

T-REC is Recognized by the Carbon Disclosure Project; Can be Used in CDP Questionnaires

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Companies are purchasing renewable energy to meet internal greenhouse gas (GHG) reduction goals, reduce the risk of traditional fuel price fluctuations, and demonstrate their commitment to corporate social responsibility (CSR). In recent years, procurements and investments at a considerable scale have affected the renewable energy market. The National Renewable Energy Certification Center within the Bureau of Standards, Metrology & Inspection (BSMI) of the Ministry of Economic Affairs (MOEA) began planning Taiwan Renewable Energy Certificates (T-REC) in 2016. T-REC, being an emerging tool for companies to demonstrate their commitment to CSR, makes the environmental benefits of using green energy concrete. Now, T-REC is recognized by CDP, the international authority on GHG disclosures, and CSR Awards held by *Global Views Monthly*. Starting in 2018, T-RECs may be used in disclosures and evaluation questionnaires for CDP and *Global Views Monthly*!

I. Incentives for Companies to Purchase Green Energy

The World Wildlife Fund surveyed 37 companies that participated in the Corporate Eco Forum or Buyers' Principles in 2016. The report showed that companies' main drivers toward purchasing renewable energy were meeting internal climate change targets, reducing energy expenses, and demonstrating company leadership¹ (Figure 1). Renewable energy use by companies in some countries may be due to specific requirements derived from renewable energy directives in the region where the company's facilities are located, CSR report is published, or main economic activities are carried out.

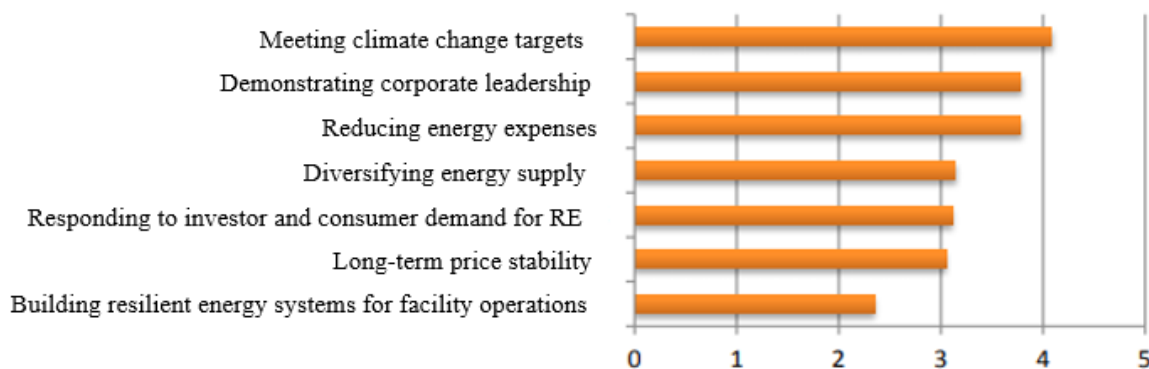


Figure 1 Analysis of causes driving multinational companies to purchase renewable energy¹
(scale of 1–5, 5 = strongest driver)

Since the use of renewable energy and other clean energy technologies by companies can achieve the goal of GHG reduction and can lower the risk of traditional fuel price fluctuations, many companies around the world are making greater commitments to obtaining renewable energy. For example, over 140 companies worldwide are participating in RE100 and have committed to using 100% renewable energy for their global operations². Furthermore, renewable energy relies on local natural resources, which effectively increases energy self-sufficiency and ensures the safety of the energy supply. Corporate buyers have the potential to guide the development of new renewable

energy and to aid the promotion of emerging or mature renewable energy markets. Procurements and investments at a considerable scale have already affected the renewable energy market in recent years.

II. T-REC as Emerging Tool for Demonstrating CSR Commitment

The National Renewable Energy Certification Center, BSMI, MOEA began issuing T-RECs in 2017 as proof of renewable energy use, thus concretizing the environmental benefits of using green energy. Companies may use T-RECs in CSR reports or evaluation mechanisms to prove their use of green energy. As such, T-RECs have become an emerging tool for companies to demonstrate their CSR commitments.

