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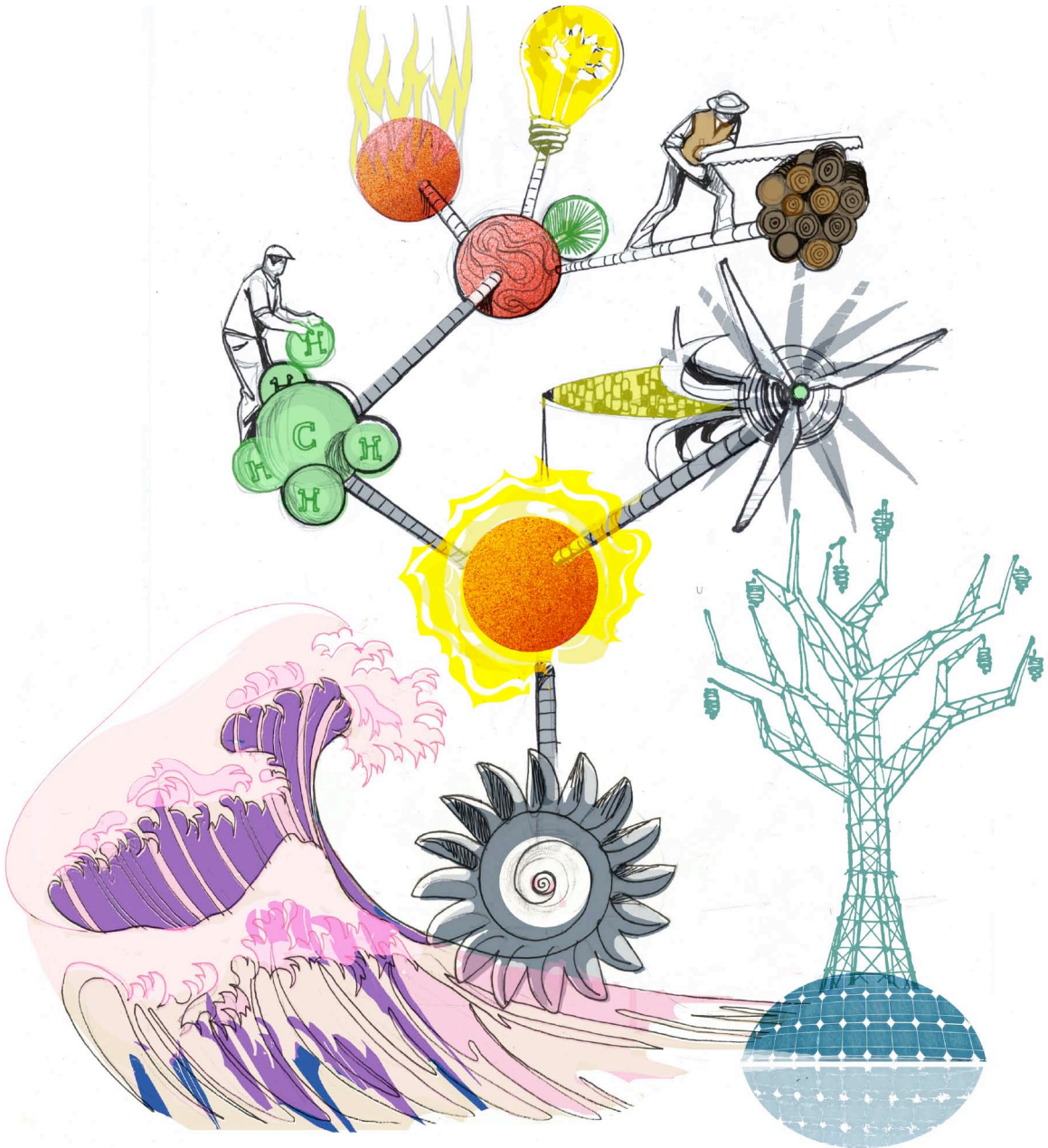
Capturing opportunity: Cleantech business booms around the world



The global cleantech sector has emerged as viable, thriving and future-oriented. Whereas once activity in the sector was fuelled by startup companies emerging with marketable ideas, products and services, today a vast array of industrialists, service organisations and utilities see the enormous opportunity in the sector and want a piece of this rapidly expanding market.

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Introduction

"Companies once approached the cleantech sector – as buyers or sellers – because it was a good thing to do, a socially responsible corporate action," says Randy Free, member of the global Cleantech group and tax partner in the United States. "But today, around the world, cleantech means reducing costs and increasing profits."

Capturing opportunity, the Grant Thornton International Business Report (IBR) cleantech sector focus, reveals that privately held businesses (PHBs) in the cleantech sector are among the most confident enterprises in the world when it comes to future prosperity, far outpacing the optimism found in most global industries – and with good reason.

In some countries, government policies have caused sudden and dramatic cleantech market changes. Traditional energy markets and players immediately faced declining futures, while cleantech and renewable energy companies saw demand where there was little to none. Furthering high demand for cleantech, customer companies are seeing the cost reduction benefits of cleantech to their organisations. One point of caution for the sector is that with heightened demand comes increased competition, competition that is willing to cross the globe to be involved with or support large, lucrative projects such as wind farms and solar fields.

The global market for solar photovoltaics, for example, has expanded from US$2.5bn in 2000 to US$71.2bn in 2010, representing a compound annual growth rate (CAGR) of 39.8%, according to Clean Edge. During that period, the global market for wind power expanded from US$4.5bn in 2000 to more than US$60.5bn, a CAGR of 29.7%. Other cleantech sectors – eg. hybrid electric vehicles, green buildings and smart grids – have seen similar growth rates. The sector is forecast to double in size from US$188.1bn in 2010 to US$349.2bn in 2020.[1]

A booming cleantech sector also means booming subsectors, as merger and acquisition opportunities and IPOs grow exponentially, driving demand for cleantech financial and consulting services. For example, investment in the capital-intensive cleantech sector is being driven to record levels by government policies, stimulus funding and recovering financial markets and investor attitudes. The Jefferies CleanTech Survey, conducted at the 11th Global Clean Technology Conference in 2011, found that:

- approximately two-thirds of investors surveyed believe that a full recovery of the IPO market for cleantech companies is likely to occur by the first half of 2012
- more than three-quarters of investors surveyed believe that large company conglomerates are expected to begin consolidating the cleantech sector during or after 2012
- stable government subsidies and regulation are seen as being the most important growth driver for the cleantech sector.[2]

Grant Thornton's IBR survey of cleantech companies confirms the Jefferies market trends and uncovers others. Capturing opportunity examines this global data on the industry – financials, trends and constraints – and offers perspectives on these issues from Grant Thornton experts around the world.

[1] Ron Pernick, Clint Wilder, Trevor Winnie, Sean Sosnovec, Clean Energy Trends 2011, Clean Edge, March 2011.
[2] The Jeffries 2011 CleanTech Survey Results; A Review of Investor Sentiment, Jeffries & Company Inc., 2011.

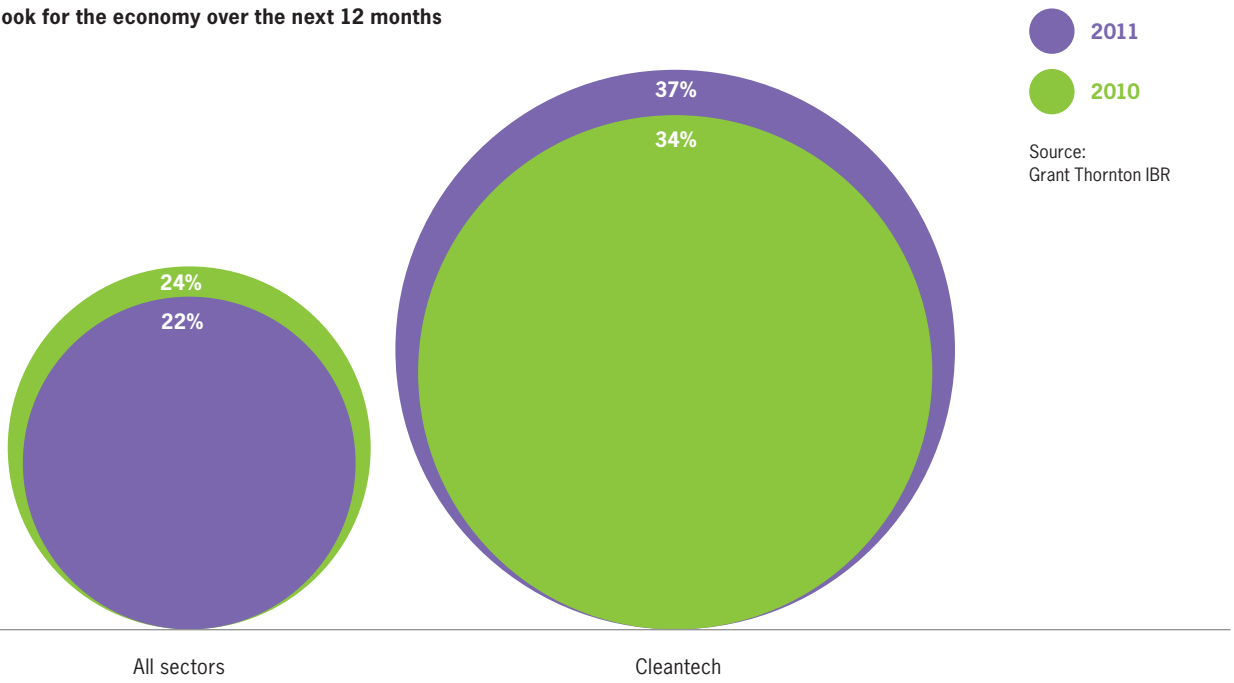
Cleantech sector full of optimism

Businesses in the cleantech sector around the globe expressed optimism about the economy for the next 12 months, with net 37% optimistic in 2011, up from net 34% in 2010. This contrasts with the all-sector average, which declined from net 24% in 2010 to net 22% in 2011. Grant Thornton experts around the world point to myriad reasons for positive prospects, and in some countries government policy changes have ignited a firestorm of businesses.

