,469	-1,396	-1,396	-1,396
Operating profit/EBIT	614	1,956	2,715	3,271
Net interest	-252	-180	-175	-175
PBT	448	1,804	2,573	3,134
HSBC PBT	448	1,804	2,573	3,134
Taxation	-100	-460	-679	-827
Net profit	410	1,379	1,934	2,353
HSBC net profit	410	1,379	1,934	2,353

### Cash flow summary (EURm)

Year to	12/2009a	12/2010e	12/2011e	12/2012e
Cash flow from operations	1,545	2,556	3,143	3,532
Capex	-494	-550	-550	-550
Cash flow from investment	100	-550	-550	-550
Dividends	646	649	835	927
Change in net debt	-787	-1,156	-1,558	-1,854
FCF equity	1,578	1,978	2,560	2,944

### Balance sheet summary (EURm)

Year to	12/2009a	12/2010e	12/2011e	12/2012e
Intangible fixed assets	11,523	11,523	11,523	11,523
Tangible fixed assets	6,123	5,477	4,832	4,186
Current assets	11,909	14,367	17,261	20,571
Cash & others	4,577	6,233	8,292	10,646
Total assets	30,527	32,379	34,673	37,387
Operating liabilities	9,352	9,969	10,659	11,443
Gross debt	5,338	5,838	6,338	6,838
Net debt	761	-395	-1,954	-3,808
Shareholders funds	14,595	15,325	16,424	17,849
Invested capital	15,626	15,164	14,665	14,191

### Ratio, growth and per share analysis

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Y-o-y % change</b>				
Revenue	-12.1	9.6	8.6	9.0
EBITDA	31.7	60.9	22.7	13.5
Operating profit	1037.0	218.5	38.8	20.5
PBT	215.5	302.6	42.7	21.8
HSBC EPS		236.3	40.2	21.7

### Ratios (%)

Year to	12/2009a	12/2010e	12/2011e	12/2012e
Revenue/IC (x)	1.4	1.7	1.9	2.1
ROIC	3.1	9.5	13.5	16.8
ROE	2.7	9.2	12.2	13.7
ROA	2.1	5.1	6.5	7.3
EBITDA margin	9.0	13.2	14.9	15.5
Operating profit margin	2.6	7.7	9.8	10.9
EBITDA/net interest (x)	8.3	18.6	23.5	26.7
Net debt/equity	5.2	-2.6	-11.9	-21.3
Net debt/EBITDA (x)	0.4	-0.1	-0.5	-0.8
CF from operations/net debt	203.0			

### Per share data (EUR)

Year to	12/2009a	12/2010e	12/2011e	12/2012e
EPS Rep (fully diluted)	0.44	1.48	2.08	2.53
HSBC EPS (fully diluted)	0.44	1.48	2.08	2.53
DPS	0.70	0.90	1.00	1.00
Book value	15.77	16.56	17.75	19.29

### Valuation data

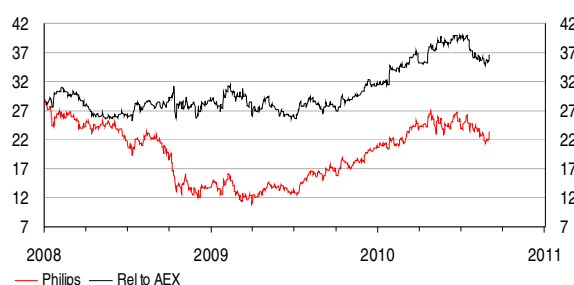
Year to	12/2009a	12/2010e	12/2011e	12/2012e
EV/sales	0.9	0.8	0.7	0.6
EV/EBITDA	10.4	6.1	4.6	3.6
EV/IC	1.4	1.3	1.3	1.2
PE*	50.1	14.9	10.6	8.7
P/Book value	1.4	1.3	1.2	1.1
FCF yield (%)	7.6	9.5	12.3	14.2
Dividend yield (%)	3.2	4.1	4.5	4.5

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (EUR)	22.11	Target price (EUR)	29.00	Potentl return (%)	31.2
Reuters (Equity)	PHG.AS	Bloomberg (Equity)	PHIA NA		
Market cap (USDm)	27,716	Market cap (EURm)	21,802		
Free float (%)	100	Enterprise value (EURm)	20449		
Country	Netherlands	Sector	Household durables		
Analyst	Matt Williams	Contact	44 20 7991 6750		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010

# Saft Groupe (SAFT FP)

- ▶ Exposure to energy storage theme
- ▶ Conditions now look right for gradual emergence of electrical vehicle market; competitive position of the Saft/Johnson Controls JV better adapted to hybrids than to electric vehicles
- ▶ We have an Overweight (V) rating with a target price of EUR32

## Climate change revenues

Saft is one of the world's leading producers of batteries for industrial applications. Its batteries are made from lithium, nickel and silver components, not from lead. It produces high performance lithium and silver-based batteries for the defence, aerospace and electronic sectors and nickel and lithium-based batteries for a number of industries such as oil and gas, utilities, telecommunications, airlines, transport and railways. In FY2009, it derived c27% of its revenues from batteries used for transportation (rail and electric vehicles) and used in Solar PV-based applications.

## Investment case

We believe that short term (and until at least 2012), the only segment in the 'green car' market offering a sufficiently wide customer base will be that of the hybrid (HEV) and not the electric vehicle (EV). The competitive position of the Saft/Johnson Controls JV (49% owned by Saft) is focused on hybrid rather than electric vehicles.

Some 75% of group sales are generated in markets where Saft ranks as sector leader. 60% of turnover is derived from products that are tailor-made for the group's clients as opposed to generic products. 21% of turnover is generated in the

defence and military sector (notably in the US, the UK and France) and, as such, is relatively independent of economic cycles. Moreover, certain military budgets will not be affected by the rigorous cost-reduction plans being implemented in the US and Europe. 12% of turnover is from sales of batteries made from lithium, expected to become the leading battery technology of the future despite its relatively high cost.

## Valuation

We value Saft using a sum-of-the-parts valuation:

- ▶ Saft's core activities at EUR25 per share
- ▶ Its stake in the JV at EUR4-8 per Saft share
- ▶ Future cash flows from the Jacksonville plant at EUR3-4 per Saft share.

We thus obtain a valuation range of between EUR32 and EUR37 per share. Our target price of EUR32 is at the bottom of this valuation range. With a potential return of 29%, we rate Saft Overweight (V).

## Risks

The key downside risks are emergence of new technologies, dependence on one particular category of client, forex risk and price risk of strategic raw materials such as nickel and cobalt.

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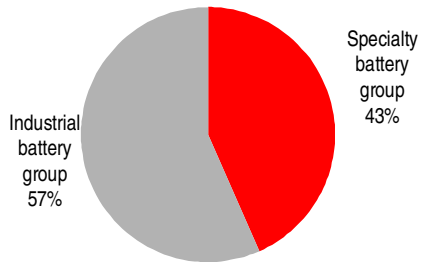
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\*Employed by a non-US affiliate of HSBC Securities (USA) Inc, and is not registered/ qualified pursuant to FINRA regulations

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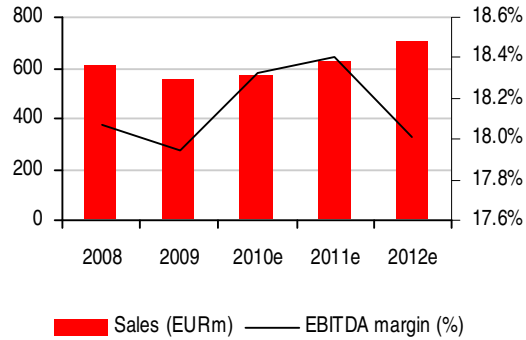
## Saft in pictures

Sales by division (2009)



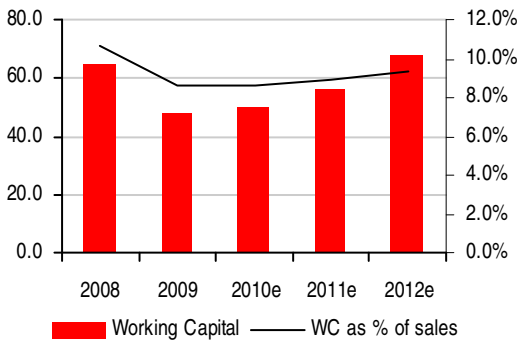
Source: Company data

Sales and EBITDA margin (2008-12e)



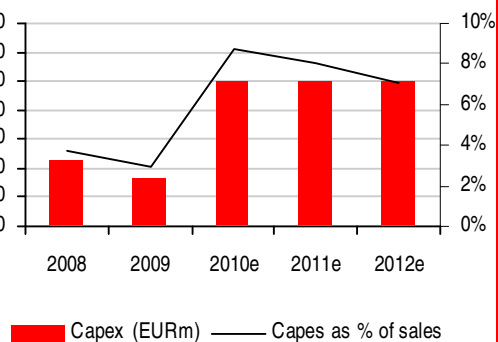
Source: Company data, HSBC estimates

Working capital (2008-12e)



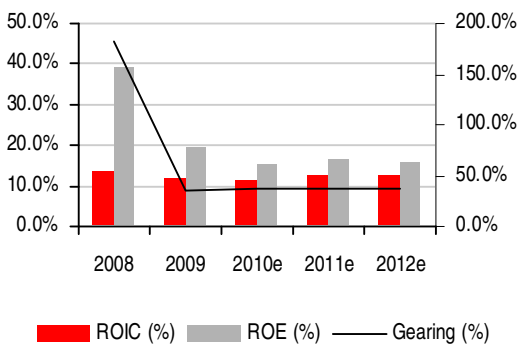
Source: Company data, HSBC estimates

Capex (2008-12e)



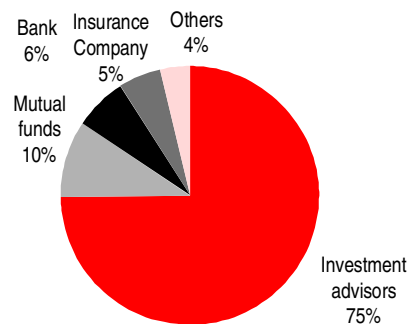
Source: Company data, HSBC estimates

Balance sheet ratios (2008-12e)



Source: Company data, HSBC estimates

Shareholder structure (August 2010)



Source: Bloomberg, HSBC



## Financials & valuation: Saft Groupe SA

Overweight (V)

### Financial statements

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Profit &amp; loss summary (EURm)</b>				
Revenue	559	573	625	705
EBITDA	100	105	115	127
Depreciation & amortisation	-32	-33	-33	-35
Operating profit/EBIT	69	72	82	92
Net interest	-19	-15	-14	-15
PBT	36	46	60	80
HSBC PBT	36	46	60	80
Taxation	-7	-13	-16	-22
Net profit	28	32	44	57
HSBC net profit	45	48	55	58

### Cash flow summary (EURm)

Cash flow from operations	93	82	85	89
Capex	-17	-50	-50	-50
Cash flow from investment	-47	-85	-80	-85
Dividends	-7	-17	-17	-17
Change in net debt	-173	14	10	10
FCF equity	70	26	31	34

### Balance sheet summary (EURm)

Intangible fixed assets	333	333	333	333
Tangible fixed assets	110	109	110	115
Current assets	414	419	438	467
Cash & others	207	207	207	207
Total assets	898	931	981	1,051
Operating liabilities	156	160	172	192
Gross debt	316	330	340	350
Net debt	109	123	132	142
Shareholders funds	306	322	349	389
Invested capital	493	494	501	516

### Ratio, growth and per share analysis

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Y-o-y % change</b>				
Revenue	-8.2	2.5	9.1	12.8
EBITDA	-8.9	4.6	9.5	10.4
Operating profit	-14.9	4.7	13.9	12.2
PBT	-13.5	25.5	32.5	31.8
HSBC EPS	-18.0	-20.1	15.3	5.4