III. Introduction to the CDP Questionnaire Evaluation System and Participation by Taiwanese Companies

CDP (Carbon Disclosure Project) is an independent non-profit organization headquartered in London. One of its main tasks is to invite large companies worldwide to fill out its questionnaire and disclose their GHG emissions. CDP also compiles reports on response strategies for climate-related investment risks and opportunities. The Climate Change Program launched by CDP has invited thousands of enterprises each year since 2003 to disclose their carbon management-related data, risks, and opportunities. The number of investment institutions worldwide supporting the program increased to 827 in 2016, a growth of nearly 20-fold compared with 2003. The total assets of the companies reached US\$100 trillion which is equivalent to the third largest conglomerate in the world. CDP has developed many programs, including: Climate Change, Carbon Action, Water, Forests, Cities, and Supply Chain. After years of efforts, CDP has become the most extensively used disclosure system for carbon, water, forests, and other related natural capital management.

CDP announced and began using a new version questionnaire in 2018, which added the Task Force on Climate-related Financial Disclosures (TCFD). This aims to help stakeholders better understand the ratios of carbon-related assets in the financial industry, as well as the financial system's exposure to climate-related risks, when they make decisions regarding a company's investments, financing, and underwriting.³

The 2018 Climate Change questionnaire includes: Introduction, governance, risks and opportunities, business strategy, targets and performance, emissions methodology, emissions data, emissions analysis, energy, additional metrics, verification, carbon pricing, engagement, other land management impacts, sign off, and supply chain module (in order from C0 to C14 and SC, as shown in Figure 2). C4, C5, C6, C7, C8, C10, C11, and SC are related to energy indirect (Scope 2) GHG emissions within the GHG protocol. The scope 2 inventory guidelines mention that renewable energy certificates or related contract instruments may be used in the GHG inventory. In Taiwan, companies could use T-RECs, which are verified by an impartial third party, in the CDP 2018 questionnaire as proof of their green power consumption and related GHG emission factors.

Key:	Irrelevant	Relevant
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C0: Introduction	C1: Governance	C2: Risks and opportunities	C3: Business strategy
C4: Targets and performance	C5: Emissions methodology	C6: Emissions data	C7: Emissions breakdown
C8: Energy	C9: Additional metrics	C10: Verification	C11: Carbon pricing
C12: Engagement	C13: Other land management impacts	C14: Sign off	SC: Supply chain module

Figure 2 Items relevant to GHG Scope 2 in the 2018 CDP questionnaire⁴

Over the past few years, eight financial institutions, including CTBC Financial Holding Co., Ltd., Taishin Financial Holding Co., Ltd., E.SUN Financial Holding Co., Ltd., Cathay Financial Holdings Co., Ltd., First Financial Holding Co., Ltd., Fubon Financial Holding Co., Ltd., Yuanta Financial Holdings Co., Ltd., and China Development Financial Holding Corporation, have all become signatories to CDP Climate Change project. A total of 123 companies in Taiwan received invitations in 2017. Of these, 56 companies responded to the questionnaire, and 54 companies were evaluated, with their grades announced on CDP's official website (Figure 3). Taiwan did not have any companies that received a grade of A in 2017, and only 10 companies received a grade of A-.

A-	B	B-	C	C-	D	D-
<ul style="list-style-type: none"> • Powertech Technology, Inc. • CTBC Financial Holding Co., Ltd. • China Steel Corporation • AU Optronics Corporation • ASE Group • Delta Electronics, Inc. • TSMC • Qisda Corporation • Siliconware Precision Industries Co., Ltd. • United Microelectronics Corporation 	<ul style="list-style-type: none"> • China Airlines • CTCI Chemicals Corporation • Compal Electronics, Inc. • Yuanta Financial Holdings Co., Ltd. • Taiwan Mobile Co., Ltd. • Lite-On Technology Corporation • Acer, Inc. • Asia Cement Corporation • Nan Ya Plastics Corporation • Inventec Corporation • Cathay Financial Holdings Co., Ltd. • First Financial Holding Co., Ltd. • Innolux Corporation • Oriental Petrochemical (Taiwan) Co., Ltd. • Wistron Corporation • Zhen Ding Tech 	<ul style="list-style-type: none"> • Advantech Co., Ltd. 	<ul style="list-style-type: none"> • Chunghwa Telecom Corporation • Formosa Plastics Corporation • Formosa Petrochemical • Taishin Financial Holding Co., Ltd. • Formosa Chemicals & Fibre Corporation • Gemtek Technology Co., Ltd. • E.SUN Financial Holding Co., Ltd. • HTC Corporation • Pegatron Corporation • EVA Air • Nanya Technology • Nan Ya Printed Circuit Board Corporation • MiTAC Holdings Corporation • Fubon Financial Holding Co., Ltd. • ASUSTeK Computer, Inc. • China Development Financial Holding Corporation • Darfon Electronics Corporation • Formosa Taffeta Co., Ltd. • CPC Corporation, Taiwan • Far East Tone • Quanta Computer, Inc. 	<ul style="list-style-type: none"> • Chaun-Choung Technology Corporation 	<ul style="list-style-type: none"> • Vanguard International Semiconductor Corporation • Chicony Electronics Co., Ltd. • Eclat Textile Co., Ltd. • MediaTek, Inc. 	<ul style="list-style-type: none"> • Hon Hai Precision Industry Co., Ltd.