"We're really on the cusp of something big," says James Brice, sustainability service head, Grant Thornton South Africa. "We're not quite sure yet how big, because the government keeps on changing its tack, but we're going through the first wave of our country's renewable energy tendering process."

The National Energy Regulator of South Africa (NERSA) regulates the single state entity that controls the national grid. Earlier this year, NERSA changed from a refit-based model to a competitive-bid model for energy, meaning that it will now procure megawatts for onshore wind, concentrated solar thermal (CST), solar photovoltaic solutions, biomass and biogas, landfill gas capacity, small hydro and other energy sources.

Figure 1: Outlook for the economy over the next 12 months



Source:
Grant Thornton IBR

"We're really on the cusp of something big. We're not quite sure yet how big, because the government keeps on changing its tack, but we're going through the first wave of our country's renewable energy tendering process."

James Brice
Sustainability service head
Grant Thornton South Africa

"There's been a flurry of activity as local and international partners try to comply with the different tendering requirements, such as complying with various socioeconomic development objectives," adds Brice. "The first round of bidding for 3,725 MW of renewable power was undersubscribed with the 28 projects (out of a possible 53), accounting for 1,416 MW of power. However, the projects are geographically dispersed around South Africa and reflect a balance of wind and solar energy. No projects for hydropower, landfill gas, biomass or biogas were selected, although capacity has been allocated to these renewable resources. The combined investment in new energy capacity, in this first phase, will amount to about R100bn and will be invested during the course of the next six to 24 months. Bidding for the second, larger phase begins in March. This demonstrates that, for the first time in Africa, a government is serious about keeping up with the times and leading by example. The process was, as far as published, entirely independent and transparent."

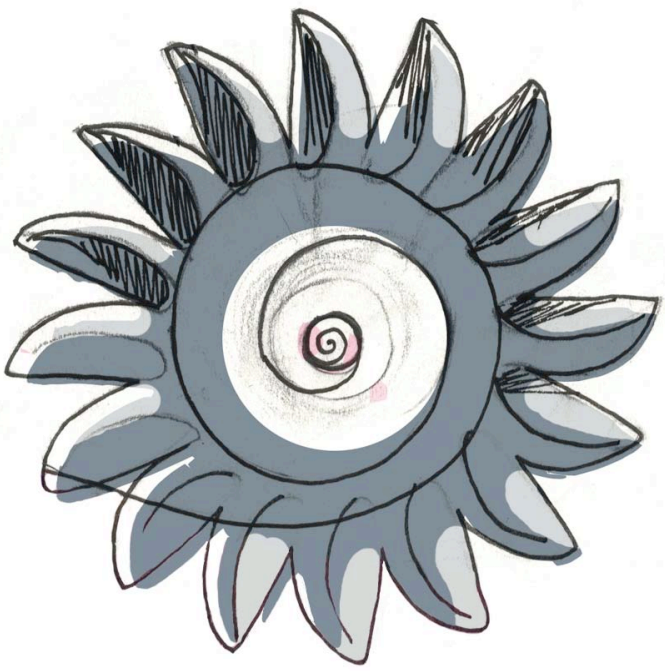
Vivek Vikram Singh, associate director, Grant Thornton India says, "Like in South Africa, we had the first phase of solar power projects tendered under the US$22bn National Solar Mission, and they have already been commissioned. The next phase of solar projects will be tendered and awarded in the next six to eight months. And now there may be a stipulation that says that you cannot import equipment for solar; it will have to be produced in India, which represents a lot of opportunity. Regardless of the proposed change, regulations that favour power generation from renewable sources, like duty exemptions, tax breaks and depreciation rate changes, have already been put in place."

Also dramatically affecting the Indian market is a proposed clean energy cess or coal tax, that would be applied on imported and domestic coal. "For every ton of coal that one uses, you will have to pay a dollar to the government. And in a country like India, where 70% of the total energy produced is from coal, that would mean about US$600m every year, which the government plans to reinvest into the cleantech sector through a Clean Technology Fund." Vivek adds that there also could be a requirement that 5% of all new power generation be mandatorily from renewable energy sources.

He says that after initial stirrings in 2005 and 2006 from research institutions, academia and policy makers, cleantech sectors in India took off in 2010, and Grant Thornton's cleantech client base has grown exponentially. "Even during the recession, this was one sector where we saw a lot of optimism, and that is partly because of the government and the policy changes that have come in." Large industrial firms – Reliance, Tata, Punj Lloyd, Moser Baer, Thermax – are all focusing on entering the Indian cleantech sector, Vivek says, and regardless of the nature of the business conversation, it eventually turns to cleantech.

Kai Bartels, senior partner, Grant Thornton Germany, says there are good reasons for the cleantech and renewable industry to have a positive outlook. In Germany the government plans to close all 17 nuclear plants by 2022. Amid preparations to close their German nuclear power plants, large utilities in the country and across the EU are divesting operations to cover debt.

"This is a dramatic change of their business model, and cleantech is one definite way to come out of this problem they now face."



But German cleantech firms face increasing competition from Asian companies, notes Bartels, especially from China and especially in the solar energy subsector. "I think the general trend in the German market will be very positive, although we really face increasing competition." Some German firms will export their technologies – wind projects to Asian and US markets and solar to Italy, Spain, Portugal and Greece to counter inbound competition.

Like India and South Africa, government policies in the UK, rather than market demands, drive much of the cleantech activity, says Nathan Goode, partner, head of energy, environment and sustainability, Grant Thornton UK. "Government support and the regulatory environment generally are very important, and the government is now in the process of undertaking some very significant changes to the electricity market in general, not just in the support for cleantech," says Goode. "Nobody is entirely sure how that is all going to pan out. The high-level view is that this government is committed to securing a low-carbon economy, both in terms of energy and other sectors, but the detail of what that really means for investors and businesses is highly uncertain at the moment. Having said that, we're seeing much more deal activity, and we are seeing businesses in different parts of the cleantech sector actually starting to make money."

"Government support and the regulatory environment generally are very important, and the new government that's been in place for just over a year now is in the process of undertaking some very significant changes to the electricity market in general, not just in the support for cleantech."

Nathan Goode
Partner, head of energy, environment and sustainability
Grant Thornton UK

Michel Lefebvre, tax partner, Raymond Chabot Grant Thornton in Canada, says the government has been promoting cleantech and is very proactive in its support of the industry. Its monumental move has been Plan Nord, a 25-year northern development plan, released in May 2011 by Québec Premier Jean Charest, that calls for no industrial activity in half of the province's territory above the 49th parallel and will apply sustainable development standards to the remainder, respecting existing rights and treaties with the region's aboriginal communities.[3] Government support, along with cultural demand for cleantech in the province, are encouraging companies to develop new technologies and grow the sector.

Similarly in France, the government has promoted and supported the sector, says Marc Claverie, transaction advisory services, Grant Thornton France, but the EU economic crisis and political pressures have mitigated the effects of that support. Nonetheless, water and waste remain strong cleantech subsectors.

In Ireland, the United States and Russia, cleantech shows promise and growth, but less so than in some other countries. Peter McArdle, head of Grant Thornton Ireland renewable energy group, says there is growth and opportunity in the Irish cleantech market, but there also is funding liquidity, which presents challenges to cleantech companies.

Free in the United States says, "We have a relatively small cleantech industry in the United States. We see significant research and development (R&D) activity in the cleantech sector. There also are companies that are beginning to scale and go into production – direct production of power that is going into the grid or production of equipment that enables the generation of power from renewable sources." He adds that Grant Thornton is working with firms that have completed initial R&D and are now entering business operations, raising additional capital, expanding their customer bases and generating a sustainable stream of revenue to turn them into successful companies.