### Ratios (%)

Revenue/IC (x)	1.1	1.2	1.3	1.4
ROIC	11.5	11.3	12.7	12.9
ROE	19.6	15.2	16.4	15.7
ROA	3.4	3.6	4.7	5.7
EBITDA margin	17.9	18.3	18.4	18.0
Operating profit margin	12.3	12.6	13.1	13.0
EBITDA/net interest (x)	5.4	7.2	8.2	8.5
Net debt/equity	35.4	38.0	37.7	36.5
Net debt/EBITDA (x)	1.1	1.2	1.1	1.1
CF from operations/net debt	86.0	66.7	64.5	62.5

### Per share data (EUR)

EPS Rep (fully diluted)	1.54	1.30	1.78	2.31
HSBC EPS (fully diluted)	2.43	1.94	2.23	2.36
DPS	0.68	0.68	0.70	0.75
Book value	12.39	13.03	14.15	15.78

### Valuation data

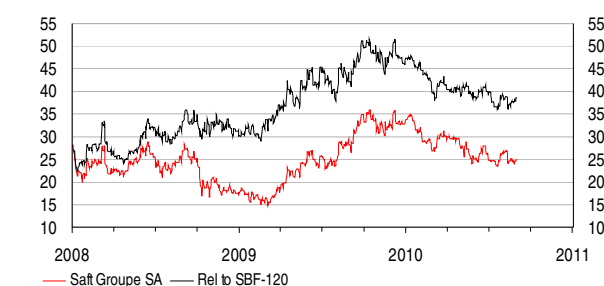
Year to	12/2009a	12/2010e	12/2011e	12/2012e
EV/sales	1.3	1.2	1.1	0.9
EV/EBITDA	7.0	6.6	5.8	5.1
EV/IC	1.4	1.4	1.3	1.2
PE*	10.3	12.8	11.1	10.6
P/Book value	2.0	1.9	1.8	1.6
FCF yield (%)	11.7	4.6	5.8	6.8
Dividend yield (%)	2.7	2.7	2.8	3.0

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (EUR)	24.89	Target price (EUR)	32.00	Potent'l return (%)	28.6
Reuters (Equity)	S1A.PA	Bloomberg (Equity)	SAFT FP		
Market cap (USDm)	794	Market cap (EURm)	625		
Free float (%)	95	Enterprise value (EURm)	688		
Country	France	Sector	Conglomerates		
Analyst	Pierre Bosset	Contact	+33 1 5652 4310		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010

Stated accounts as of 31 Dec 2004 are IFRS compliant

# São Martinho (SMT03 BZ)

- ▶ Exposure to bioenergy theme
- ▶ Partnership with Petrobras should accelerate future growth
- ▶ We have an Overweight (V) rating with a target price of BRL21

## Climate change revenues

Sao Martinho is a Brazil-based ethanol processor and generated 62% of its revenues from ethanol production in FY09 (March ending). The mandatory blending of 25% ethanol in gasoline coupled with increasing consumption of blended fuel by flex-fuel fleet in Brazil is expected to drive Sao Martinho's future growth.

## Investment case

Sao Martinho has a total cane crushing capacity of c12m tons in FY09 and operates the largest sugar mill in the world with 8.5m tons of annual sugarcane crushing capacity.

Sao Martinho is one of the smallest listed ethanol players in Brazil sugar industry but is the most efficient. It has consistently produced positive and better margins than its peers. The operations of the company are very sophisticated with mechanisation of 87% versus Cosan's 80%.

Recently, Petrobras Bioenergia injected BRL400m into Sao Martinho. The company plans to use the proceeds to expand crushing capacity at its Boa Vista mill (100% ethanol) by 180% from the current 2.5m tons to 7.0m tons of sugarcane by FY15.

Ethanol production at this plant will increase substantially to 587k from 212k cubic meters.

Cogeneration potential will also increase materially,

with energy available for sale increasing to 406k MWh from 121k MWh by FY15.

## Valuation

Our DCF metrics use a 12% cost of equity, 9% pre-tax cost of debt, and 40:60 debt-to-equity, leading to a 9.58% WACC. This generates our 12-month target price of BRL21. Under our research model, for Brazilian stocks with a volatility indicator, the Neutral band is 10 percentage points above and below our hurdle rate of 12%. Our BRL21 target price suggests a potential return of 22.1%, which is above the Neutral band; so we rate the stock Overweight (V).

## Risks

The key downside risks to our view include: ability to roll over short-term debt; lower sugar prices from larger-than-expected production in countries like India; and lower demand for hydrous ethanol from a potential cut in gasoline prices in Brazil.

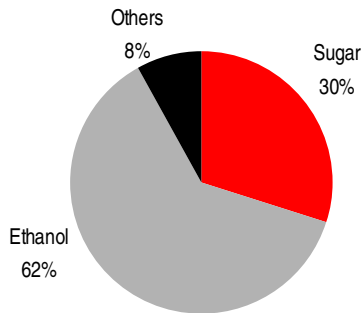
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**Pedro Herrera**  
Analyst  
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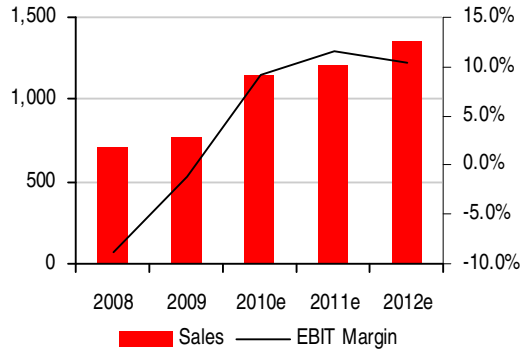
## Sao Martinho in pictures

Sao Martinho – revenue by business segment (2009a)



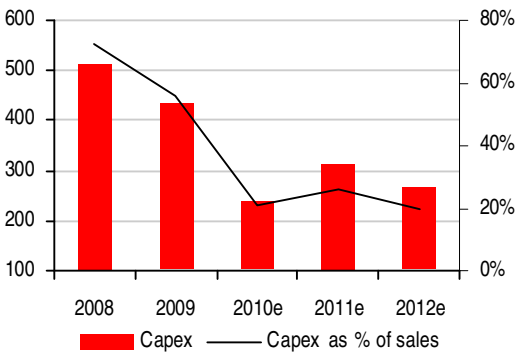
Source: Company data

Sales (BRLm) and EBIT margin (2008-2012e)



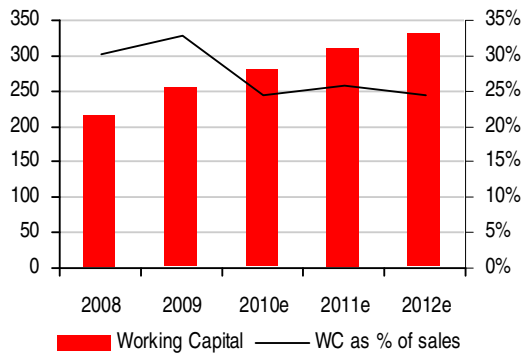
Source: Company data, HSBC estimates

Capex (BRLm) and capex as % of sales (2008-12e)



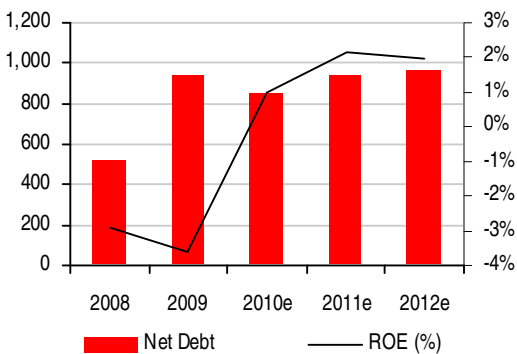
Source: Company data, HSBC estimates

Working capital (BRLm) and WC as % of sales (2008-12e)



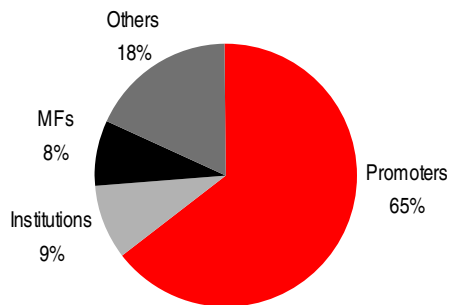
Source: Company data, HSBC estimates

Net debt (BRLm) and RoE (%) (2008-12e)



Source: Company data, HSBC estimates

Shareholder structure



Source: Thomson Reuters

## Financials & valuation: São Martinho

Overweight (V)

### Financial statements

Year to	03/2009a	03/2010e	03/2011e	03/2012e
<b>Profit &amp; loss summary (BRLm)</b>				
Revenue	774	1,153	1,206	1,353
EBITDA	189	340	375	379
Depreciation & amortisation	-199	-235	-236	-239
Operating profit/EBIT	-9	104	139	140
Net interest	-100	-79	-84	-89
PBT	-130	115	53	33
HSBC PBT	-109	25	55	51
Taxation	53	-27	-18	-11
Net profit	-70	85	33	21
HSBC net profit	-58	16	35	32

### Cash flow summary (BRLm)

Year to	03/2009a	03/2010e	03/2011e	03/2012e
Cash flow from operations	38	382	236	260
Capex	-432	-240	-315	-268
Cash flow from investment	-435	-263	-315	-268
Dividends	0	-39	-8	-5
Change in net debt	423	-82	88	17
FCF equity	-351	39	-78	10

### Balance sheet summary (BRLm)

Year to	03/2009a	03/2010e	03/2011e	03/2012e
Intangible fixed assets	81	78	78	78
Tangible fixed assets	2,482	2,441	2,520	2,550
Current assets	602	722	671	707
Cash & others	190	246	160	165
Total assets	3,395	3,405	3,432	3,498
Operating liabilities	387	424	428	441
Gross debt	1,132	1,106	1,108	1,129
Net debt	942	860	948	965
Shareholders funds	1,575	1,620	1,645	1,661
Invested capital	2,587	2,572	2,681	2,729

### Ratio, growth and per share analysis

Year to	03/2009a	03/2010e	03/2011e	03/2012e
<b>Y-o-y % change</b>				
Revenue	8.7	48.8	4.6	12.2
EBITDA	49.2	79.5	10.3	1.0
Operating profit	-	-	32.9	0.6
PBT	-	-	-53.9	-37.9
HSBC EPS	-	-	121.7	-6.0

### Ratios (%)

Year to	03/2009a	03/2010e	03/2011e	03/2012e
Revenue/IC (x)	0.3	0.4	0.5	0.5
ROIC	-0.2	3.1	3.5	3.4
ROE	-3.6	1.0	2.1	2.0
ROA	0.2	5.6	2.9	2.6
EBITDA margin	24.5	29.5	31.1	28.0
Operating profit margin	-1.2	9.1	11.5	10.3
EBITDA/net interest (x)	1.9	4.3	4.5	4.3
Net debt/equity	59.1	53.0	57.5	58.0
Net debt/EBITDA (x)	5.0	2.5	2.5	2.5
CF from operations/net debt	4.0	44.4	24.9	27.0

### Per share data (BRL)

Year to	03/2009a	03/2010e	03/2011e	03/2012e
EPS Rep (fully diluted)	-0.62	0.75	0.29	0.18
HSBC EPS (fully diluted)	-0.51	0.14	0.31	0.29
DPS	0.00	0.35	0.07	0.05
Book value	13.96	14.36	14.58	14.71

