

14 October 2009 (No. of pages: 6)

Firms Likely to Benefit from Increased Investment in Clean Tech

Full-fledged start of emissions trading could boost clean-tech investment

Japanese report: 9 Oct 09

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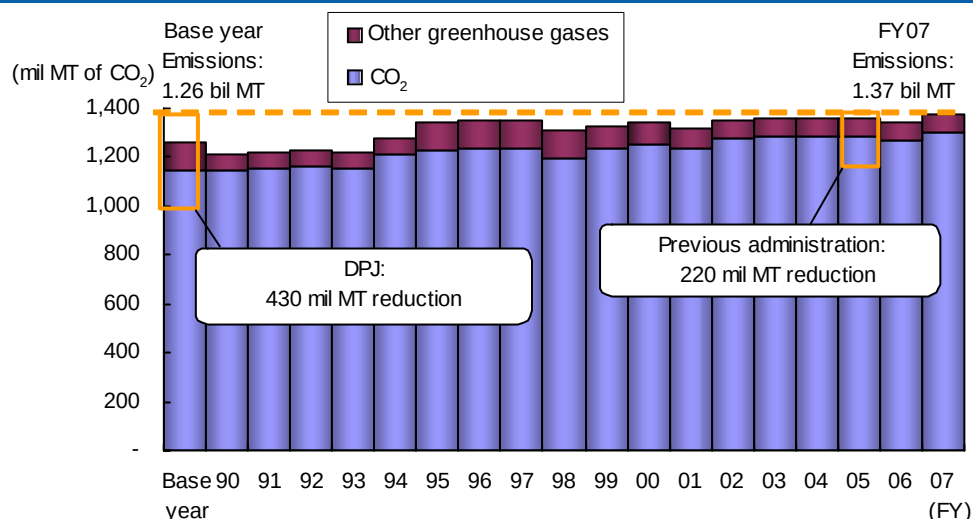
Summary

- Prime Minister Yukio Hatoyama has boldly pledged to the international community that Japan will reduce greenhouse gases by 25% from the 1990 level over the medium term. Detailed plans are slated to be formulated by the Cabinet ministry for national strategy, economic and fiscal policy. Global warming initiatives are expected to make up one key pillar of the new administration's economic growth strategy. Due to budgetary constraints, the first such measures will likely involve a cap-and-trade system of emissions trading.
- We think it will be some time before firms shift investment away from energy-saving technologies back to boosting capacity, which will probably only occur after they become convinced that earnings are set to recover. For that reason, we think the Hatoyama administration's proposed emissions trading scheme and other global warming initiatives should provide a tailwind to investment in clean technologies over the near term.
- In this report, we are focusing on firms that install energy-saving technologies or provide relevant advice on reducing consumption. We have compiled a list of companies we think stand to benefit from increased investment in clean tech. Specifically, the list includes companies with ESCO-related businesses or which are registered with the metropolitan Tokyo government as clean-tech consulting service providers.

CO₂ reduction targets twice as large as previous administration's

At a UN gathering and summit of G20 leaders in late September, Prime Minister Yukio Hatoyama outlined Japan's greenhouse gas reduction targets, calling for a 25% cut from the 1990 level. The comparatively bold target (previous administration aimed for 15% cut from 2005 level and 8% reduction from 1990 level) has won strong praise from the international community. In volume terms, the Hatoyama administration is calling for a reduction of 430 million MT in emissions from the 2007 level, or nearly twice the 220 million MT envisioned by the preceding Aso administration.

Greenhouse Gas Reduction Targets of Hatoyama and Previous Administrations
Chart 1



Source: Government materials; compiled by DIR.

Note: Base year of 1990. Data for 1990-1994 are approximate, as they do not include certain types of greenhouse gases.

Details of cuts to be outlined by year-end

The ruling Democratic Party of Japan's (DPJ) proposals assume a wide range of measures to meet the target, including (1) encouraging the participation of major polluting countries such as the US, China and India, and (2) contributions from overseas aid provided by Japan, purchases of emissions credits, and forest sinks.