Unlike economies where government intervention has had huge market ramifications, Free says the US cleantech sector is more free market driven by profit-motivated customers. "Very large companies, manufacturers and building owners, in particular, are interested in cleantech. The reason there is a demand for cleantech is not because the government is telling them that they have to do it. It's because they have figured out that it actually makes sense and it's a way to put a couple more points on the gross profit line. I think that's a tremendously positive development. We finally have crossed the line from doing good to making money out of cleantech."

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Randy Free
Member of the global Cleantech group and tax partner, Grant Thornton United States

[3] "Building a New Empire in the North – Québec's Plan Nord," Globe-Net, Aug. 13, 2011.

Financial measures on the upswing

While revenue prospects improved in most industry sectors in 2011, according to IBR survey findings, net 64% of businesses in the cleantech sector expected top-line growth, up from net 54% in 2010 and well above the all-sector net 53%. What's more, net 64% of cleantech businesses expected to increase profits, significantly higher than in 2010 (net 42%). For all sectors, only net 40% of businesses expected to increase profits in 2011, up from 29% in 2010. The revenue and profitability expectations appear to have fuelled workforce expansion plans, with net 42% of cleantech businesses expecting to expand their workforces in 2011, compared to net 28% of all-sector businesses.

In addition, net 48% of cleantech businesses expected to increase selling prices in 2011, more than double the percentage in 2010, and well above the all-sector percentage of net 27%. But selling-price optimism is not necessarily unanimous around the globe.

Figure 2: Revenue expectations over the next 12 months
Net percentage of businesses expecting an increase

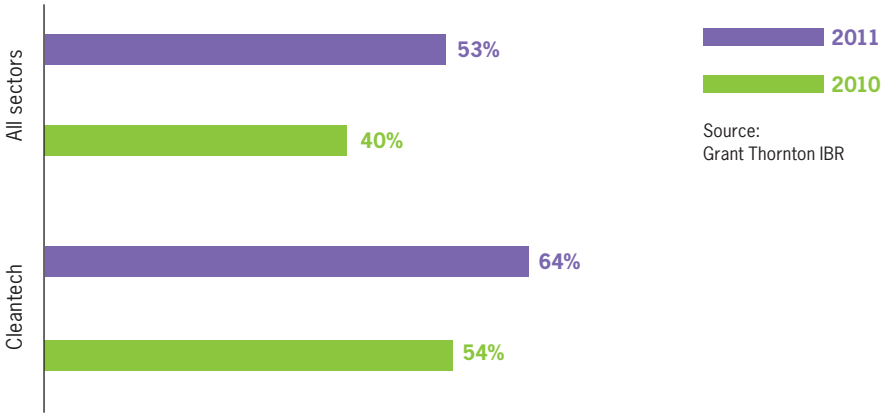


Figure 3: Profitability expectations over the next 12 months
Net percentage of businesses expecting an increase

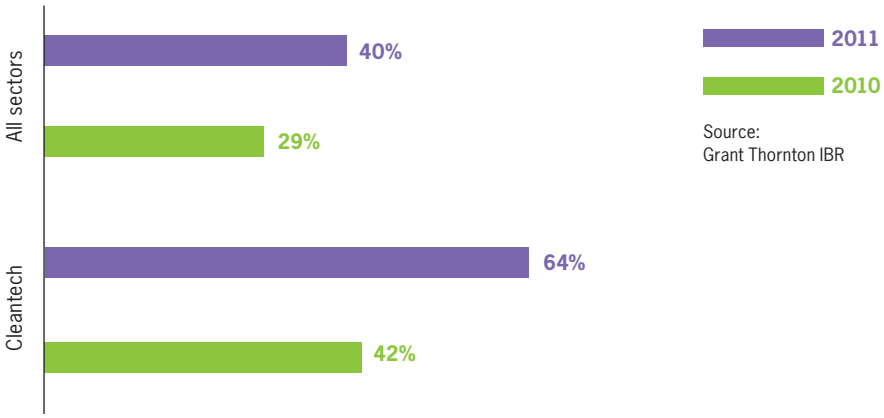


Figure 4: Employment history
Net percentage of businesses expecting/reporting an increase

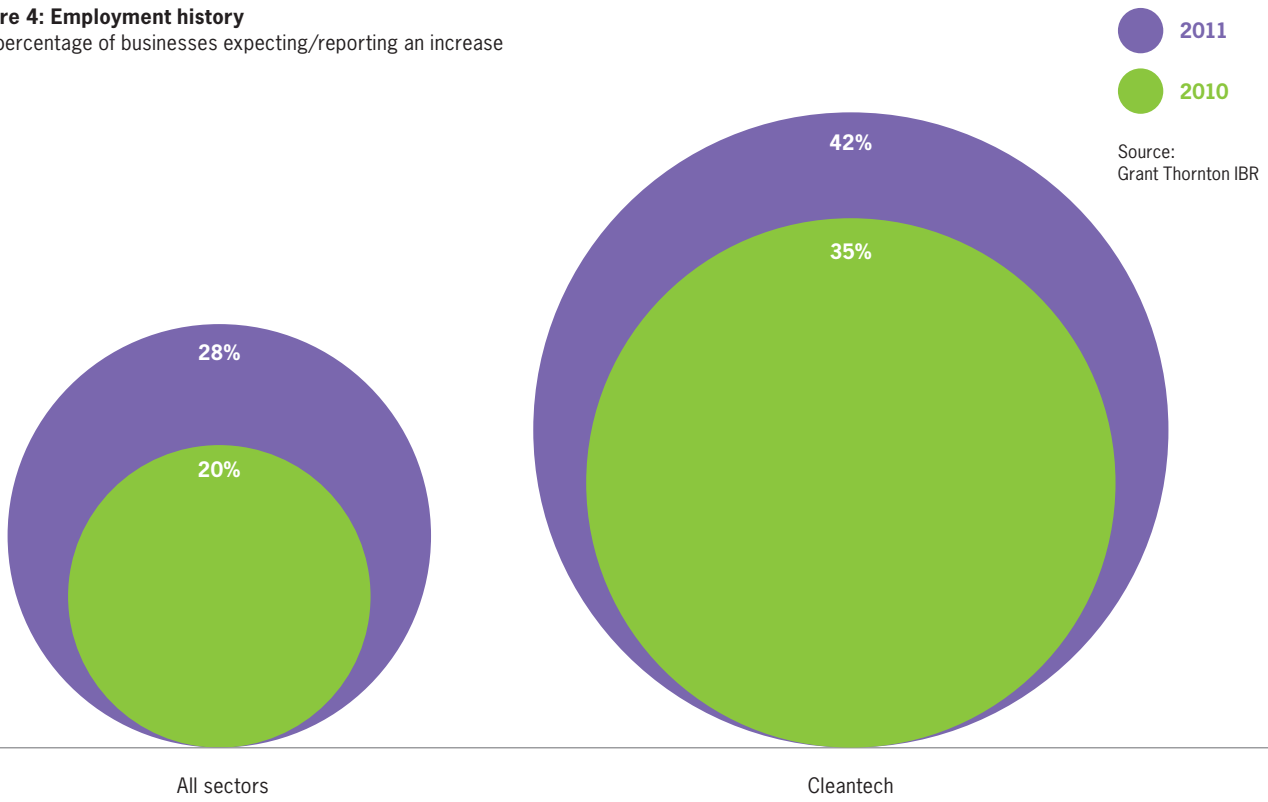
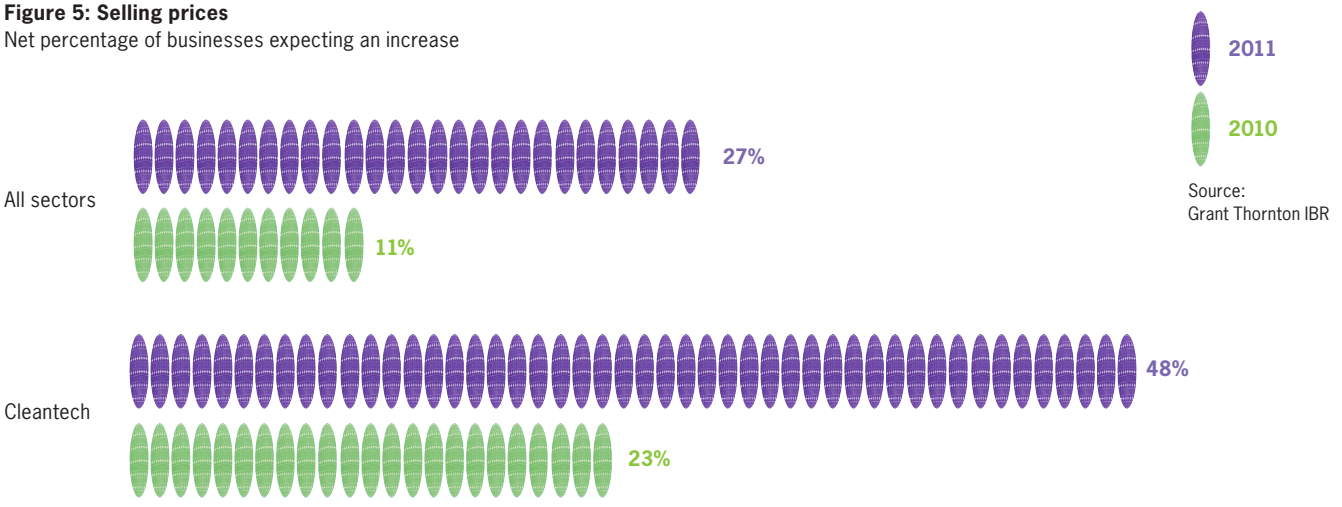
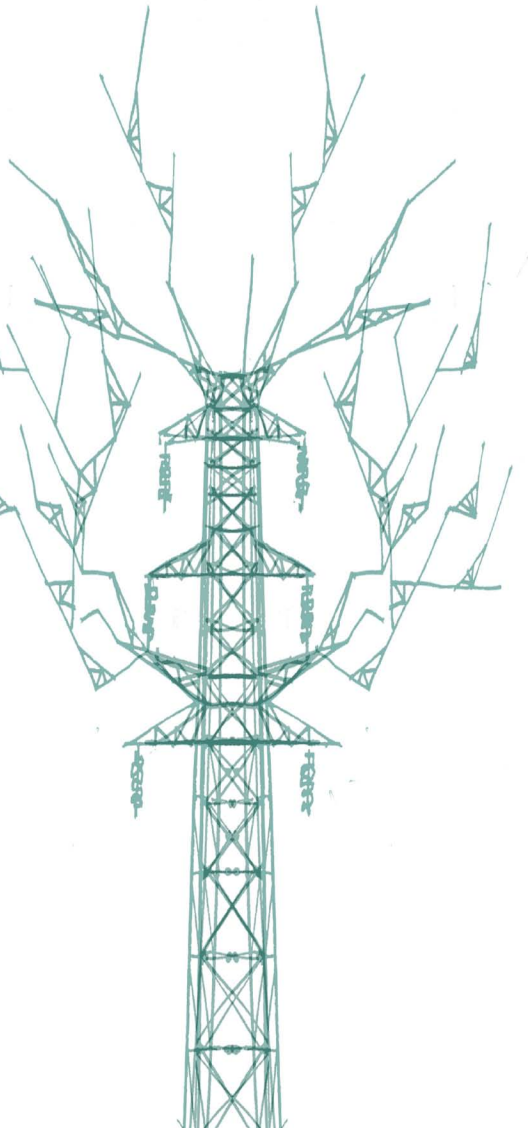