### Valuation data

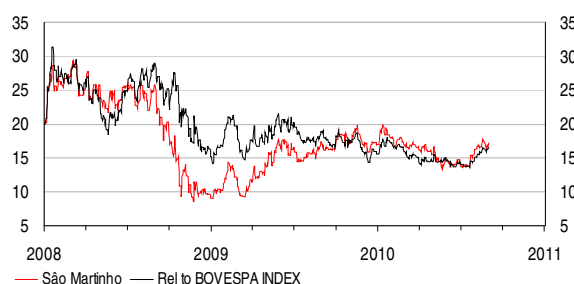
Year to	03/2009a	03/2010e	03/2011e	03/2012e
EV/sales	3.7	2.4	2.4	2.1
EV/EBITDA	15.3	8.2	7.7	7.7
EV/IC	1.1	1.1	1.1	1.1
PE*	-	124.6	56.2	59.8
P/Book value	1.2	1.2	1.2	1.2
FCF yield (%)	-17.9	2.0	-4.0	0.5
Dividend yield (%)	0.0	2.0	0.4	0.3

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (BRL)	17.20	Target price (BRL)	21.00	Potentl return (%)	22.1
Reuters (Equity)	SMTO3.SA	Bloomberg (Equity)	SMTO3 BZ		
Market cap (USDm)	1,106	Market cap (BRLm)	1,944		
Free float (%)	35	Enterprise value (BRLm)	2800		
Country	Brazil	Sector	Agricultural Products		
Analyst	Pedro Herrera	Contact	+1 212 525 5126		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010

# Siemens (SIE GY)

- ▶ Exposure to energy efficiency themes
- ▶ We see five growth drivers for Siemens over the medium term
- ▶ We have an Overweight rating with a target price of EUR95

## Climate change revenues

Siemens has wide product portfolio broadly classified within three broad categories – industry, energy and healthcare. The automation, drive and building technologies, and efficient lighting and solutions divisions fall in the industrial sector. Industrial automation and solutions contributed 18.5% of total revenues in FY2009, while energy-saving lighting solutions contributed 5.5%. The renewable-energy division is in the energy sector and contributed 3.5% of total revenues in FY2009. Siemens is a global leader in the supply of turbines to offshore wind farms.

## Investment case

Siemens' decade-long restructuring has finally started to show results. After more than 10 years of sub-peer profitability, Siemens' EBIT margin was 80bps above the median of its peers in FY2009 and in FY2010e Siemens' EBIT margin will be 90bps above the median based on our estimates. By the end of FY2010 we estimate that Siemens will have taken out recurring costs equivalent to over 3% of pre-credit crunch revenues.

We see five drivers of earnings growth for Siemens over the medium term: global economic recovery; operational gearing; improved prospects specifically for Siemens' most cash-generative businesses; remaining savings from the SG&A and SCM programmes; and increasing

competitive advantage from Siemens' ability to cross-finance its growth platforms.

For a detailed discussion of the investment case for Siemens, please see *Siemens: OW: the best outlook for Siemens' earnings for a decade*, 2 June 2010.

## Valuation

We have a target price of EUR95. This targets a 12-month forward MACC value of 12.3% (current MACC of 15.5%) and long-term ACROIC of 9%. Our target MACC is at a 220bps premium to our sector median MACC of 10.1%. Siemens has historically traded at an average MACC premium of c90bps to the sector median.

Under our research model, for stocks without a volatility indicator, the Neutral band is 5ppt above and below the hurdle rate for European ex UK stocks of 8.5%. This translates into a Neutral band of 3.5% to 13.5% above the current share price. Our 12-month target price of EUR95 implies a potential return of 32%, which is above the Neutral band; thus, we rate the stock Overweight. Siemens is a Europe Super Ten equity portfolio constituent.

## Risks

The risks to our rating are execution risk, which has been a problem historically; slow recovery for long-cycle businesses; and slower-than-expected recovery in developed markets.

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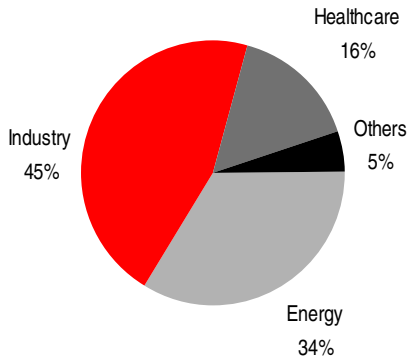
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\*Employed by a non-US affiliate of HSBC Securities (USA) Inc, and is not registered/ qualified pursuant to FINRA regulations

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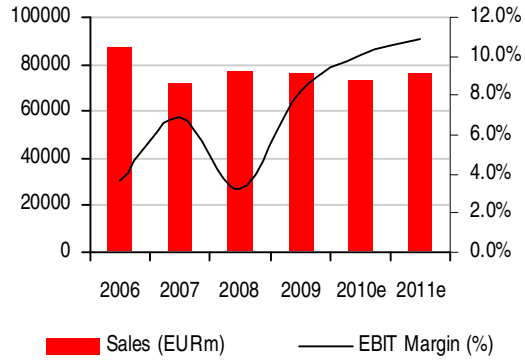
## Siemens in pictures

Sales by division (FY2009)



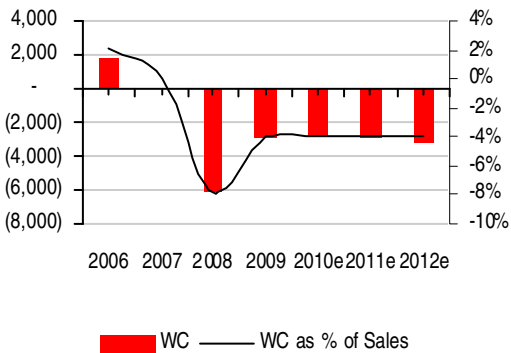
Source: Company data

Sales and EBIT margin development (FY2006-2012e)



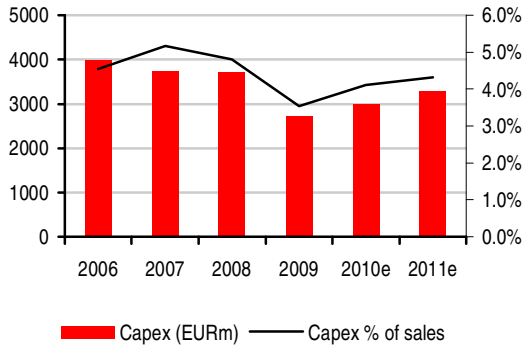
Source: Company data, HSBC estimates

Working capital (EURm) (FY2006-12e)



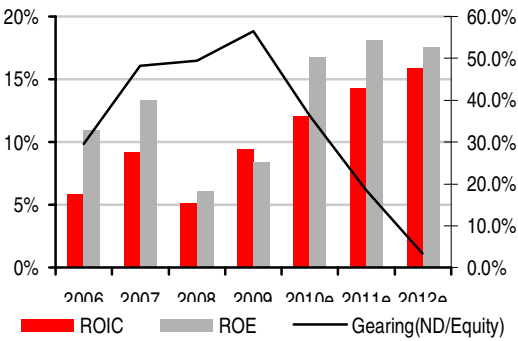
Source: Company data, HSBC estimates

Capex (FY2006-12e)



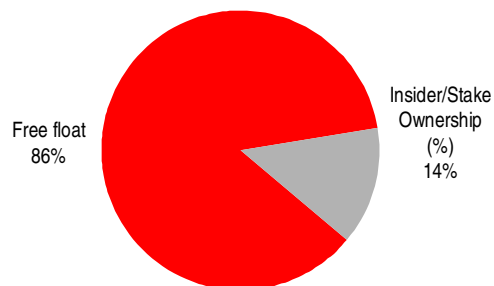
Source: Company data, HSBC estimates

Balance sheet ratios (FY2006-12e)



Source: Company data, HSBC estimates

Shareholder structure (August 2010)



Source: Bloomberg

## Financials & valuation: Siemens AG

Overweight

### Financial statements

Year to	09/2009a	09/2010e	09/2011e	09/2012e
<b>Profit &amp; loss summary (EURm)</b>				
Revenue	76,651	72,842	76,334	80,930
EBITDA	9,271	10,718	11,690	12,592
Depreciation & amortisation	-2,924	-3,407	-3,407	-3,407
Operating profit/EBIT	6,347	7,311	8,283	9,185
Net interest	150	117	217	217
PBT	3,931	7,028	8,600	9,502
HSBC PBT	3,891	7,028	8,600	9,502
Taxation	-1,434	-2,030	-2,490	-2,751
Net profit	2,292	4,737	5,811	6,420
HSBC net profit	2,252	4,737	5,811	6,420

### Cash flow summary (EURm)

Year to	09/2009a	09/2010e	09/2011e	09/2012e
Cash flow from operations	6,235	8,689	9,523	10,197
Capex	-2,715	-3,000	-3,300	-3,300
Cash flow from investment	-2,923	-3,000	-3,300	-3,300
Dividends	1,463	1,463	1,609	1,689
Change in net debt	1,870	-4,226	-4,614	-5,208
FCF equity	3,326	5,689	6,223	6,897

### Balance sheet summary (EURm)

Year to	09/2009a	09/2010e	09/2011e	09/2012e
Intangible fixed assets	20,847	20,847	20,847	20,847
Tangible fixed assets	25,271	24,864	24,757	24,650
Current assets	44,129	45,857	52,018	59,263
Cash & others	10,159	13,575	18,189	23,397
Total assets	94,926	95,847	102,001	109,239
Operating liabilities	38,516	36,712	38,366	40,543
Gross debt	25,576	24,766	24,766	24,766
Net debt	15,417	11,191	6,577	1,369
Shareholders funds	26,646	29,920	34,122	38,853
Invested capital	44,965	41,281	41,068	40,821

### Ratio, growth and per share analysis

Year to	09/2009a	09/2010e	09/2011e	09/2012e
<b>Y-o-y % change</b>				
Revenue	-0.9	-5.0	4.8	6.0
EBITDA	62.5	15.6	9.1	7.7
Operating profit	154.7	15.2	13.3	10.9
PBT	-43.0	78.8	22.4	10.5
HSBC EPS	36.3	108.4	22.5	10.0

### Ratios (%)

Year to	09/2009a	09/2010e	09/2011e	09/2012e
Revenue/IC (x)	1.8	1.7	1.9	2.0
ROIC	9.4	12.1	14.3	15.9
ROE	8.4	16.7	18.1	17.6
ROA	3.1	5.7	6.7	6.9
EBITDA margin	12.1	14.7	15.3	15.6
Operating profit margin	8.3	10.0	10.9	11.3
EBITDA/net interest (x)				
Net debt/equity	56.5	36.3	18.6	3.4
Net debt/EBITDA (x)	1.7	1.0	0.6	0.1
CF from operations/net debt	40.4	77.6	144.8	744.7

### Per share data (EUR)

Year to	09/2009a	09/2010e	09/2011e	09/2012e
EPS Rep (fully diluted)	2.68	5.49	6.72	7.40
HSBC EPS (fully diluted)	2.63	5.49	6.72	7.40
DPS	1.60	1.76	1.85	1.94
Book value	29.15	32.73	37.32	42.50

### Valuation data

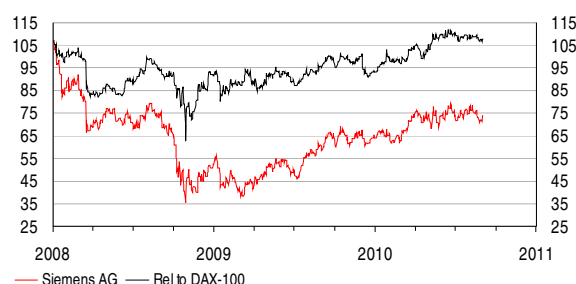
Year to	09/2009a	09/2010e	09/2011e	09/2012e
EV/sales	1.0	1.0	0.9	0.8
EV/EBITDA	8.3	6.9	5.9	5.1
EV/IC	1.7	1.8	1.7	1.6
PE*	27.3	13.1	10.7	9.7
P/Book value	2.5	2.2	1.9	1.7
FCF yield (%)	5.4	9.1	10.0	11.0
Dividend yield (%)	2.2	2.5	2.6	2.7

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (EUR)	71.78	Target price (EUR)	95.00	Potentl return (%)	32.3
Reuters (Equity)	SIEGn.DE	Bloomberg (Equity)	SIE GR		
Market cap (USDm)	83,422	Market cap (EURm)	65,622		
Free float (%)	100	Enterprise value (EURm)	73,435		
Country	Germany	Sector	Conglomerates		
Analyst	Colin Gibson	Contact	44 20 7991 6592		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010

Stated accounts as of 30 Sep 2005 are IFRS compliant

# Veolia Environnement (VIE FP)

- ▶ Exposure to water and waste, transport and energy
- ▶ Global reach a key strength
- ▶ We have an Overweight rating with a target price of EUR28

## Climate change revenues

Veolia provides environment services in water and waste-related activities. It is the largest operator globally in water. It offers a full range of water services and has grown aggressively in the past five years, particularly in markets of water scarcity, which makes it an attractive climate opportunity company. In 2009, over 36% of revenues came from water-related activities and another 26% from waste management.

