## Economic Survey of Environmental Industries in June 2014

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Office of Environmental and Economy Policy Research, Environmental Strategy Division, Environmental Policy Bureau, Ministry of the Environment

The Ministry of the Environment (MOE) has been conducting its official survey of Japanese Environmental Industries every 6 months since December 2010, and the results of 'The Economic Survey of Environmental Industries in June 2014' have been publicized.

According to the results, the Diffusion Index (DI)\* of business confidence in Environmental Industries was +22 in June 2014, which surpassed the DI (+17) of the previous survey in December 2013. It was also higher than the DI (+12) of all industries in June 2014.

For the future perspective of the business conditions of Environmental Industries, the DI was expected to be +24 in 6 months and +27 in 10 years and among the four major Environmental Business categories, the DI for 'Countermeasures against Climate Change' contributed to the improvement of business confident.

As for future Environmental Industries that companies are interested to get into, "Renewable energy" ranked first, regardless of the type of business industry and the scale.

\* Diffusion Index (DI): percentage of responses "Good" minus percentage of responses "Bad", % points

## 1. An outline of the Survey

- (1) Survey period From June 2, 2014 (Monday) to July 4, 2014 (Friday)
- (2) Sample companies

11,552 private companies in Japan, with a capital of 20 million yen or above, were selected by stratified random sampling based on the amount of capital and the classification of industry. The number of companies with valid responses were 4,915 and the valid response rate was 42.5%.

## (3) Survey items

- Q1-1 Business Confidence on the entire Environmental Industries in Japan (present, in 6 months and in 10 years)
- Q1-2 Promising Outlook of Environmental Business (present, in 6 months and in 10 years)
- Q2 Business Confidence on the Currently Operating Businesses of the Responded Companies (present, in 6 months and in 10 years)

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- (i) Conditions of Business
- (ii) Primary Factor in Assessment of Business Conditions
- (iii) Domestic Supply-Demand Conditions,
- (iv) Output Prices,
- (v) R&D Spending,
- (vi) Scale of Capital Equipment,
- (vii) Scale of Workforce,
- (viii) Financial Positions (present status only),
- (ix) Overseas Supply-Demand Conditions (if selling overseas), and
- (x) Interests in Expanding Business Overseas (if not selling overseas yet)
- Q3-1 Whether they are Currently Operating Environmental Businesses
- Q3-2 Currently Operating Environmental Businesses (up to 3), their Business
  Confidence (present, in 6 months and in 10 years)
  \* the survey items are same as those in Q2, from (i) to (x)
- Q4-1 Whether they want to operate Environmental Businesses
- Q4-2 Environmental Businesses they want to newly operate or expand (up to 3)
- Q4-3 Reasons to launch new Environmental Businesses
- Q4-4 Time and places: when and where they want to start the Environmental Businesses
- Q4-5 Reasons why they do not wish to operate Environmental Businesses/reasons why they answer they "don't know."

## 2. Summary of the Survey Results

(1) Environmental Industries Business Confidence

The DI of business confidence in the companies currently operating environmental businesses at present (June 2014) was +22, which surpassed the DI (+17) of the previous survey in December 2013. It also surpassed the DI of all industry (+12) and of TANKAN\* (+7) in June 2014 survey. For the future, business condition of Environmental Industries would be expected to improve, as the survey shows the DI +24 in 6 months and +27 in 10 years. In particular, DI of the environmental industries categorized as 'Countermeasures against Climate Change' among all \*4 major business categories contributed to enhance the DI of environmental industries overall.

As for the reasons of their responses regarding the business confidence described above, many companies responded that it expected 'increasing orders from their business partners (customers)' at present, 'improvement of business in the whole industrial world,' in 6 months and 'growing of overseas market' in 10 years.

\* TANKAN: Bank of Japan's quarterly survey of business sentiment

<sup>\*4</sup> major categories: A. Pollution Management, B. Countermeasures against Climate Change, C. Waste Management and Efficient Use of Resources, D. Natural Environment Management, categorized by Ministry of the Environment.

| DI: "Good" minus "Bad" in  |              |      |              |      |                   |              |          |   |                |  |
|--|--------------|------|--------------|------|-------------------|--------------|----------|---|----------------|--|
|  |              |      |              |      |                   | Forecast     |          |   |                |  |
|  | Jun.<br>2013 | Sep. | Dec.<br>2013 | Mar. | Jun.<br>(Current) | Sep.<br>2014 | Dec      | - | In 10<br>years |  |
| Environmental Businesses<br>(Forecast before 6 months)   | 15<br>(15)   |      | 17<br>(19)   |      | 22<br>(19)        |              | 24       |   | 27<br>(25)     |  |
| <ul> <li>A. Pollution Management</li> <li>B. Countermeasures against Climate<br/>Change</li> </ul> | 3<br>26      |      | 10<br>27     |      | 9<br>32           |              | 15<br>34 |   | 21<br>36       |  |
| C. Waste Management and Efficient Use<br>of Resources  | 7            |      | 8            |      | 11                |              | 10       |   | 9              |  |
| D. Natural Environment Management  | 11           |      | 4            |      | 12                |              | 20       |   | 33             |  |
| All Businesses<br>(Forecast before 6 months)   | 1<br>(-6)    |      | 9<br>(7)     |      | 12<br>(10)        |              | 15       |   | 8<br>(10)      |  |
| Companies Operating Environmental<br>Business  | 10           |      | 22           |      | 25                |              | 26       |   | 22             |  |
| Companies Not Operating Environmental<br>Business  | -1           |      | 6            |      | 8                 |              | 12       |   | 5              |  |
| TANKAN (Bank of Japan)<br>Totals of All Types in All Industries                                    | -2           | 2    | 8            | 12   | 7                 | 7            |          |   |                |  |