Figure 5: Selling prices
Net percentage of businesses expecting an increase





"In Israel, there is continued growth in demand," says Shlomi Bartov, partner, head of advisory services, Grant Thornton Israel, "and we see the results of growth in revenues." He is less certain, though, about a continuing increase for cleantech profitability in Israel due to increased competition in the cleantech business sector across the country. Cleantech sector companies are beginning to understand the effects of regulations and tariffs in the Israeli market, which should help them manage their finances better and keep profitability in check.

Cleantech revenues and profitability are definitely increasing in Germany, confirms Bartels, "and I'm quite convinced that, in terms of employment, this sector will be one of the very important sectors within the German economy."

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Kai Bartels
Senior partner
Grant Thornton Germany

The UK's Goode says that like the general economic environment in his country, there exists a mixed bag of cleantech financial performers, especially when assessing the different subsectors in the industry. But in general he is witnessing an increase in business opportunities and activities, which translate to anticipated revenue, profit and employment increases.

For the foreseeable future, US cleantech firms do not have much upward control over their pricing and, thus, their profit margins.

"The US economy is not a place where we are seeing a lot of price increases in anything," says Free. "There is not a great deal of opportunity here to increase prices, quite frankly, for almost anything, even though a lot of businesses are trying to do it because they cut prices dramatically to get through the downturn. They're operating on very thin margins or not operating on any margin at all. There is some pressure to try to drive prices up, but I just don't think it's going to happen in this economy."

But cleantech, of all business sectors, "could buck the pricing and profitability trend," adds Free, "because their value proposition is that they can actually save a company money. Are companies willing to save money at a little bit higher price? Certainly the venture capitalists interested in the cleantech sector would like to see their portfolio companies begin to increase pricing, because that's the only way they're ever going to get to profitability – right now they're all losing money."

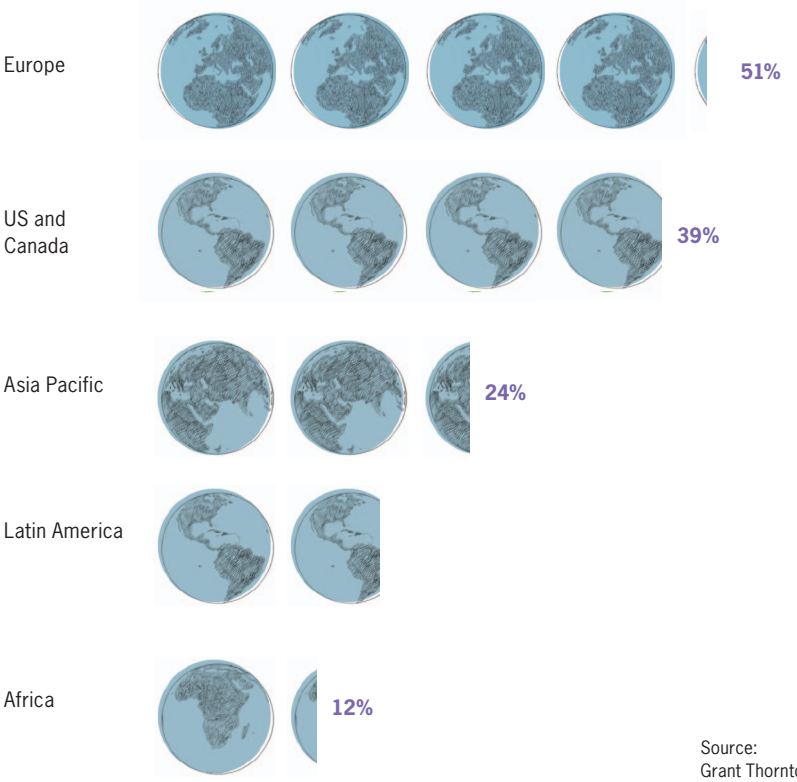
Denis Zhivchikov, valuation director, Grant Thornton Russia, reports that the cleantech sector in Russia is exhibiting sluggish growth: "Revenues will hardly change significantly compared to pre-economic crisis years, profitability will not change significantly if compared to 2010, and it's possible that employment will be reduced." He adds that selling prices have barely increased, and that any growth exhibited in the cleantech sector is the result of consumer pressure/public opinion.

Identifying international and subsector opportunities

Grant Thornton experts around the globe see cleantech sectors in their countries attracting foreign competition as well as their own country's cleantech organisations expanding their reach into other regions. They also note that cleantech presents a diverse range of business subsectors around the world.

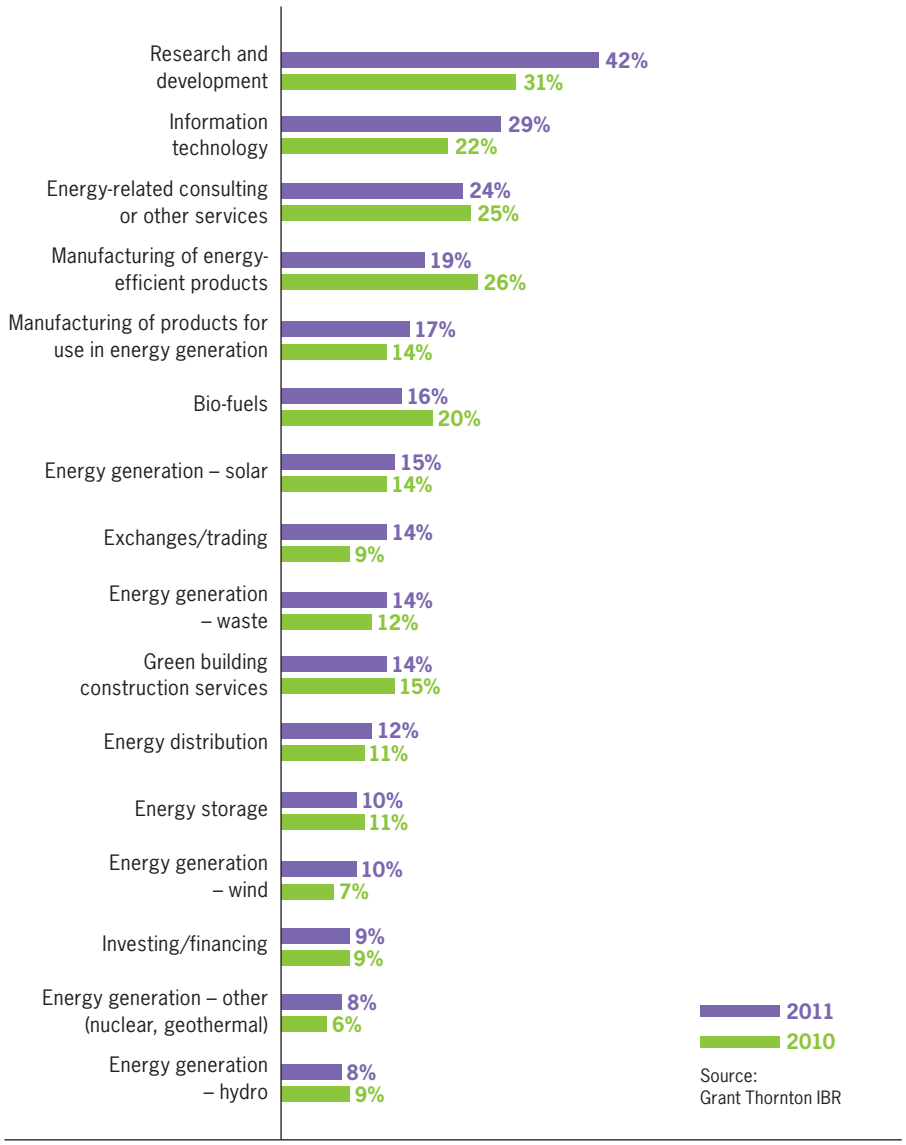
Europe is seen to be the location with the greatest demand/potential for cleantech products and services (cited by 51% of cleantech businesses responding to the IBR survey), followed by the United States and Canada (39%). The most prominent subsectors within the cleantech industry are research and development (42% in 2011, up from 31% in 2010), information technology (29% in 2011, up from 22% in 2010), and energy-related consulting (24%). More than one-third of cleantech companies are involved in manufacturing: manufacture of energy-efficient products (19%) and manufacture of products for use in energy generation (17%).