## Investment case

Global reach is Veolia's biggest strength. It focuses on Europe; the US, where it is the largest non-regulated water service provider; the Middle East; and Asia. In the US, which we believe is a growth market, Veolia has recently won asset-light contracts for reference projects in Atlanta and Minneapolis.

In China, Veolia has expanded rapidly and the market appears to believe it is not creating value. However, it has a visible presence and has been able to raise tariffs in some of its major cities – Shanghai and Pudong in particular.

We estimate that Veolia can increase its EBITDA 6% between 2009 and 2014. We believe this growth will be organic, mainly due to contract wins in France, in waste management in the UK, in all its US businesses and in Asia and Australia.

Veolia's other businesses are environmental services. These offer a complete service in solid

waste collection, recycling recovery, treatment and disposal; energy services, energy efficiency and green energy management; and transport – rail, light rail and bus operations.

Veolia's major challenge in 2010 is to manage its business, driving up margins through cost cutting and channelling its relatively limited financial resources into growth in earnings and returns.

## Valuation

We derive our 12-month target price of EUR28 from the average value of the company under four methodologies: sum-of-the-parts (EUR28.36 by geography with 10% discount, EUR26.04 by business with 10% discount), DCF (EUR20.6 with 10% discount), DDM (EUR30.89) and value creation (EUR33.3). Under our research model, for Europe ex-UK stocks without a volatility indicator, the Neutral band is 5ppts above and below the hurdle rate for European ex-UK stocks of 8.5%. This translates into a Neutral band of 3.5% to 13.5% above the current share price. Our 12-month target price of EUR28 implies a potential return of 52%, which is above the Neutral band; thus, we rate the stock Overweight.

## Risks

The risks to our rating include delays in economic recovery, and with Veolia's efforts to maintain stable debt and credit metrics, it is not able to deploy capital to win asset-intensive contracts outside Europe, which could affect the growth profile.

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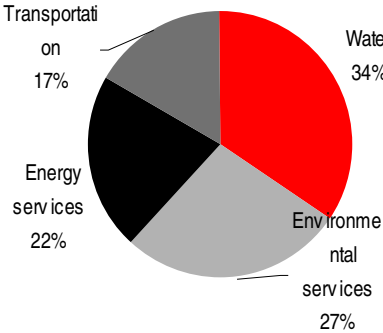
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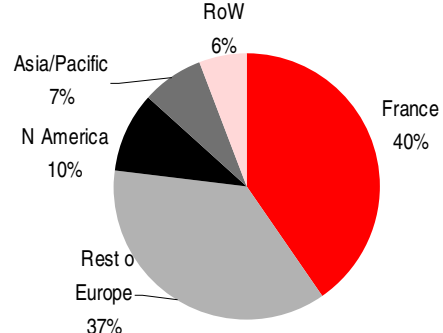
## Veolia Environnement in pictures

Revenue breakdown by business (H1 2010)



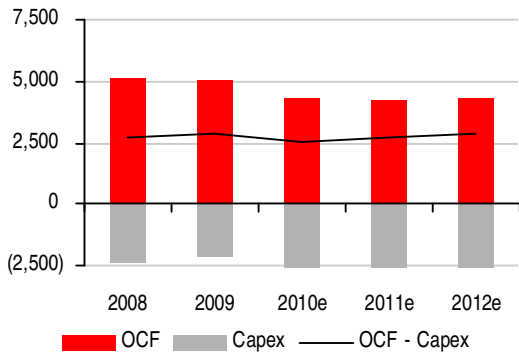
Source: Company data, HSBC

Revenue breakdown by geography (H1 2010)



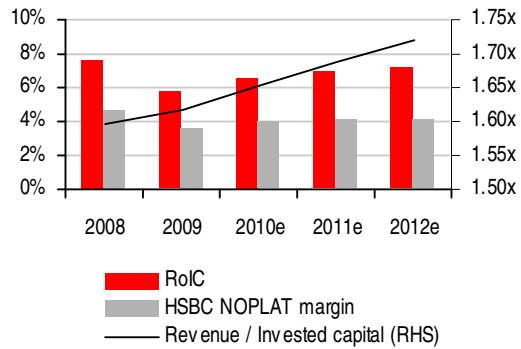
Source: Company data, HSBC

Free cash flow = OCF less capex (EURm) (2008-12e)



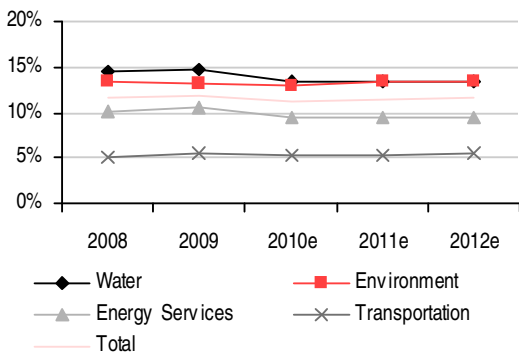
Source: Company data, HSBC estimates

Return analysis (2008-12e)



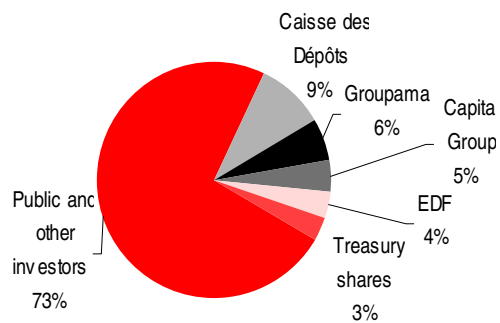
Source: Company data, HSBC estimates

EBITDA margin – segmental analysis (2008-12e)



Source: Company data, HSBC

Shareholder structure (December 2009)



Source: Company data, HSBC

## Financials & valuation: Veolia Environnement

Overweight

### Financial statements

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Profit &amp; loss summary (EURm)</b>				
Revenue	34,551	35,468	36,754	38,239
EBITDA	3,595	3,864	4,091	4,305
Depreciation & amortisation	-1,575	-1,820	-1,907	-2,007
Operating profit/EBIT	2,020	2,044	2,183	2,298
Net interest	-895	-802	-836	-857
PBT	1,126	1,242	1,348	1,441
HSBC PBT	868	1,242	1,348	1,441
Taxation	-285	-385	-418	-447
Net profit	584	592	642	687
HSBC net profit	626	592	642	687

### Cash flow summary (EURm)

Cash flow from operations	3,962	3,131	3,032	3,021
Capex	-2,207	-2,854	-2,923	-2,970
Cash flow from investment	-1,662	-2,838	-2,828	-2,855
Dividends	-434	-592	-601	-633
Change in net debt	-1,401	643	396	467
FCF equity	640	276	108	50

### Balance sheet summary (EURm)

Intangible fixed assets	11,687	11,687	11,687	11,687
Tangible fixed assets	9,382	9,942	10,462	10,911
Current assets	19,499	19,150	19,048	19,126
Cash & others	5,614	5,315	4,919	4,452
Total assets	49,817	50,485	51,304	52,231
Operating liabilities	13,609	14,011	14,500	15,064
Gross debt	21,085	21,085	21,085	21,085
Net debt	15,127	15,770	16,166	16,633
Shareholders funds	7,461	7,645	7,872	8,122
Invested capital	21,345	21,452	21,778	22,207

### Ratio, growth and per share analysis

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Y-o-y % change</b>				
Revenue	-3.4	2.7	3.6	4.0
EBITDA	-12.4	7.5	5.9	5.2
Operating profit	3.0	1.2	6.8	5.3
PBT	11.1	10.4	8.5	7.0
HSBC EPS	86.5	-5.8	7.6	7.0

### Ratios (%)

Revenue/IC (x)	1.6	1.7	1.7	1.7
ROIC	5.8	6.6	7.0	7.2
ROE	8.7	7.8	8.3	8.6
ROA	2.9	2.8	3.0	3.1
EBITDA margin	10.4	10.9	11.1	11.3
Operating profit margin	5.8	5.8	5.9	6.0
EBITDA/net interest (x)	4.0	4.8	4.9	5.0
Net debt/equity	149.3	151.7	150.7	150.0
Net debt/EBITDA (x)	4.2	4.1	4.0	3.9
CF from operations/net debt	26.2	19.9	18.8	18.2

### Per share data (EUR)

EPS Rep (fully diluted)	1.24	1.25	1.34	1.44
HSBC EPS (fully diluted)	1.33	1.25	1.34	1.44
DPS	1.21	1.21	1.27	1.33
Book value	15.82	16.13	16.47	17.00

### Valuation data

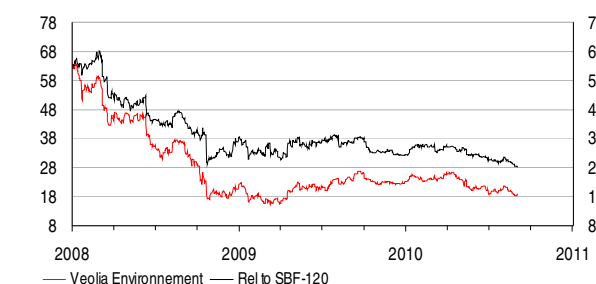
Year to	12/2009a	12/2010e	12/2011e	12/2012e
EV/sales	0.8	0.8	0.7	0.7
EV/EBITDA	7.4	6.9	6.6	6.3
EV/IC	1.2	1.2	1.2	1.2
PE*	13.8	14.7	13.7	12.8
P/Book value	1.2	1.1	1.1	1.1
FCF yield (%)	5.6	2.5	1.0	0.5
Dividend yield (%)	6.6	6.6	6.9	7.3

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (EUR)	18.37	Target price (EUR)	28.00	Potentl return (%)	52.4
Reuters (Equity)	VIE.PA	Bloomberg (Equity)	VIE FP		
Market cap (USDm)	11,615	Market cap (EURm)	9,137		
Free float (%)	100	Enterprise value (EURm)	26757		
Country	France	Sector	Multi-utilities		
Analyst	Verity Mitchell	Contact	44 20 7991 6840		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010

# Vossloh (VOS GR)

- ▶ Exposure to transport efficiency theme
- ▶ Key railway play with sensible growth strategy and sound financials on a global scale
- ▶ We have an Overweight rating with a target price of EUR97

## Climate change revenues

Vossloh generates all its revenues from rail infrastructure and transportation.

## Investment case

Vossloh is benefiting from the global resurgence of railways. It has high exposure to ground infrastructure and high-speed rail, which are expected to outgrow the average market.

Vossloh reported solid Q2 results above market forecasts and raised its detailed (already positive) 2010-11 targets, contrary to concerns in the market about the potential for the China business (local competition, auxiliary measures).