Detailed reduction targets will be established by a cross-sectional working group of various ministries led by Naoto Kan, Deputy Prime Minister and State Minister for National Strategy, Economic and Fiscal Policy. The group plans to run various simulations and solicit additional input from industry leaders, aiming to put together proposals before the UN COP15 meeting on climate change scheduled for early December.

The previous Aso administration had begun preparing greenhouse gas reduction targets in January 2009, before firming up its scenarios at the end of March and releasing its findings in May. This time around, the administration has already released reduction targets, so it is unlikely to tamper much with previous estimates of technically feasible emissions cuts and actual CO₂ reductions, given the need to maintain credibility both at home and overseas. There is a good chance that the ruling coalition has already finished compiling its own data and designing its scenarios. Public meetings in October and November, thus, will probably involve mainly discussions and feedback regarding its scenarios. Such simulations, factoring in continued global warming and the development of new growth industries, will likely underscore potential economic growth resulting from government measures to address climate change.

Global warming measures a key tenet of DPJ plans to promote economic growth

We will be watching to see how high the DPJ places emission reduction proposals on its list of priorities. So far, it appears to be sticking steadfastly to its election manifesto, with the prime minister's office spearheading government efforts. Based on the 16 September Hatoyama Cabinet press conference, we believe the current administration should benefit from close cooperation between foreign minister Katsuya Okada, a green proponent from the get-go, trade minister Masayuki Naoshima, and environment minister Sakihito Ozawa.

In fact, Prime Minister Hatoyama has apparently instructed Mr. Naoshima to specifically devise plans to (1) expand employment and develop new growth industries by setting sights on other Asian markets; (2) provide necessary financial support to SMEs; (3) secure steady supplies of energy, including that from renewable sources; and (4) develop ways to address global warming together with the foreign and environment ministries. Since the first proposal also encompasses development of clean-tech industries, three out of Mr. Hatoyama's four directives call for measures to combat global warming. In this sense, the DPJ most likely views its policies to address climate change as a key component of its economic growth package.

Green Measures in DPJ Manifesto			Chart 2
Item No.	Goal	Specific measures	
42	Strongly promote measures to prevent global warming	Aim to reduce CO₂ emissions by 25% from 1990 levels by 2020 and by more than 60% by 2050 Spearhead environmental diplomacy and encourage participation of major emitters, including US, China, and India Establish domestic cap-and-trade emissions trading market Explore possibility of global warming taxes Promote increased disclosure of CO₂ emission information for consumer electronics and other products	
43	Introduce feed-in tariff scheme for renewable energy requiring purchase of all power generated	Promote anti-global warming measures rooted in everyday life Create jobs by promoting development of new technologies and industries in energy Fast-track introduction of gross feed-in tariff scheme for renewable energy Promote development and spread of smart grid technologies Subsidize purchase of residential solar panels, eco-friendly cars, and energy-efficient consumer electronics	
44	Promote eco-friendly, high-quality housing	Promote housing more in line with peoples' diversifying values Support barrier-free refurbishing, seismic retrofitting, and energy-saving renovations, such as solar panel and insulation installations Revise building standards and other regulations Establish support schemes, including rent subsidies, and promote fixed-term rental housing	
45	Lead world in innovative green technologies	Increase weighting of renewable energy in total primary energy supply to 10% by 2020 Promote development and commercialization of fuel cell, superconductive cable, and biomass technologies Harness new energy and energy-saving technologies to foster new industries	
46	Establish stable energy supply	Establish stable energy supply Ensure stable energy supply, encourage development and use of new energy, and promote renewable energies Establish system for ensuring stable supplies and recycling of rare metals Take steady strides toward increased use of nuclear power	

Source: DPJ Manifesto; compiled by DIR.

Note: Item No. indicates paragraph number in DPJ manifesto. Emphasis (bold text) ours.

Initial measures likely to involve emissions trading and mandatory purchase of renewable energy

That said, we think child allowances, the centerpiece of the DPJ platform, and subsidies for farming households will likely be given precedence in funding over the near term. Although the present administration will probably maintain the Eco-Point program and other eco-friendly policies not at odds with its manifesto, support for main global warming measures will likely be possible only after the government secures necessary funds.