Figure 6: Which of the following geographies do you see the greatest demand/potential for your products/services?
Percentage of businesses



Source:
Grant Thornton IBR

Figure 7: Which areas of the sector are you involved in?
Percentage of businesses



In India, most Grant Thornton cleantech clients are in energy – wind, hydro and solar – "and right now, it's too early to say where these people will branch out to – some clients want to go away from power generation and to power equipment because that is where everybody sees the big money, as in the suppliers to all the small power generators," says Vivek. Other cleantech subsectors are relatively slow because they have not been affected as much by government policies, and some, such as service providers and consultants, have been in place for some time and do not exhibit the high growth they previously had recorded.

In Ireland, McArdle says that the wind subsector is attracting the most attention and that some Irish companies have secured rights to develop solar farms in the Middle East and Africa.

Hydro, wind and waste are the top cleantech sectors in Quebec, says Lefebvre, as those energy-generation subsectors are core to Hydro-Quebec, the province's government-owned and profitable public utility. He sees emerging but limited potential in biofuels, solar and waste, the latter especially in large industrial companies such as pulp and paper, aluminium and agrifood.

In Germany, manufacturing and energy generation constitute a solid client base for Grant Thornton, says Bartels. He also anticipates a rise on the service side – especially R&D and cleantech financing – as well as a one- to two-year trend of more activity in biofuel and energy generation from wastes.

"You don't do research and development just for the sake of it. You do research and development for the sake of developing a product or a service."

Randy Soifer
Partner, Advisory Services
Grant Thornton Canada

In the North America, equipment manufacturing – for either sale or long term licensing – as well as R&D, energy generation and storage are growing markets. But in recognition of cleantech's evolutionary trend, Randy Soifer, partner, advisory services, Grant Thornton Canada, notes, "You don't do research and development just for the sake of it. You do research and development for the sake of developing a product or a service."

Ultimately, the United States will develop a "huge manufacturing sector," especially for large equipment such as solar panels and wind turbines that are challenging to ship efficiently, adds Free. For example, logistics costs for transport from China of a solar panel outweigh the cheaper production costs found in China. Storage products are a growing market. "We know how to generate enormous amounts of energy from the sun, wind and other sources, but we can't hang on to it. We can't store it for when we need it. So what we currently do is feed it into the grid, and that makes the current power-generating mechanism inefficient… It doesn't take too long to figure out that that's not a real winning business proposition."

Bartov sees substantial business in Israel in solar, hydro and water, but also recognises changes in the market as many firms expand their current operations to include wind and waste projects. There also are product companies looking to expand into energy generation, which can help them move from startup to established company. Many companies in these sectors are currently at an R&D stage with plans to manufacture, but, Bartov adds, they may look to produce goods outside of the country. "Maybe they'll try to manufacture in China, the US or other countries to grow a more global company."

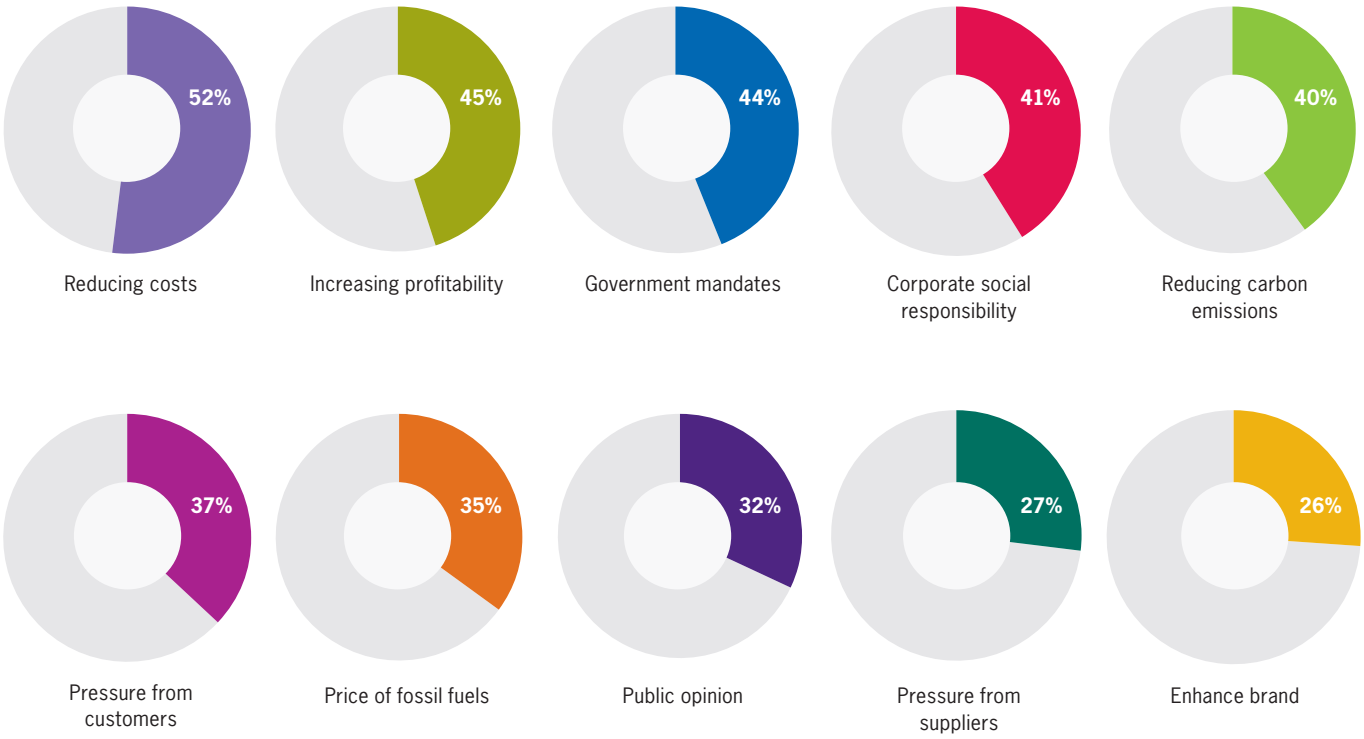
"There is a mix of cleantech subsectors growing in the UK, with a focus on energy generation, particularly wind and to a lesser extent solar, hydro and waste," says Grant Thornton's Goode. "On the services side, we're seeing a lot of activity around green-building construction. Going forward, water is a big issue for the UK, both clean water and sewage management. It might sound strange, but some parts of the UK have less average rainfall than the Sahara Desert. That's going to be a big issue going forward."

Similar to trends in the United States, Goode also cites the rising issue of energy storage. "But I'm not seeing a lot of activity around that sector; we are seeing a lot of interest in smart metering – the efficient use of the energy once it's actually in the grid and passing round."

South Africa's Brice says that country's attention has thus far been on energy generation – primarily solar, wind and waste – and that "almost all our equipment is going to be imported until we get similar regulations like they have in India, but I don't see that happening for the next couple of years." He also sees momentum in green buildings and the water subsector (water efficiency, water treatment) due to drought restrictions. South Africa's tendering process also will drive consulting and financing subsectors. "This is the first of several tendering waves that'll come over the next couple of years. As the market becomes more refined, companies are going to need more advice to stay ahead of the pack."