Vossloh has a good track record with its portfolio optimisation strategy. Most recently, it materially increased its exposure to high-margin services via an acquisition at a very attractive price, which offers significant development potential.

Furthermore, the company follows a sensible organic and external growth strategy and it commands sound financials. EUR400m is still available for acquisitions, and the disposal of cyclical low-margin locomotives, which is a valid long-term scenario, could add further funds.

Vossloh has announced two large-scale order wins in Q3 and further wins are possible. The Chinese

railway ministry is expected to issue a large new fastening systems tender during Q3 (previous Chinese orders were EUR160m and EUR170m).

Cyclical demand for diesel locomotives, which constrained 2009-10 group sales growth and earnings, seems to have improved.

## Valuation

We value Vossloh using a three-stage DCF/economic residual income model. We assume a risk-free rate of 4%, an equity risk premium of 4.5% and a company beta of 0.9, which is above the 0.83 market beta. This gives us a target price of EUR97.

Under our research model, for stocks without a volatility indicator, the Neutral band is 5ppts above and below the hurdle rate for Europe ex-UK stocks of 8.5%. This translates into a Neutral band of 3.5% to 13.5% above the current share price. Our 12-month target price of EUR97 implies a potential return of 23%, which is above the Neutral band; thus, we rate the stock Overweight.

## Risks

Downside risks to our rating come from typical project risks such as delays or penalties, or the failure to win large orders. In addition, new players could weaken margins. Steel price moves could also influence estimates.

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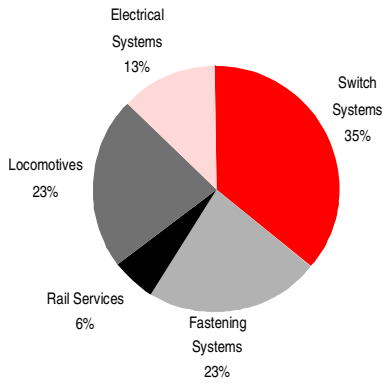
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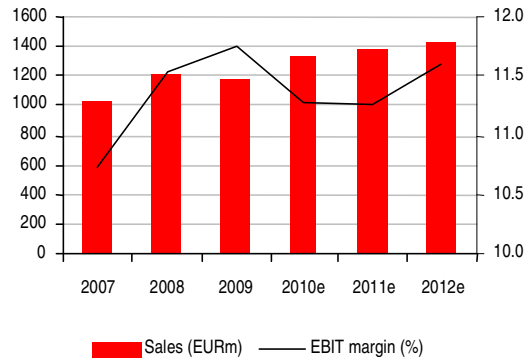
## Vossloh in pictures

Sales by division (2010e)



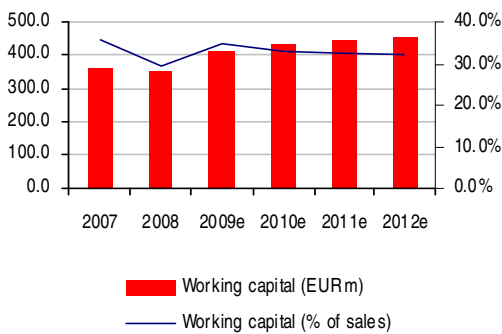
Source: HSBC estimates

Sales and EBIT margin (2007-2012e)



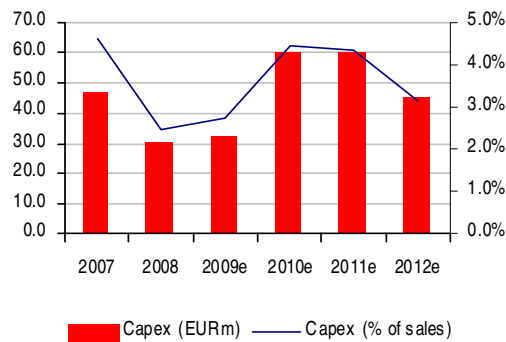
Source: Company data, HSBC estimates

Working capital (2007-12e)



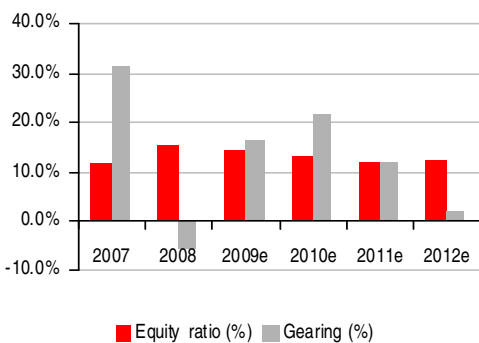
Source: Company data, HSBC estimates

Capex (2007-12e)



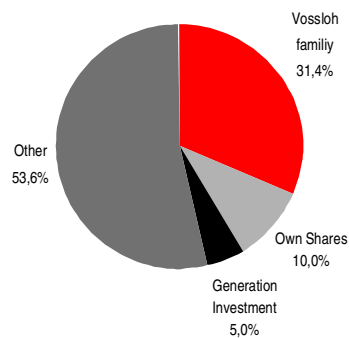
Source: Company data, HSBC estimates

Financing ratios (2007-12e)



Source: Company data, HSBC estimates

Shareholder structure



Source: Deutsche Börse

## Financials & valuation: Vossloh

Overweight

### Financial statements

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Profit &amp; loss summary (EURm)</b>				
Revenue	1,174	1,370	1,405	1,450
EBITDA	163	187	196	204
Depreciation & amortisation	-25	-32	-37	-38
Operating profit/EBIT	138	155	159	166
Net interest	-9	-12	-11	-6
PBT	129	143	148	160
HSBC PBT	129	143	148	160
Taxation	-32	-37	-40	-46
Net profit	88	95	99	105
HSBC net profit	88	95	99	105

### Cash flow summary (EURm)

Cash flow from operations	61	97	154	147
Capex	-47	-60	-60	-45
Cash flow from investment	-45	-131	-61	-46
Dividends	-44	-27	-28	-29
Change in net debt	106	55	-55	-63
FCF equity	18	35	85	93

### Balance sheet summary (EURm)

Intangible fixed assets	322	351	343	336
Tangible fixed assets	127	197	230	245
Current assets	849	938	946	970
Cash & others	157	157	157	157
Total assets	1,338	1,527	1,559	1,590
Operating liabilities	357	395	402	411
Gross debt	237	293	237	175
Net debt	80	135	80	18
Shareholders funds	472	540	612	688
Invested capital	784	934	959	982

### Ratio, growth and per share analysis

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Y-o-y % change</b>				
Revenue	-3.2	16.7	2.6	3.2
EBITDA	-2.8	15.1	4.8	3.7
Operating profit	-1.4	12.3	2.5	4.2
PBT	0.1	11.6	3.3	7.9
HSBC EPS	-0.9	8.7	4.2	6.4

### Ratios (%)

Revenue/IC (x)	1.6	1.6	1.5	1.5
ROIC	14.6	13.8	12.6	12.4
ROE	18.5	18.8	17.2	16.2
ROA	8.5	8.6	8.0	8.0
EBITDA margin	13.9	13.7	14.0	14.0
Operating profit margin	11.8	11.3	11.3	11.4
EBITDA/net interest (x)	17.3	15.6	17.6	33.4
Net debt/equity	16.2	23.4	12.3	2.4
Net debt/EBITDA (x)	0.5	0.7	0.4	0.1
CF from operations/net debt	76.0	72.0	193.0	839.7

### Per share data (EUR)

EPS Rep (fully diluted)	6.57	7.14	7.44	7.91
HSBC EPS (fully diluted)	6.57	7.14	7.44	7.91
DPS	2.00	2.10	2.20	2.40
Book value	35.29	40.59	45.93	51.64

### Valuation data

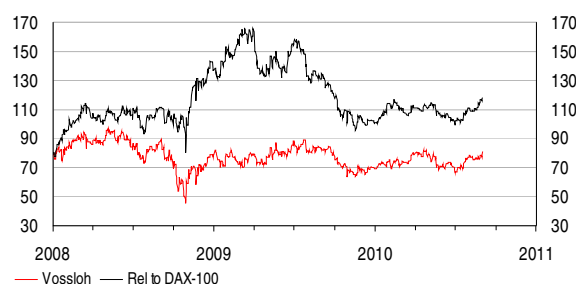
Year to	12/2009a	12/2010e	12/2011e	12/2012e
EV/sales	1.1	1.0	0.9	0.8
EV/EBITDA	7.7	7.1	6.5	5.9
EV/IC	1.6	1.4	1.3	1.2
PE*	12.0	11.0	10.6	10.0
P/Book value	2.2	1.9	1.7	1.5
FCF yield (%)	1.5	3.0	7.1	7.8
Dividend yield (%)	2.5	2.7	2.8	3.0

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (EUR)	78.77	Target price (EUR)	97.00	Potent'l return (%)	23.1
Reuters (Equity)	VOSG.DE	Bloomberg (Equity)	VOS GR		
Market cap (USDm)	1,482	Market cap (EURm)	1,165		
Free float (%)	67	Enterprise value (EURm)	1329		
Country	Germany	Sector	Machinery		
Analyst	Juergen Siebrecht	Contact	+49 211 910 3350		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010

Stated accounts as of 31 Dec 2004 are IFRS compliant

# Wacker Chemie (WCH GR)

- ▶ Exposure to solar theme
- ▶ H2: seasonal slowdown of Chemicals to be offset by strong polysilicon and further improvements at Siltronic
- ▶ We have an Overweight (V) rating with a target price of EUR155

## Climate change revenues

Wacker Chemie is a leading polysilicon (raw material for Solar PV) producer and is in the global top three in its key markets, which have high entry barriers and underlying growth rates above GDP.

## Investment case

Wacker has low gearing and solid financials. We forecast 22% y-o-y top-line growth in 2010 and the company to capitalise on its exposure to emerging markets (c34% of 2009 sales in Asia), its cost and quality leadership in polysilicon, and the cyclical nature of its Siltronic and Silicones unit. We expect the cash-generative polysilicon division to maintain its strengths as new capacity ramps up ahead of plan. Polysilicon's Q2 EBITDA margin expansion to 54% (up 5.7ppt q-o-q; clean margin 51.5%) was driven by unit cost reductions and scale effects from the new Poly 8 facility (fully ramped in the quarter). We expect a fairly stable margin performance in H2 with some upside potential from reductions in bottlenecks and scale effects.

We believe the supply/demand imbalance in the solar value chain will increase towards year-end and expect price pressure going into 2011 (we forecast the polysilicon spot price to fall to USD45 per kg, down 18% y-o-y). However, we expect Wacker's margin to be resilient as over 60% of production is

sold under long-term contracts). Guidance for 2010 (EBITDA above EUR1.06bn) seems conservative to us (HSBCE EBITDA EUR1.13bn).

## Valuation

Our target price of EUR155 is based on the average of our DCF model and our SOTP valuation analysis. Our DCF model is based on a WACC of 10.1% (risk-free rate 4.0%, equity risk premium 4.5%, and a beta of 1.3) and generates a fair value of EUR140. Our SOTP analysis, using 2011e multiples, yields a fair value of EUR167.

Under our research model, for stocks without a volatility indicator, the Neutral band is 5ppts above and below the hurdle rate for Europe ex-UK stocks of 8.5%. This translates into a Neutral band of 3.5% to 13.5% above the current share price. Our 12-month target price of EUR155 implies a potential return of 29%, which is above the Neutral band; thus, we rate the stock Overweight.

## Risks

Key downside risks, in our view, include: a weaker-than-expected recovery in the global economy and the semiconductor market; cost savings below expectations; increased volatility in semiconductor industry cycles; rising energy and raw-material costs; negative FX effects (US dollar); and oversupply.