In other words, measures likely to be implemented in the near term will probably be those that require no additional budgetary outlays—namely, cap-and-trade emission trading programs, or feed-in tariff schemes mandating the purchase of all energy produced by renewable sources (not limited to solar power). There has already been

progress on the former in the US and Europe, where portions of emissions allowances have been auctioned off, with proceeds helping to fund climate change initiatives. Such schemes are likely to gain currency with the DPJ, which is seeking to spur economic growth through global warming initiatives. Putting together a team to study emissions trading is an urgent task for the new administration, one that deserves to be under the jurisdiction of the National Strategy Bureau, given considerations about the management of proceeds from such a program. As for feed-in tariffs, costs from such programs may be passed on to consumers via electricity rates, which could in turn spur households to find ways to consume less energy.

Firms set to benefit from emissions trading

We will first consider the sorts of firms likely to benefit from emissions trading. Companies consuming more than a certain amount of energy will likely be required to limit their emissions. The CO₂ reduction targets set forth by the previous administration assumed a mix of initiatives: (1) energy-efficient air-conditioning, lighting, and boilers; (2) solar power systems; (3) BEMS (building and energy management systems); (4) high energy efficiency water heaters; and (5) improved insulation of buildings. To achieve cuts in CO₂ emissions, firms will likely need to adopt one or more of these technologies, so outside companies that install relevant technologies or can provide necessary advice are likely to benefit from the start of emissions trading.

The DPJ is currently studying a cap-and-trade emissions trading program. Elsewhere, the metropolitan Tokyo government plans to introduce a scheme in 2010 based on the EU-ETS (European Union Emissions Trading System) model, already in use in Europe. As of 2 October 2009, it had already compiled a list of 85 businesses providing technical consulting services to companies seeking to reduce their energy consumption.

Yamatake Consulting Services Revenue and Share Price Performance

Chart 3



Source: Company materials; compiled by DIR.

Note: For chart, we have assumed that revenue from clean-tech consulting services was equal to revenue from existing facilities/services business in building automation segment.

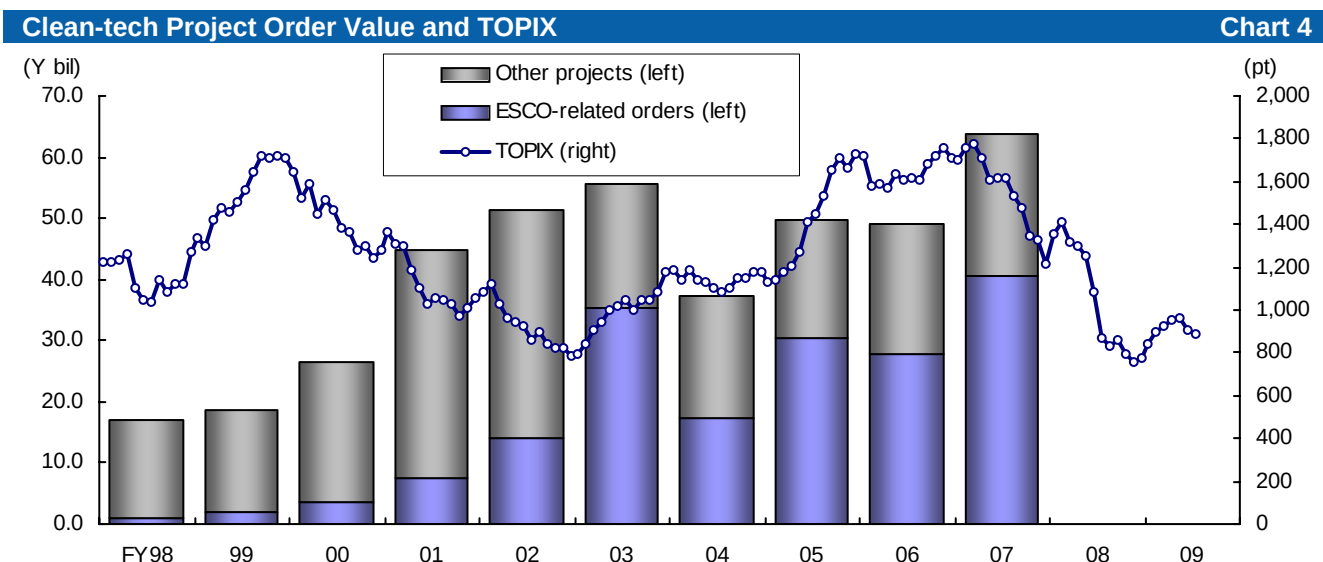
Some of the companies on this list are ESCOs (Energy Service Companies), whose activities are partially supported by METI. Such organizations, which provide services to mid-tier firms and SMEs, receive compensation for their services based on how much a client saves on its energy costs, setting them apart from traditional service providers of energy-saving refurbishments or system upgrades.