Sector driven by cost-conscious customers and government intervention

Figure 8: What factors are driving the demand for clean technologies from businesses?
Percentage of businesses



Source: Grant Thornton IBR

Half of cleantech businesses cite reducing costs (52%) as a factor driving demand for clean technologies, according to the IBR survey. Increasing profitability (45%), government mandates (44%) and corporate social responsibility (41%) also were top market factors driving demand for clean technologies. These factors are the epicentre of most cleantech conversations around the globe, especially government programmes, but Grant Thornton experts also cite the influence of other factors, such as availability of working capital and, simply, customer demands for cleantech goods and services.

There is no shortage of Grant Thornton opinions citing the power of government regulation in driving progress in the cleantech sector around the world:

- **Germany** – Bartels says the most dominant driver of the cleantech industry is government regulations, but also notes the availability of working capital, improved supplier quality and foreign competition
- **France** – regulations have not been supportive in the country, especially for the solar sector, says Claverie, but upcoming elections could alter the regulatory landscape
- **UK** – government regulation drives the market in the UK, says Goode, who also cites working capital as an influence along with availability of skilled labour
- **Canada** – Lefebvre reports that regulation is the key driver, but the provinces are waiting for cleantech-specific regulations to emerge
- **Israel** – Bartov similarly identifies government regulation, but is quick to point to the price of fossil fuels, which underpins activity within many cleantech subsectors
- **Russia** – Zhivchikov says government regulations are "a very strong influence due to governmental energy-efficiency programs"
- **India** – Vivek rates the following cleantech market drivers: "One to 10 would be government regulations – everything else is 11th."

Government regulation is at the core of South Africa's cleantech emergence. The country has had cheap electricity for many years, but it now faces expensive energy costs because so much energy is derived from the burning of low-grade coal, says Brice, adding that higher grades of coal are typically exported to India and China. This situation has contributed to government action and government regulations driving the market in South Africa as well as the rest of the Southern African Development Community, certainly sub-Saharan Africa. "Africa is really in two main camps," he says. "North Africa, north of the Sahara, is more aspirant to European business models, while south of the Sahara really operates differently and looks to South Africa for guidance in terms of trends." As such, he says, many countries are still looking to see how South Africa's cleantech sectors evolve.

India's Vivek says his country's companies have begun to make inroads into East Africa, but most of the partners in large renewable energy projects, such as the Turkana wind project in Kenya or the Aysha Wind Farm in Ethiopia, are European. However, he agrees that most of that region is still dependent on hydroelectric and traditional energy for their energy sufficiency. "The rest of Africa is really struggling with the traditional energy, and cleantech hasn't happened. South Africa is the clear leader in that continent in any technology influence."

"We don't have the government mandate in most of the United States (California being the exception) that has occurred in Europe," says Free. "I think it is highly unlikely, given all the other challenges that we've got here on the political front, that we're going to get any serious mandate on carbon reduction out of the federal government. This is a private sector driven initiative. Unfortunately, the private sector seems to be willing to absorb the cost of oil at the current levels. Some people have suggested that it would take oil being two or three times as expensive as it is today to really get people serious about this. And, quite frankly, I think that a lot of the demand for cleantech in the United States is going to have to start with the consumers. Right now, consumers are focused on other stuff and they're not focused on holding corporate America accountable for sustainable business operations and for reducing the cost of energy, getting rid of gasoline cars, etc."

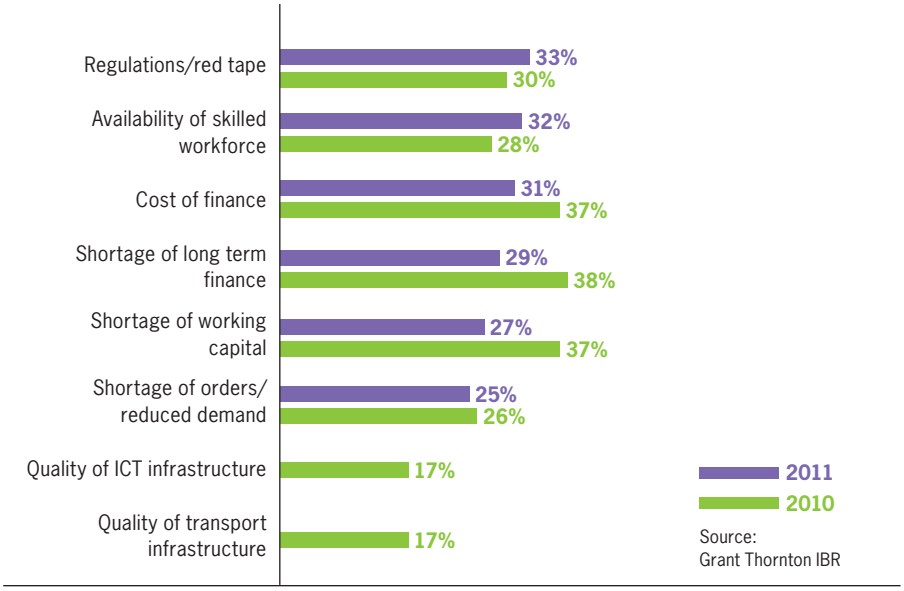
Cleantech suffers traditional constraints

While government policies and regulations are a major factor driving the cleantech sector, they are also responsible in some areas for constraining sector expansion. Regulations/red tape was cited by 33% of cleantech businesses as an expansion constraint (rating constraint 4 or 5 on a scale of 1 to 5, where 1 is not a constraint and 5 is a major constraint on expansion). Approximately one third of cleantech businesses also identified availability of skilled workforce (32%) and cost of finance (31%) as expansion constraints.

It is important to note that the IBR survey data shows that percentages of cleantech businesses identifying financial constraints – cost of finance, shortage of long term finance, shortage of working capital – decreased substantially compared to 2010. In addition, when answering a separate question about accessibility of financing, a lower percentage of cleantech businesses expected finance to be less accessible: 19% in 2011 vs. 24% in 2010.

In what is a capital-intensive industry, increased access to funds is likely see businesses invest in waste (24% of businesses), solar (23%) and biofuels (22%) according to the IBR survey.

Figure 9: Constraints on expansion
Percentage of businesses rating constraint 4 or 5 on a scale of 1 to 5, where 1 is not a constraint and 5 is a major constraint