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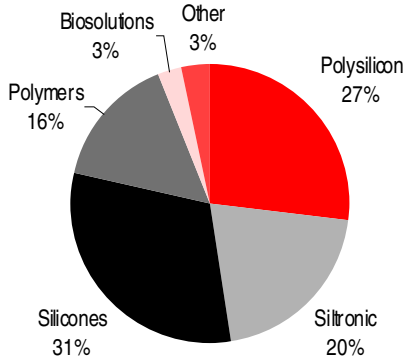
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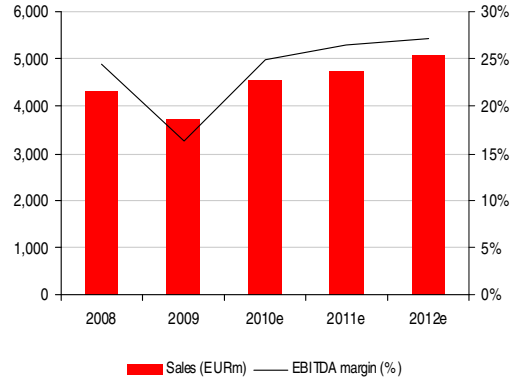
## Wacker Chemie in pictures

Sales by division (2010e)



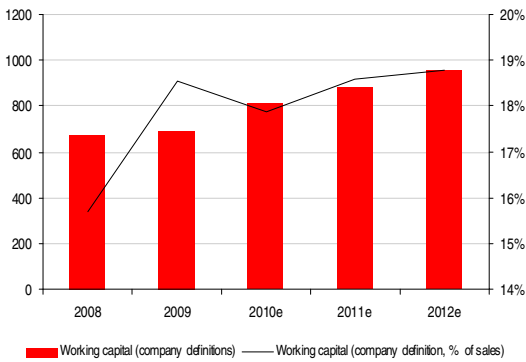
Source: HSBC estimates

Sales and EBITDA margin (2008-12e)



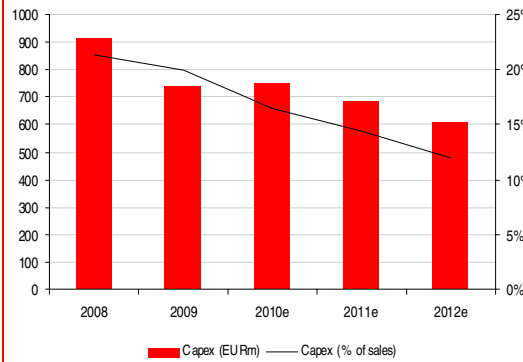
Source: Company data, HSBC estimates

Working capital (EURm) (2008-12e)



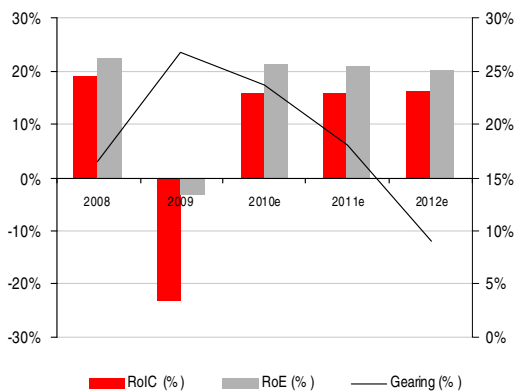
Source: Company data, HSBC estimates

Capex (2008-12e)



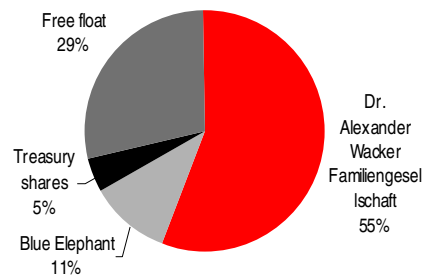
Source: Company data, HSBC estimates

Balance sheet ratios (2008-12e)



Source: Company data, HSBC estimates

Shareholder structure (June 2010)



Source: HSBC, company data

## Financials & valuation: Wacker Chemie

Overweight (V)

### Financial statements

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Profit &amp; loss summary (EURm)</b>				
Revenue	3,719	4,542	4,747	5,098
EBITDA	607	1,129	1,260	1,384
Depreciation & amortisation	-580	-451	-479	-495
Operating profit/EBIT	27	678	782	889
Net interest	-18	3	3	4
PBT	3	669	777	887
HSBC PBT	3	669	777	887
Taxation	-78	-214	-249	-284
Net profit	-71	454	527	602
HSBC net profit	-71	454	527	602

### Cash flow summary (EURm)

Cash flow from operations	768	820	923	1,006
Capex	-740	-750	-685	-607
Cash flow from investment	-800	-790	-721	-644
Dividends	-89	-60	-114	-134
Change in net debt	178	32	-58	-206
FCF equity	-204	11	160	322

### Balance sheet summary (EURm)

Intangible fixed assets	22	21	20	19
Tangible fixed assets	2,872	3,182	3,396	3,516
Current assets	1,422	1,693	1,769	1,867
Cash & others	364	441	441	441
Total assets	4,542	5,159	5,478	5,726
Operating liabilities	1,278	1,335	1,242	1,167
Gross debt	885	994	936	730
Net debt	521	553	495	289
Shareholders funds	1,925	2,315	2,725	3,190
Invested capital	2,674	3,120	3,501	3,793

### Ratio, growth and per share analysis

Year to	12/2009a	12/2010e	12/2011e	12/2012e
<b>Y-o-y % change</b>				
Revenue	-13.5	22.1	4.5	7.4
EBITDA	-42.5	86.1	11.6	9.8
Operating profit	-95.9	2430.1	15.3	13.7
PBT	-99.5	20171.8	16.1	14.2
HSBC EPS	-116.1		16.0	14.1

### Ratios (%)

Revenue/IC (x)	1.4	1.6	1.4	1.4
ROIC	-23.3	15.9	16.1	16.6
ROE	-3.5	21.4	20.9	20.3
ROA	-13.8	9.4	10.0	10.8
EBITDA margin	16.3	24.9	26.6	27.2
Operating profit margin	0.7	14.9	16.5	17.4
EBITDA/net interest (x)	33.0			
Net debt/equity	26.8	23.7	18.0	9.0
Net debt/EBITDA (x)	0.9	0.5	0.4	0.2
CF from operations/net debt	147.3	148.2	186.4	348.6

### Per share data (EUR)

EPS Rep (fully diluted)	-1.43	9.15	10.61	12.11
HSBC EPS (fully diluted)	-1.43	9.15	10.61	12.11
DPS	1.20	2.30	2.70	3.00
Book value	38.76	46.60	54.85	64.22

### Key forecast drivers

Year to	12/2009a	12/2010e	12/2011e	12/2012e
Siltronic	638	991	997	1,015
Polysilicon	1,121	1,319	1,433	1,630
Chemicals	2,088	2,404	2,517	2,673
Other	181	159	166	178
Consolidation	308	332	366	398
Wacker Chemie	3,719	4,542	4,747	5,098

### Valuation data

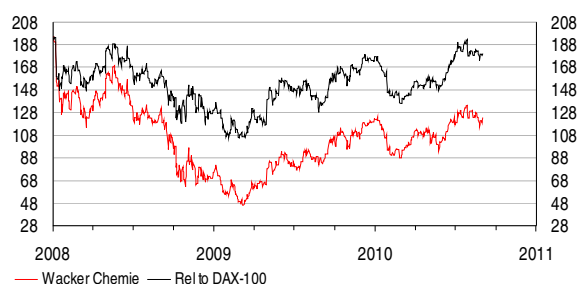
Year to	12/2009a	12/2010e	12/2011e	12/2012e
EV/sales	1.7	1.4	1.3	1.2
EV/EBITDA	10.3	5.6	4.9	4.3
EV/IC	2.3	2.0	1.8	1.6
PE*	nm	13.1	11.3	9.9
P/Book value	3.1	2.6	2.2	1.9
FCF yield (%)	-3.6	0.2	2.8	5.7
Dividend yield (%)	1.0	1.9	2.3	2.5

Note: \* = Based on HSBC EPS (fully diluted)

### Issuer information

Share price (EUR)	119.70	Target price (EUR)	155.00	Potent'l return (%)	29.5
Reuters (Equity)	WCHG.DE	Bloomberg (Equity)	WCH GR		
Market cap (USDm)	7,558	Market cap (EURm)	5,945		
Free float (%)	29	Enterprise value (EURm)	6272		
Country	Germany	Sector	CHEMICALS		
Analyst	Christian Rath	Contact	+49 211 910 3049		