Based on materials from the period 2006-08, around 30% of the approximately 100 ESCOs that issued reports on their activities were listed on the TSE1. These entities accounted for around 60% of total orders for clean-tech consulting services. Yamatake (TSE1; 6845), which ranked among the leaders in terms of orders, has seen revenue from such services increase since 2007, when the metropolitan Tokyo government began articulating its plans for emissions trading.

***Clean-tech investment
could help jump-start
moribund economy***

Chart 4 depicts the total value of clean-tech refurbishment orders at 83 members of JAESCO (Japan Energy Service Companies), as compiled by ECCJ (Energy Conservation Center Japan). Orders hit a new high in FY07, totaling Y64 billion (of which over 60% was ESCO-related). Note that order growth is relatively weak when market performance is solid (i.e., economy is healthy) but rises steadily when the economy enters into a down cycle. These trends probably reflect the tendency of manufacturers to invest in capacity additions during expansionary periods and energy-saving technologies when the economy sours.

We think companies will probably continue to search for ways to save energy until confidence in a recovery permits them to make new capital expenditures. Progress in inventory reductions has enabled some firms to lift operating rates at their plants recently. However, with capacity utilization apparently still around only 80%, it will probably be some time before they are able to shift their focus from cost reduction to capacity additions, in our view. For that reason, the DPJ's proposed emission trading scheme and other global warming initiatives should provide a tailwind to further investment in clean tech.



Source: ECCJ (Energy Conservation Center Japan) website; compiled by DIR.

Note: Data from 83 firms belonging to JAESCO, as compiled by ECCJ.

Boost in clean-tech spending to hinge on emission trading details, energy efficiency initiatives

As noted earlier, Yamatake saw an uptick in orders in 2007, the year that the metropolitan Tokyo government opened debate on its plans to cut CO₂ emissions. Once detailed discussions of the DPJ's emissions trading scheme begin, we think there could be a wave of investment in clean tech, as firms bring forward projects while financial stimulus initiatives supporting such investment remain in effect. Judging from the example of the metropolitan Tokyo government, we will most likely see detailed laws drafted by the DPJ in 2010, briefings and gradual roll-outs in 2011, and full-fledged implementation from around 2012.

For reference, in Chart 5, we have compiled a partial list of listed firms that have submitted reports of ESCO businesses to the ECCJ, as well as those registered with the metropolitan Tokyo government as clean-tech consulting service providers.