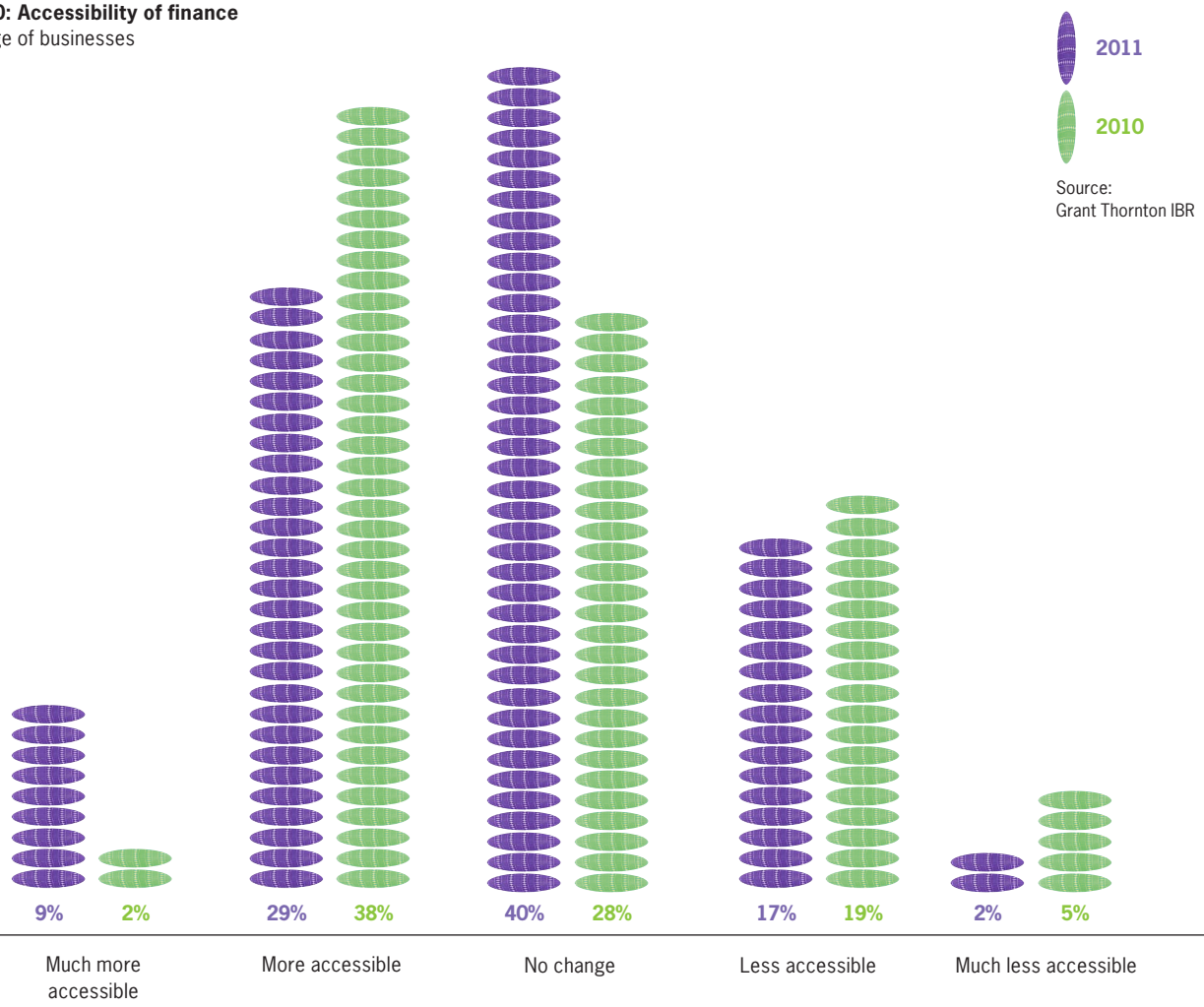


Source:
Grant Thornton IBR

"The availability of financing in France varies depending on the type of the company: many large cleantech companies have the cash in hand to invest in their operations and continue to fund growth opportunities and launch R&D programmes. This is especially true of companies in the waste and water subsectors."

Marc Claverie
Partner, Transaction Advisory Services
Grant Thornton France

Figure 10: Accessibility of finance
Percentage of businesses



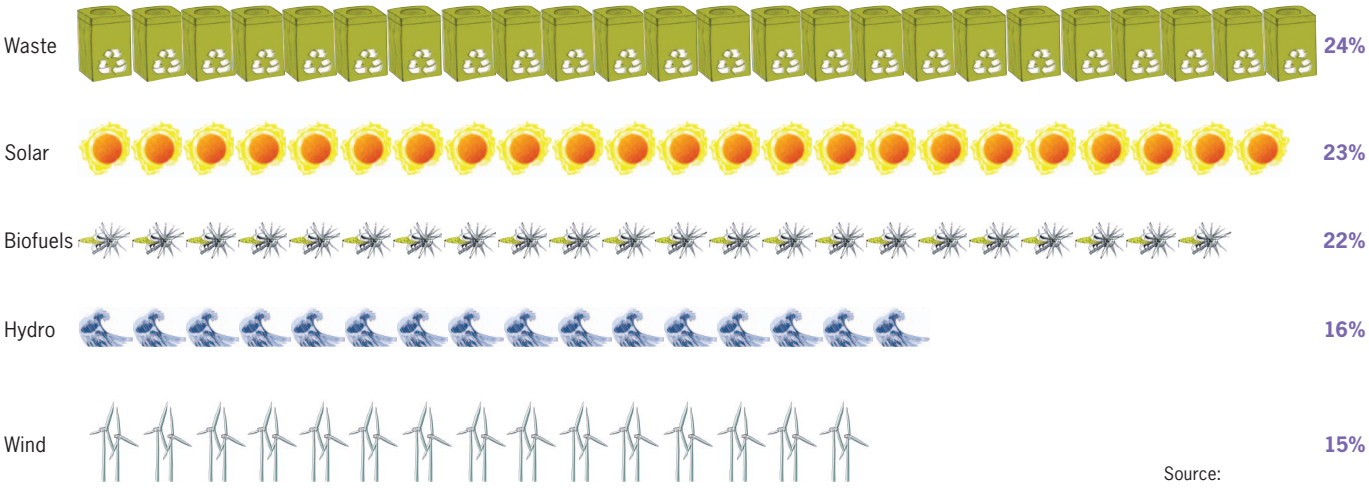
Grant Thornton's Zhivchikov says cleantech companies in Russia have had no problems obtaining financing and are comfortable taking on more debt, as debt burdens are generally low. Many companies, especially strong market players that are doing everything possible to increase their market shares, would use funding to acquire smaller or weaker competitors. There are attractive targets, he notes, as the quality of cleantech suppliers and supply chains in Russia is good and poses no constraint to cleantech development in the country – "the market structure has changed since many weak companies went under."

Cleantech activities in the UK – such as offshore wind farms – are very capital intensive, says Goode, and require huge amounts of financial support. "Even large corporations and utilities have to think carefully about where they get finance. Smaller, more agile emerging technology businesses are also finding it difficult to finance their need for growth." He adds that helping these companies raise capital has been a key activity for Grant Thornton UK, with clients seeking commercial and financial advice on structuring deals, engaging the public sector and tax services for what can be relatively complex corporate structures.

In Germany, Bartels is helping Grant Thornton clients raise financing and providing them with transaction advisory services (financial checks, due diligence, valuation, mergers and acquisition strategy). Specialists in the United States, India and Israel concur with Bartels about the demand for financing-related services, as well as valuation, due diligence and business planning services (feasibility analysis). Free says that US cleantech companies also request audit services:

"These companies that have venture capital money have a requirement to get annual audits. Certainly the companies that are thinking about IPOs have an enormous need for audit services. And with governmental programmes making grants and loan guarantees available, we are getting requests for assistance with that as well."

Figure 11: Which of the following renewable energy sources/technologies are you focusing on/investing in to grow your business?
Percentage of businesses



Source:
Grant Thornton IBR

Cleantech companies in France have three main requirements that are driving services at Grant Thornton, says Claverie: growth via mergers and acquisitions; financing of that growth, which includes requirements for cash reporting; and tax issues.

Lefebvre in Quebec identifies strategic planning (where and how to participate in cleantech), financing and tax incentives as the needs among the cleantech client base in the province. In addition, Grant Thornton in Quebec is working with the government to create new funds to support the sector. Financing has been limited and cleantech companies have looked to venture capitalists for funding. Cleantech companies also have been hesitant to increase their debt and prudent in their investments. But Lefebvre expects change in early 2012 as federal and provincial budgets are delivered and companies "will know a bit more about the strategies, and we're expecting some funds to be created. This should open the market and the companies' minds for investing more."

Economic conditions in the EU and Ireland's recent history of economic crisis have made it harder for cleantech companies to obtain financing, says McArdle. So despite market opportunities being present, companies are deferring decision making. Next year when liquidity eases, he adds, the sector will see more growth and then huge growth in the years after. "Cleantech is an interesting space, but it's quite capital intensive. Capital intensity needs capital. If I'm correct and liquidity comes back into the marketplace, we're going to have a very exciting time and a very busy time."

The Government recognises the need for cleantech financing, says Goode, and is attempting to establish a bank specifically for financing cleantech activity. "That's seen as a major initiative in policy and recognising that there's a significant funding gap for all the things that the government wants to see happen in this sector. The banks are still very selective about the kinds, types and sizes of projects that they're prepared to finance. So that does leave a significant gap for somebody else to fill."

"Cleantech is an interesting space, but it's quite capital intensive. Capital intensity needs capital. If I'm correct and liquidity comes back into the marketplace, we're going to have a very exciting time and a very busy time."

Peter McArdle
Head of renewable energy group
Grant Thornton Ireland

Claverie says that the availability of financing in France varies depending on the type of company: Many large cleantech companies have the cash on hand to invest in their operations and continue to fund growth opportunities and launch R&D programmes. This is especially true of companies in the waste and water subsectors. Another group of large companies have faced funding cuts, so are going about their business as usual and waiting for 2012 to invest. Third, small companies and midcap companies look to France and private equity funds for support. Claverie expects funding for the cleantech sector and all facets of the cleantech value chain to increase, with growing ranks of credit clients emerging. "They are ready to become a really key player in this market. They know the sector. They are experts in their industry, so they are ready to play this role."

Any financing gaps are likely to be filled soon enough. Across the globe, the cleantech sector is attracting money. Cleantech global venture investment in Q3 2011 was 23% higher than Q3 2010 ($1.81 billion). The number of deals recorded in Q3 2011 was 189, compared to 179 in Q2 2011. Cleantech global M&A activity in Q3 2011 also was significantly higher than in Q3 2010.[4] M&A is a hot cleantech sector topic, and both big and small organisations look to grow and expand their base.

In Germany, because of the strategic shifts of utilities in response to government policies, Grant Thornton's Bartels sees increased M&A activity, especially among large utilities in the German market. "But not only focused on the German market, but rather in Europe and all over the world, just to step into new activities or to get a new business field they can be active in."

Buyers also are coming to Germany. Asian companies want to acquire German technology companies with a focus on cleantech, says Bartels, in order to buy knowhow and production experience that they can then use in their home countries to build up new productions – but at a much more attractive price level. But he cautions that financing and M&A looked more positive in early 2011. "I think companies will have a problem if they don't have a good equity portion in their balance sheet to get affordable financing, even though companies would be comfortable taking on more debt. The question will really be, in two or three months, whether the banking sector in Germany and Europe is really willing and able to still support the cleantech sector in the way it would be necessary to develop the whole industry."