### Price relative



Source: HSBC

Note: price at close of 31 Aug 2010

Stated accounts as of 31 Dec 2004 are IFRS compliant



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# Appendix – CEO stock list

HSBC Climate Equity Opportunity list

Company	Sector	Rating	Currency	Current price	Target price	Potential return	EV/sales	EV/EBITDA	PE (diluted)
<b>Low-carbon energy</b>									
Cosan SA †	Bioenergy	Overweight (V)	BRL	22.89	30.00	31%	0.9	8.2	32.0
São Martinho	Bioenergy	Overweight (V)	BRL	17.20	21.00	22%	2.4	8.2	124.6
	<b>Sector Mean</b>						<b>1.7</b>	<b>8.2</b>	<b>78.3</b>
Daldrup & Soehne	Geothermal	Neutral (V)	EUR	23.59	27.00	14%	2.1	8.7	16.6
	<b>Sector Mean</b>						<b>2.1</b>	<b>8.7</b>	<b>16.6</b>
EDF	LCPP	Underweight	EUR	31.43	39.00	24%	1.8	7.2	16.9
Energias de Portugal †	LCPP	Overweight	EUR	2.40	3.20	33%	1.8	6.8	8.2
Fortum OYJ	LCPP	Overweight	EUR	18.17	21.00	16%	3.5	8.2	11.5
Iberdrola	LCPP	Neutral	EUR	5.56	6.26	13%	2.2	8.3	11.4
KEPCO †	LCPP	Neutral	KRW	29150.00	36500.00	25%	1.4	6.5	14.0
	<b>Sector Mean</b>						<b>2.2</b>	<b>7.4</b>	<b>12.4</b>
Doosan Heavy Industry †	Nuclear	Overweight (V)	KRW	68800.00	110000.00	60%	0.8	10.3	19.1
	<b>Sector Mean</b>						<b>0.8</b>	<b>10.3</b>	<b>19.1</b>
Acciona	RPP	Overweight (V)	EUR	62.29	94.00	51%	1.6	8.6	18.9
China Longyuan Power †	RPP	Neutral (V)	HKD	7.85	8.30	6%	4.3	8.1	31.0
Edf Energies Nouvelles	RPP	Neutral (V)	EUR	30.74	34.00	11%	4.3	13.1	21.8
EDP Renovaveis	RPP	Overweight (V)	EUR	4.39	7.25	65%	7.3	9.1	31.3
Iberdrola Renovables S.A	RPP	Overweight (V)	EUR	2.58	3.50	36%	6.2	9.9	24.4
Terna Energy SA	RPP	Overweight (V)	EUR	3.40	5.00	47%	6.8	17.3	31.6
Theolia	RPP	Neutral (V)	EUR	1.70	1.00	-41%	1.6	11.4	
	<b>Sector Mean</b>						<b>4.6</b>	<b>11.1</b>	<b>26.5</b>
Centrosolar	Solar	Overweight (V)	EUR	5.69	7.50	32%	0.4	4.1	6.1
Centrotherm PV	Solar	Underweight (V)	EUR	33.50	25.00	-25%	0.9	6.0	15.4
Conergy	Solar	Underweight (V)	EUR	0.60	0.50	-17%	0.6	24.0	
GCL Poly Energy Holdings	Solar	Underweight (V)	HKD	1.80	1.20	-33%	2.9	8.6	13.0
LDK Solar	Solar	Neutral (V)	USD	6.81	8.00	17%	1.2	5.4	5.6
Manz Automation	Solar	Neutral (V)	EUR	49.91	50.00	0%	1.1	10.8	38.3
Meyer Burger	Solar	Underweight (V)	CHF	27.95	25.00	-11%	1.8	12.9	34.0
Motech Industries Inc	Solar	Underweight (V)	TWD	124.50	94.06	-24%	1.9	16.1	39.1
Pfeiffer Vacuum	Solar	Neutral (V)	EUR	61.29	60.00	-2%	2.4	9.6	15.2
Phoenix Solar	Solar	Neutral (V)	EUR	27.80	35.00	26%	0.3	4.6	7.6
PV Crystalox	Solar	Overweight (V)	GBP	0.56	0.80	43%	0.7	4.4	15.6
Q-Cells	Solar	Underweight (V)	EUR	5.12	6.00	17%	0.8	7.2	
Renesola	Solar	Neutral (V)	GBP	2.82	2.40	-15%	1.2	7.2	8.7
Renewable Energy Corp	Solar	Neutral (V)	NOK	16.26	21.00	29%	1.5	7.3	17.3
Roth & Rau	Solar	Neutral (V)	EUR	19.86	25.00	26%	0.9	6.4	15.3
SMA Solar	Solar	Neutral (V)	EUR	85.30	100.00	17%	1.5	5.1	8.9
Solaria Energia	Solar	Underweight (V)	EUR	1.58	1.60	1%	1.3	10.9	25.9
SolarWorld	Solar	Overweight (V)	EUR	8.97	12.50	39%	1.1	5.7	12.2
Solon	Solar	Neutral (V)	EUR	3.58	5.00	40%	0.6	14.9	
Suntech Power Holdings	Solar	Overweight (V)	USD	7.74	13.00	68%	0.8	5.9	15.9
Trina Solar	Solar	Neutral (V)	USD	25.78	27.00	5%	1.3	4.9	7.5
Wacker Chemie	Solar	Overweight (V)	EUR	119.70	155.00	29%	1.4	5.6	13.1
Yingli	Solar	Neutral (V)	USD	11.13	10.50	-6%	1.9	7.7	12.2
	<b>Sector Mean</b>						<b>1.2</b>	<b>8.5</b>	<b>16.3</b>
Clipper Windpower	Wind	Overweight (V)	GBP	0.44	1.00	129%	0.1	6.1	178.7
Dongfang Electric Corp †	Wind	Overweight (V)	HKD	28.35	30.00	6%	1.1	10.9	21.1
Gamesa Corp	Wind	Neutral (V)	EUR	5.30	5.50	4%	0.6	7.4	22.2
Hansen Transmissions	Wind	Overweight (V)	GBP	0.58	0.95	65%	1.1	14.4	
Nordex	Wind	Overweight (V)	EUR	7.32	10.00	37%	0.2	4.5	19.8
REpower Systems	Wind	Neutral (V)	EUR	104.90	115.00	10%	0.6	6.7	16.8
Suzlon Energy Ltd	Wind	Underweight (V)	INR	46.25	42.00	-9%	0.8	17.8	
Taewoong Co Ltd	Wind	Neutral (V)	KRW	48500.00	66000.00	36%	1.3	8.4	16.1
Vestas Wind	Wind	Overweight (V)	DKK	219.20	300.00	37%	1.0	10.4	30.3
	<b>Sector Mean</b>						<b>0.8</b>	<b>9.6</b>	<b>43.6</b>

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal/oil such as coal based electricity generation or turbine manufacturers  
Prices as at close of 31 Aug 2010  
Source: HSBC, Thomson Reuters Datastream

HSBC Climate Equity Opportunity list (Contd...)

Company	Sector	Rating	Currency	Current price	Target price	Potential return	EV/sales	EV/EBITDA	PE (diluted)
<b>Energy Efficiency</b>									
Aixtron	Building efficiency	Overweight (V)	EUR	19.60	34.00	73%	2.0	5.8	11.2
Centrotec	Building efficiency	Overweight (V)	EUR	14.02	16.00	14%	0.6	6.1	9.5
NVC Lighting Holding	Building efficiency	Overweight (V)	HKD	3.48	4.40	26%	2.6	14.5	23.6
Philips	Building efficiency	Overweight	EUR	22.11	29.00	31%	0.8	6.1	14.9
Saint Gobain	Building efficiency	Neutral (V)	EUR	29.04	31.00	7%	0.6	5.9	11.2
Zumtobel	Building efficiency	Neutral (V)	EUR	13.10	15.00	15%	0.8	9.7	11.8
	<b>Sector Mean</b>						<b>1.2</b>	<b>8.0</b>	<b>13.7</b>
Saft Groupe SA	Energy storage	Overweight (V)	EUR	24.89	32.00	29%	1.2	6.6	12.8
SFC Energy	Energy storage	Neutral (V)	EUR	5.72	6.00	5%	0.4		
	<b>Sector Mean</b>						<b>0.8</b>	<b>6.6</b>	<b>12.8</b>
KRONES	Industrial efficiency	Neutral (V)	EUR	42.58	46.00	8%	0.6	9.7	26.1
KUKA	Industrial efficiency	Neutral (V)	EUR	12.48	13.50	8%	0.5	9.4	76.0
Rational	Industrial efficiency	Overweight (V)	EUR	142.95	142.00	-1%	4.5	14.6	23.2
Thermax India †	Industrial efficiency	Neutral (V)	INR	758.15	750.00	-1%	2.4	19.9	32.9
	<b>Sector Mean</b>						<b>2.0</b>	<b>13.4</b>	<b>39.6</b>
ABB	Multi-theme EE	Neutral	CHF	19.62	23.00	17%	1.3	9.1	17.1
Alstom †	Multi-theme EE	Overweight (V)	EUR	37.64	70.00	86%	0.5	4.7	9.1
Emerson Electric Co	Multi-theme EE	Neutral	USD	46.65	50.00	7%	1.8	10.1	17.6
Honeywell International I	Multi-theme EE	Underweight	USD	39.06	40.00	2%	1.3	10.5	16.6
Schneider Electric	Multi-theme EE	Overweight	EUR	83.69	98.00	17%	1.6	10.7	15.3
Siemens AG	Multi-theme EE	Overweight	EUR	71.78	95.00	32%	1.0	6.9	13.1
	<b>Sector Mean</b>						<b>1.2</b>	<b>8.7</b>	<b>14.8</b>
Atkins WS	Transport efficiency	Neutral	GBP	6.80	8.00	18%	0.6	6.3	8.7
Delachaux Sa	Transport efficiency	Overweight	EUR	50.13	60.00	20%	1.1	8.2	13.6
Faiveley SA	Transport efficiency	Overweight	EUR	60.82	72.00	18%	1.3	8.3	12.2
Giant manufacturing	Transport efficiency	Overweight	TWD	116.00	98.87	-15%	1.1	12.2	14.9
Oxford Catalyst Group	Transport efficiency	Overweight (V)	GBP	0.73	1.00	37%	3.6		
Sercos Group	Transport efficiency	Neutral	GBP	5.82	6.10	5%	0.8	10.8	18.2
Vossloh	Transport efficiency	Overweight	EUR	78.77	97.00	23%	1.0	7.1	11.0
	<b>Sector Mean</b>						<b>1.4</b>	<b>8.8</b>	<b>13.1</b>
<b>Water &amp; Waste</b>									
New Environment Energy	Waste	Overweight (V)	HKD	0.50	2.80	460%	0.2	1.3	2.5
Pennon Group	Waste	Neutral	GBP	5.73	6.20	8%	3.7	9.7	13.8
Seche Environnement	Waste	Neutral (V)	EUR	54.00	63.00	17%	1.4	5.5	15.3
	<b>Sector Mean</b>						<b>1.8</b>	<b>5.5</b>	<b>10.5</b>
American Water Works	Water	Overweight	USD	22.58	25.00	11%	3.7	9.5	16.1
Andritz	Water	Overweight	EUR	48.00	56.00	17%	0.6	7.0	17.0
Aqua America	Water	Overweight	USD	19.88	21.00	6%	5.9	10.9	22.4
Athens Water & Sewerage	Water	Neutral	EUR	5.00	6.30	26%	1.8	9.1	13.7
BWT	Water	Neutral (V)	EUR	17.97	20.00	11%	0.9	9.3	16.6
China Everbright Intl	Water	Overweight (V)	HKD	3.50	4.90	40%	5.1	13.7	20.1
Northumbrian Water Group	Water	Neutral	GBP	3.30	3.50	6%	5.6	10.4	13.0
Severn Trent	Water	Underweight	GBP	12.95	12.70	-2%	4.0	8.3	10.4
Suez Environnement	Water	Overweight	EUR	12.70	22.00	73%	1.1	6.3	14.8
United Utilities	Water	Overweight	GBP	5.71	6.40	12%	3.6	7.8	10.0
Veolia Environnement	Water	Overweight	EUR	18.37	28.00	52%	0.8	6.9	14.7
WashTec	Water	Neutral (V)	EUR	7.90	10.00	27%	0.6	5.8	10.7
	<b>Sector Mean</b>						<b>2.8</b>	<b>8.8</b>	<b>15.0</b>

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal/oil such as coal based electricity generation or turbine manufacturers  
Prices as at close of 31 Aug 2010  
Source: HSBC, Thomson Reuters Datastream