Firms Likely to Benefit from Increased Investment in Clean Tech							Chart 5	
Code	Company	Market	Sector	Market cap as of 8 Oct 2009 (Y bil)	P/E (X)		P/B (X)	Dividend yield (%)
					FY09 E	10 E	Actual	09 E
* 1711	Shodensya	TSE Mothers	Construction	1.2	115.0	28.8	1.13	0.0
1719	Hazama	TSE 1	Construction	9.2	9.2	9.7	0.49	1.6
* 1723	Nihon Dengi	JQ	Construction	5.3	7.0	4.8	0.49	4.3
1802	Obayashi	TSE 1	Construction	267.0	26.7	28.1	0.68	2.2
1832	Hokkai Electrical Construction	Sapporo	Construction	7.7	11.8	10.9	0.41	1.8
* 1904	Taisei Oncho	JASDAQ	Construction	5.3	8.8	8.5	0.29	4.1
* 1942	Kandenko	TSE 1	Construction	120.1	25.6	24.0	0.70	2.4
1944	Kinden	OSE 1	Construction	191.3	19.5	16.6	0.63	1.9
1946	Toenec	TSE 1	Construction	52.0	43.3	34.7	0.66	1.9
1952	Shin Nippon Air Technologies	TSE 1	Construction	15.2	15.2	13.8	0.57	2.5
1961	Sanki Engineering	TSE 1	Construction	53.4	22.2	19.8	0.68	2.2
* 1965	Techno Ryowa	TSE 2	Construction	11.4	9.5	11.4	0.46	3.2
1969	Takasago Thermal Engineering	TSE 1	Construction	63.4	13.2	15.8	0.77	3.4
1970	Hitachi Plant Technologies	TSE 1	Construction	117.4	53.3	41.9	1.19	0.7
1975	Asahi Kogyosha	TSE 1	Construction	12.2	11.6	12.8	0.66	3.4
* 1979	Taikisha	TSE 1	Construction	41.8	64.3	29.8	0.70	2.6
* 1980	Dai-Dan	OSE 1	Construction	22.0	22.0	18.3	0.53	3.3
* 1982	Hibiya Engineering	TSE 1	Construction	26.3	15.9	17.0	0.54	2.1
5001	Nippon Oil	TSE 1	Oil & coal products	707.4	9.1	8.3	0.74	4.1
* 6013	Takuma	TSE 1	Machinery	20.6	22.9	17.2	0.89	0.0
6361	Ebara	TSE 1	Machinery	159.8	45.7	32.0	1.30	0.0
6367	Daikin Industries	TSE 1	Machinery	917.4	76.5	35.3	1.85	1.2
6501	Hitachi	TSE 1	Electrical machinery	1,003.7	Loss	50.2	0.99	0.0
6502	Toshiba	TSE 1	Electrical machinery	2,012.9	Loss	44.7	1.87	0.0
6503	Mitsubishi Electric	TSE 1	Electrical machinery	1,488.0	Loss	74.4	1.67	0.0
* 6508	Meidensha	TSE 1	Electrical machinery	108.8	217.6	108.8	2.27	0.0
6841	Yokogawa Electric	TSE 1	Electrical machinery	202.5	Loss	202.5	1.25	0.0
* 6845	Yamatake	TSE 1	Electrical machinery	146.4	29.3	20.1	1.21	3.2
9501	Tokyo Electric Power	TSE 1	Electric power & gas	3,091.3	47.6	28.1	1.27	2.6
9509	Hokkaido Electric Power	TSE 1	Electric power & gas	382.8	63.8	60.8	0.94	2.8
* 9514	First Energy Service	TSE Mothers	Electric power & gas	1.1	Loss	10.7	0.30	0.0
9535	Hiroshima Gas	TSE 2	Electric power & gas	13.9	8.2	8.2	0.49	2.2
9543	Shizuokagas	TSE 1	Electric power & gas	50.4	7.4	6.5	1.07	1.2
9906	Fujii Sangyo	JASDAQ	Wholesale	5.5	17.6	14.4	0.42	1.5
8591	Orix	TSE 1	Miscellaneous finance	644.8	21.5	18.4	0.55	1.2
* 1954	Nippon Koei	TSE 1	Services	24.2	17.3	14.2	0.61	2.7
9621	CTI Engineering	TSE 1	Services	7.8	12.0	10.7	0.41	2.9
9728	Nippon Kanzai	TSE 1	Services	33.2	15.1	14.7	1.28	2.0

Source: Toyo Keizai; compiled by DIR.

Notes: 1) Toyo Keizai estimates and sector names, as of 8 Oct 2009. * indicates firms with business segments we believe are involved with clean technologies.

2) Firms in list are taken from JAESCO list compiled by ECCJ and Tokyo list of clean-tech consulting service providers.

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