"I think M&A will increase during the coming year in the technology field and in power generation," says Israel's Bartov. "But it's a big challenge for the companies to continue to raise money." That challenge may be diminished in Israel by banks now financing the sector, with a shift occurring between private equity (PE) and venture capital to standard banking.

"Quite a few M&As and PE deals totalling about US$400m have happened in the cleantech sector, which is very promising given that this is a sunrise sector," says Vivek. "The M&A market in India is on the rise, as well as in Asia and China. But right now, cleantech is more of a private equity play. M&A will pick up – 2011 was far better than 2010 and 2009 in terms of cleantech activity."

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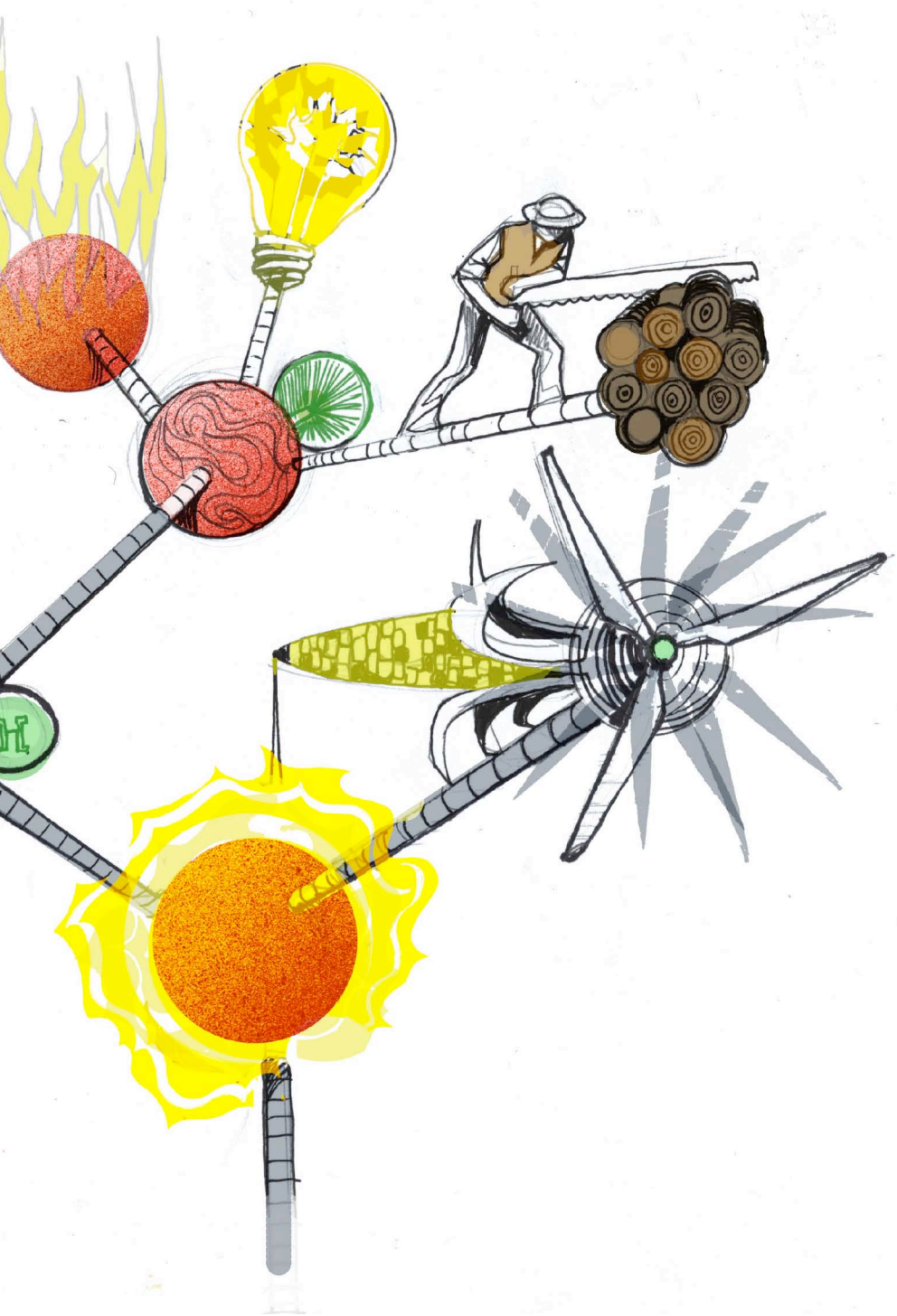
Vivek Vikram Singh
Associate director, Grant Thornton India

[4] "3Q 2011 Global Cleantech Venture Investment Up 12 Percent from Previous Quarter," Cleantech Group, Oct. 5, 2011.



"We're actually seeing an increase in deal activity in the UK," says Goode, and that's being driven by a number of factors. "There's more confidence coming back into the market generally. Also, we have a number of major players in the energy sector in particular who are looking at their balance sheets and consolidating their portfolios. So some of the large utilities, such as German utilities E.ON and RWE, have highly geared balance sheets and a lot of capital commitments in a lot of different areas. As a result, they're disposing of what they see as being noncore assets. At the same time, we're starting to see more financial players coming back into the market after the credit crunch, so they're bidding for these sorts of assets. All of this is creating quite a healthy market, particularly in onshore wind transactional activity."

South Africa's Brice expects consolidation to occur in coming years, and the first players will look for the right funding mechanisms, the right funding structures and the right business partners. "This is a whole new sector that's developing, and the way the tendering process is structured in South Africa, it's got to be local companies. They can source the technologies from offshore and their equipment providers can be overseas partners in the projects, but there has to be local empowerment. It's going to be a steep learning curve. I think there's going to be a lot of advisory services required in the corporate finance arena."

Free, too, agrees that some consolidation is underway, as well as IPOs, finally giving the sector proof of being a real business. "If you can present a convincing business model, you can not only attract venture capital, but there have been several cleantech IPOs here in the United States that are very big deals."

Call to action

Capturing opportunity, the Grant Thornton International Business Report cleantech sector focus, highlights emerging trends and their impact on cleantech companies worldwide. How will your organisation respond to these opportunities and prepare for the challenges that are sure to come as well?

- **Ideation to sales:** Does your company have the internal resources and insight to thoughtfully plan your business approach by analysing market opportunities and determining how to bring cleantech product and service ideas efficiently out of labs and into markets? Have you comprehensively reviewed your cost structure and cost drivers to see if they can support business development requirements? Can your company develop the relationships – product suppliers, service providers, financial institutions – needed to enhance your technological and operational performance?

- **Mergers and acquisitions:** Companies in and out of the cleantech sector see acquisition as a way to gain a foothold and grow. Even amid a shaky economic recovery, there is a sharp upswing in cleantech M&A activity. Are you able to identify target acquisitions that will fit well with your company? Does your company have the internal expertise to identify M&A opportunities and then to conduct effective due diligence? Can you find financing to support acquisitions?

- **Financing:** Private equity money is chasing cleantech. Is your company able to approach venture capitalists to obtain needed funding? Are you able to rapidly and accurately perform financial checks, valuations and audits that are required by venture capitalists and necessary to secure government grants and loan guarantees? Can you bring your company to an initial public offering?

- **Regulatory understanding:** Country specific regulations and tendering processes are defining how cleantech and renewable energy markets will operate and who will operate them. Is your entire company aware of the regulations in its own market – today and those possible next year – as well as in regions to which it will be exporting products and services? Cleantech is truly a global industry and players can capture opportunities around the world. Does your company have the ability to monitor, measure and document regulatory compliance wherever it operates?

- **Country specific changes:** The global trends cited in this report affect individual companies and individual countries in unique ways, challenging cleantech executives to stay abreast of trends that affect their bottom lines. Is your company ready to identify and respond to trends on its own?

Any company can benefit from a fresh set of eyes to help address challenges and manage opportunities efficiently and effectively. As one of the world's leading professional services organisations – with more than 2,500 partners in more than 100 countries providing business advisory, assurance and comprehensive tax services – Grant Thornton is ready to help.

About the Grant Thornton International Business Report

The Grant Thornton International Business Report (IBR) is a quarterly survey of the views of senior executives in privately held businesses (PHBs) all over the world. Launched in 1992 in nine European countries, the report now surveys 3,000 listed and privately held businesses every quarter – 12,000 annually – in 40 economies, providing insights on the economic and commercial issues affecting a sector often described as the "engine" of the world's economy.

In the cleantech sector, 458 businesses were interviewed. The majority were from the manufacturing sector (38%), followed by business and professional services (13%), retail (12%), construction and real estate (9%), technology (9%), and other (19%).

For the purpose of this research, the cleantech sector was defined as those businesses for which more than 40% of their activities relate to the research and development, production, or distribution of alternative energy/ cleantech.

To find out more about IBR and to obtain copies of reports and summaries, please visit: www.internationalbusinessreport.com.

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