**HSBC Climate Equity Opportunity list (alphabetical order)**

Company	Theme	Region	Analysts	RIC code
ABB	Multi theme energy efficiency	Europe	Colin Gibson & team	ABBN.VX
Acciona	RPP	Europe	Robert Clover & team	ANA.MC
Aixtron	Building efficiency	Europe	Christian Rath & team	AIXGn.DE
Alstom †	Multi-theme EE	Europe	Colin Gibson & team	ALSO.PA
American Water Works	Water	North America	Verity Mitchell & team	AWK.N
Aqua America	Water	North America	Verity Mitchell & team	WTR.N
Athens Water & Sewerage	Water	Europe	Paris Mantzavras & team	EYDr.AT
Atkins WS	Transport efficiency	Europe	Matthew Lloyd & team	ATKW.L
BWT	Water	Europe	Burkhard Weiss & team	BWTV.VI
Centrosolar	Solar	Europe	Burkhard Weiss & team	C3OG.DE
Centrotec	Building efficiency	Europe	Burkhard Weiss & team	CEVG.DE
Centrotherm PV	Solar	Europe	Christian Rath & team	CTNG.DE
China Everbright International	Water	Asia	Ken Ho & team	0257.HK
China Longyuan Power Group †	RPP	Asia	Shishir Singh & team	0916.HK
Clipper Windpower	Wind	Europe	Robert Clover & team	CWPR.L
Conergy	Solar	Europe	Burkhard Weiss & team	CGYG.DE
Cosan SA †	Bioenergy	South America	Pedro Herrera & team	CZZ.N
Daldrup & Soehne	Geothermal	Europe	Burkhard Weiss & team	4DSG.DE
Delachaux SA	Transport efficiency	Europe	Christophe Quarante & team	DELX.PA
Dongfang Electric Corp †	Wind	Asia	Gary Chiu & team	1072.HK
Doosan Heavy Industry †	LCPP	Asia	Tarun Bhatnagar & team	034020.KS
EDF	LCPP	Europe	Adam Dickens & team	EDF.PA
Edf Energies Nouvelles	RPP	Europe	Robert Clover & team	EEN.PA
EDP †	LCPP	Europe	Jose A Lopez & team	EDP.LS
EDP Renovaveis	RPP	Europe	Robert Clover & team	EDPR.LS
Eringklinger	Transport efficiency	Europe	Niels Fehre & team	ZILGn.DE
Emerson Electric	Multi theme energy efficiency	North America	Colin Gibson & team	EMR.N
Faiveley SA	Transport efficiency	Europe	Christophe Quarante & team	FAIP.PA
Fortum OYJ	LCPP	Europe	Adam Dickens & team	FUM1V.HE
Gamesa Corp Tecnologica	Wind	Europe	Robert Clover & team	GAM.MC
GCL Poly Energy Holdings	Solar	Asia	Shishir Singh & team	3800.HK
Giant Manufacturing	Transport efficiency	Asia	Herald van der Linde & team	9921.TW
Hansen Transmissions	Wind	Europe	Robert Clover & team	HSNT.L
Honeywell	Multi theme energy efficiency	North America	Colin Gibson & team	HON.N
Iberdrola	LCPP	Europe	Jose A Lopez & team	IBE.MC
Iberdrola Renovables S.A	RPP	Europe	Robert Clover & team	IBR.MC
KEPCO †	LCPP	Asia	Gary Chiu & team	015760.KS
KRONES	Industrial efficiency	Europe	Richard Schramm & team	KRNG.F
KUKA	Industrial efficiency	Europe	Richard Schramm & team	KU2G.DE
LDK Solar	Solar	Asia	Shishir Singh & team	LDK.N
Manz Automation	Solar	Europe	Christian Rath & team	M5ZG.DE
Meyer Burger	Solar	Europe	Christian Rath & team	MBTN.S
Motech Industries Inc	Solar	Asia	Shishir Singh & team	6244.TWO
New Environment Energy	Waste	Asia	Ken Ho & team	3989.HK
Nordex	Wind	Europe	Burkhard Weiss & team	NDXGk.DE
Northumbrian Water Group	Water	Europe	Verity Mitchell & team	NWG.L
NVC Lighting Holding Ltd	Building efficiency	Asia	Ken Ho & team	2222.HK
Oxford Catalyst Group Plc	Industrial efficiency	Europe	Robert Clover & team	OCG.L
Pennon Group	Water	Europe	Verity Mitchell & team	PNN.L
Pfeiffer Vacuum	Solar	Europe	Christian Rath & team	PV.DE
Philips	Building efficiency	Europe	Colin Gibson & team	PHG.AS
Phoenix Solar	Solar	Europe	Burkhard Weiss & team	PS4G.DE
PV Crystalox	Solar	Europe	Robert Clover & team	PVCS.L
Q-Cells	Solar	Europe	Burkhard Weiss & team	QCEG.DE

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal/oil such as coal based electricity generation or turbine manufacturers

Prices as at close of 31 Aug 2010

Source: HSBC, Thomson Reuters Datastream

**HSBC Climate Equity Opportunity list (alphabetical order) ...contd.**

Company	Theme	Region	Analysts	RIC code
RATIONAL	Industrial efficiency	Europe	Richard Schramm & team	RAAG.DE
Renesola	Solar	Asia	Robert Clover & team	SOLA.L
Renewable Energy Corp As	Solar	Europe	Robert Clover & team	REC.OL
REpower Systems	Wind	Europe	Burkhard Weiss & team	RPWGr.DE
Roth & Rau	Solar	Europe	Christian Rath & team	R8RG.DE
Saft Groupe SA	Energy storage	Europe	Pierre Bosset & team	S1A.PA
Saint Gobain	Building efficiency	Europe	John Fraser-Andrews & team	SGOB.PA
Sao Martinho	Bioenergy	South America	Pedro Herrera & team	SMTO3.SA
Schneider Electric	Multi theme energy efficiency	Europe	Matt Williams & team	SCHN.PA
Seche Environnement	Waste	Europe	Murielle Andre Pinar & team	CCHE.PA
Serco Group	Transport efficiency	Europe	Matthew Lloyd & team	SRP.L
Severn Trent	Water	Europe	Verity Mitchell & team	SVT.L
SFC Smart Fuel Cell	Fuelcells	Europe	Christian Rath & team	F3CG.DE
Siemens AG	Multi theme energy efficiency	Europe	Colin Gibson & team	SIEGr.DE
SMA Solar	Solar	Europe	Christian Rath & team	S92G.DE
Solaria Energia	Solar	Europe	Robert Clover & team	SLRS.MC
SolarWorld	Solar	Europe	Burkhard Weiss & team	SWVG.DE
Solon SE	Solar	Europe	Burkhard Weiss & team	SOOG.DE
Suez Environnement	Water	Europe	Verity Mitchell & team	SEVI.PA
Suntech Power Holdings	Solar	Asia	Shishir Singh & team	STP.N
Suzlon Energy Ltd	Wind	Asia	Robert Clover & team	SUZL.NS
Taewoong Co Ltd	Wind	Asia	Keith Hwang 7 team	044490.KQ
Terna Energy SA	RPP	Europe	Vangelis Karanikas & team	TENr.AT
Theolia	RPP	Europe	Robert Clover & team	TEO.PA
Thermax India †	Waste	Asia	Sumeet Agrawal & team	THMX.BO
Trina Solar	Solar	Asia	Shishir Singh & team	TSL.N
United Utilities	Water	Europe	Verity Mitchell & team	UU.L
Veolia Environnement	Water	Europe	Verity Mitchell & team	VIE.PA
Vestas Wind	Wind	Europe	Robert Clover & team	VWS.CO
Vossloh	Transport efficiency	Europe	Juergen Siebrecht & team	VOSG.DE
Wacker Chemie	Solar	Europe	Christian Rath & team	WCHG.DE
WashTec	Water	Europe	Burkhard Weiss & team	WSUG.DE
Yingli	Solar	Asia	Shishir Singh & team	YGE.N
Zumtobel	Building efficiency	Europe	Svenjo Behrens & team	ZUMV.VI

Note: † indicates high carbon flag, companies with over 20% of revenues from businesses using coal /oil such as coal based electricity generation or turbine manufacturers  
Prices as at close of 31 Aug 2010  
Source: HSBC, Thomson Reuters Datastream

# Disclosure appendix

## Analyst Certification

The following analyst(s), economist(s), and/or strategist(s) who is(are) primarily responsible for this report, certifies(y) that the opinion(s) on the subject security(ies) or issuer(s) and/or any other views or forecasts expressed herein accurately reflect their personal view(s) and that no part of their compensation was, is or will be directly or indirectly related to the specific recommendation(s) or views contained in this research report: Zoe Knight, Robert Clover, Nick Robins, Charanjit Singh, James Magness, Ken Ho, Matt Williams, Pierre Bosset, Pedro Herrera, Colin Gibson, Verity Mitchell, Juergen Siebrecht and Christian Rath

## Important disclosures

### Stock ratings and basis for financial analysis

HSBC believes that investors utilise various disciplines and investment horizons when making investment decisions, which depend largely on individual circumstances such as the investor's existing holdings, risk tolerance and other considerations. Given these differences, HSBC has two principal aims in its equity research: 1) to identify long-term investment opportunities based on particular themes or ideas that may affect the future earnings or cash flows of companies on a 12 month time horizon; and 2) from time to time to identify short-term investment opportunities that are derived from fundamental, quantitative, technical or event-driven techniques on a 0-3 month time horizon and which may differ from our long-term investment rating. HSBC has assigned ratings for its long-term investment opportunities as described below.

This report addresses only the long-term investment opportunities of the companies referred to in the report. As and when HSBC publishes a short-term trading idea the stocks to which these relate are identified on the website at [www.hsbcnet.com/research](http://www.hsbcnet.com/research). Details of these short-term investment opportunities can be found under the Reports section of this website.

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## Rating definitions for long-term investment opportunities

### Stock ratings

HSBC assigns ratings to its stocks in this sector on the following basis:

For each stock we set a required rate of return calculated from the risk free rate for that stock's domestic, or as appropriate, regional market and the relevant equity risk premium established by our strategy team. The price target for a stock represents the value the analyst expects the stock to reach over our performance horizon. The performance horizon is 12 months. For a stock to be classified as Overweight, the implied return must exceed the required return by at least 5 percentage points over the next 12 months (or 10 percentage points for a stock classified as Volatile\*). For a stock to be classified as Underweight, the stock must be expected to underperform its required return by at least 5 percentage points over the next 12 months (or 10 percentage points for a stock classified as Volatile\*). Stocks between these bands are classified as Neutral.

Our ratings are re-calibrated against these bands at the time of any 'material change' (initiation of coverage, change of volatility status or change in price target). Notwithstanding this, and although ratings are subject to ongoing management review, expected returns will be permitted to move outside the bands as a result of normal share price fluctuations without necessarily triggering a rating change.

\*A stock will be classified as volatile if its historical volatility has exceeded 40%, if the stock has been listed for less than 12 months (unless it is in an industry or sector where volatility is low) or if the analyst expects significant volatility. However, stocks which we do not consider volatile may in fact also behave in such a way. Historical volatility is defined as the past month's average of the daily 365-day moving average volatilities. In order to avoid misleadingly frequent changes in rating, however, volatility has to move 2.5 percentage points past the 40% benchmark in either direction for a stock's status to change.

## Rating distribution for long-term investment opportunities

As of 02 September 2010, the distribution of all ratings published is as follows:

<b>Overweight (Buy)</b>	50%	(20% of these provided with Investment Banking Services)
<b>Neutral (Hold)</b>	37%	(18% of these provided with Investment Banking Services)
<b>Underweight (Sell)</b>	13%	(18% of these provided with Investment Banking Services)

Information regarding company share price performance and history of HSBC ratings and price targets in respect of its long-term investment opportunities for the companies the subject of this report, is available from [www.hsbcnet.com/research](http://www.hsbcnet.com/research).

## HSBC & Analyst disclosures

### Disclosure checklist

Company	Ticker	Recent price	Price Date	Disclosure
ACCIONA SA	ANA.MC	63.67	02-Sep-2010	1, 2, 5, 7
EDP RENOVAVEIS	EDPR.LS	4.42	02-Sep-2010	6
NVC LIGHTING HOLDING LTD	2222.HK	3.56	02-Sep-2010	1, 5
PHILIPS	PHG.AS	23.26	02-Sep-2010	1, 2, 5, 6, 7, 11
SIEMENS AG	SIEGn.IB	73.89	02-Sep-2010	2, 4, 5, 6, 7, 11
VEOLIA ENVIRONNEMENT	VIE.PA	18.82	02-Sep-2010	2, 4, 5, 6, 7, 11
VOSSLOH	VOSG.DE	81.09	02-Sep-2010	4
WACKER CHEMIE	WCHG.DE	123.35	02-Sep-2010	6, 11

Source: HSBC

- 1 HSBC\* has managed or co-managed a public offering of securities for this company within the past 12 months.
- 2 HSBC expects to receive or intends to seek compensation for investment banking services from this company in the next 3 months.
- 3 At the time of publication of this report, HSBC Securities (USA) Inc. is a Market Maker in securities issued by this company.
- 4 As of 31 July 2010 HSBC beneficially owned 1% or more of a class of common equity securities of this company.
- 5 As of 31 July 2010, this company was a client of HSBC or had during the preceding 12 month period been a client of and/or paid compensation to HSBC in respect of investment banking services.
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- 8 A covering analyst/s has received compensation from this company in the past 12 months.
- 9 A covering analyst/s or a member of his/her household has a financial interest in the securities of this company, as detailed below.
- 10 A covering analyst/s or a member of his/her household is an officer, director or supervisory board member of this company, as detailed below.
- 11 At the time of publication of this report, HSBC is a non-US Market Maker in securities issued by this company and/or in securities in respect of this company

Analysts, economists, and strategists are paid in part by reference to the profitability of HSBC which includes investment banking revenues.

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\* *HSBC Legal Entities are listed in the Disclaimer below.*

## Additional disclosures

- 1 This report is dated as at 06 September 2010.
- 2 All market data included in this report are dated as at close 31 August 2010, unless otherwise indicated in the report.
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