Table 1: Business Confidence D.I.

(2) Promising environmental industries

'Energy-saving vehicles' was ranked 1<sup>st</sup> as promising environmental industries at present. For the future perspective (in 6 months and in 10 years), again, 'Energy-saving vehicles' ranked top in 6 months, while 'Renewable energy (excluding solar power generation)' ranked top in 10 years.

Meanwhile, 'Air pollution control' ranked in all time sections (at present, in 6 months and in 10 years) within the top 5 promising Environmental businesses.

| Table 2. Fromsting Environmental Dusinesses in Sapan |   |      |             |  |      |   |   |      |  |
|--|---|------|-------------|--|------|---|---|------|--|
| Present  |   | %    | In 6 Months |  | %    |   | In 10 Years                             |      |  |
| 1  | Energy-saving vehicles                    | 24.1 | 1           | Energy-saving vehicles   | 23.1 | 1 | Renewable energy*                       | 31.1 |  |
| 2  | Air pollution control                     | 19.2 | 2           | Solar power generation system(equipment)                           | 12.7 | 2 | Energy-saving vehicles                  | 11.2 |  |
| 3  | Solar power generation system (equipment) | 14.2 | 3           | Renewable energy*  | 12.5 | 3 | Air pollution control                   | 7.2  |  |
| 4  | Waste water<br>management                 | 9.4  | 4           | Air pollution control  | 11.1 | 4 | Smart grid                              | 5.7  |  |
| 5  | Renewable energy*                         | 8.0  | 5           | Solar power generation<br>system<br>(installation&maintenanc<br>e) | 5.9  | 5 | Other businesses against climate change | 4.8  |  |

Table 2: Promising Environmental Businesses in Japan

\* Equipment for Wind, Hydroelectric, Geothermal, Solar Thermal, Bio Gas, and Small-/Medium-sized Hydroelectric Power Generation, and Sales of Power Generated from New Energy

(3) Environmental businesses they want to operate in the future

'Countermeasures against climate change' dominated the higher ranks in the environmental businesses that companies want to operate in the future. Same as the results of the previous

survey, 'Renewable energy' ranked 1st in all three time sections (at present, in 6 months and in 10 years) regardless of the type of business industry and the scale.

For the prospects for the future Environmental Businesses, 437 companies nationwide returned with valid answers, and they expressed their wish to launch total of 554 new Environmental Businesses in the future. As for the prospects for place of business, Kanto region attracted the highest number, 197 companies, Chubu region 65, Kinki region 49, Tohoku region 44, Hokkaido region 25 and Chugoku/Shikoku region 25.

| Table 5. Environmental Dusinesses for Operating in the Future (by Type) |   |      |   |   |      |                     |   |      |  |
|---|---|------|---|---|------|---------------------|---|------|--|
|   | All Businesses  | %    |   | Manufacturers   | %    | % Non-manufacturers |   | %    |  |
| 1   | Renewable energy*   | 29.8 | 1 | Renewable energy*   | 27.9 | 1                   | Renewable energy*   | 31.0 |  |
| 2   | Smart grid  | 12.2 | 2 | Solar power generation<br>system(equipment)                                       | 10.3 | 2                   | Smart grid  | 15.2 |  |
| 3   | Other businesses against climate change                         | 9.5  | 3 | Rechargeable batteries  | 10.3 | 3                   | Solar power generation<br>system (installation,<br>maintenance) | 11.2 |  |
| 4   | Solar power generation<br>system (installation,<br>maintenance) | 8.7  | 4 | Other business<br>products for pollution<br>management<br>(equipment, facilities) | 9.8  | 4                   | Energy-saving consulting  | 10.2 |  |
| 5   | Solar power generation system (equipment)                       | 7.7  | 5 | Energy-saving vehicles  | 9.3  | 5                   | Other businesses against climate change                         | 10.2 |  |

 Table 3: Environmental Businesses for Operating in the Future (by Type)

\* Equipment for Wind, Hydroelectric, Geothermal, Solar Thermal, Bio Gas, and Small-/Medium-sized Hydroelectric Power Generation, Sales of Power Generated from New Energy and so on.

Note: For further detailed information of the survey results including information of previous surveys, please refer to the following site (descriptions in Japanese only.)

http://www.env.go.jp/policy/keizai\_portal/B\_industry/b03.html)