The companies above are listed according to the number of strokes in their Chinese names.

Figure 3 Grades of Taiwanese Enterprises that Participated in CDP's 2017 Questionnaire⁵

In addition to CDP, there are many CSR-related awards and evaluation mechanisms. In Taiwan, the CSR Awards of *Global Views Monthly*, the CSR Awards of *CommonWealth Magazine*, and the Taiwan Corporate Sustainability Awards of the Taiwan Institute for Sustainable Energy are some of

the more well-known awards.

IV. Overview and Future Outlook for Connections Between T-RECs and CSR or Corporate Sustainability Evaluation Mechanisms, in Taiwan and Overseas

T-REC Team of BSMI, MOEA actively engaged with CDP numerous times from 2016 to 2018 to explain the design concepts of T-REC system and its development status. T-RECs were included in the CDP Technical Note: Accounting of Scope 2 Emissions published in 2018. Starting in 2018, companies may use T-RECs as metrics to provide necessary information when filling out the CDP questionnaire (Figure 4).

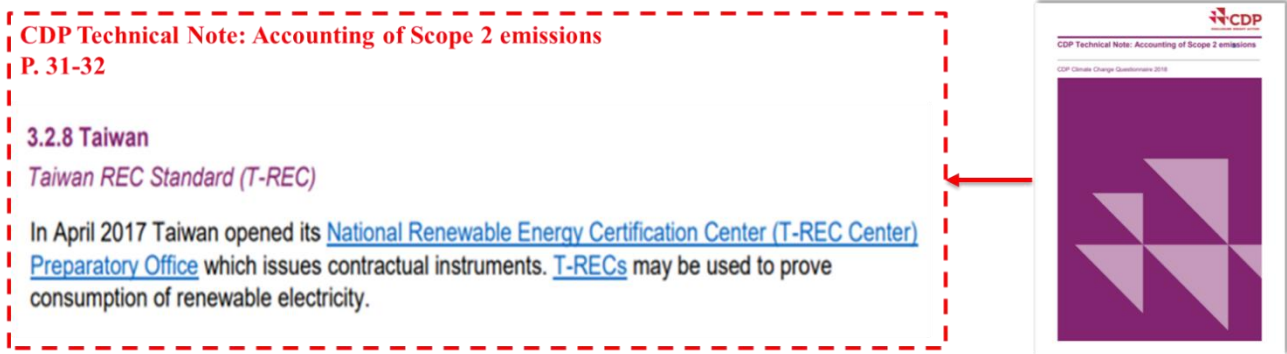


Figure 4 T-RECs included in CDP 2018 questionnaire – CDP Technical Note: Accounting of Scope 2 emissions⁴

T-RECs were included in the environmental measures part of *Global Views Monthly's* questionnaire for the 14th CSR Awards in 2018 (Figure 5). According to a May 2018 *Global Views Monthly* press release, a total of 138 companies participated in the survey for its CSR Awards in 2018. Of these, 10.8% of the companies acquired T-RECs and 19.6% of companies purchased T-RECs (Figure 6).

13. Has your company acquired or purchased T-RECs issued by BSMI,MOEA?

Acquired a total of ___ T-RECs in 2017

Purchased a total of ___ T-RECs in 2017

Currently planning application, please explain: _____

No current plans

Figure 5 *Global Views Monthly* 2018 CSR Awards Questionnaire – T-REC⁶

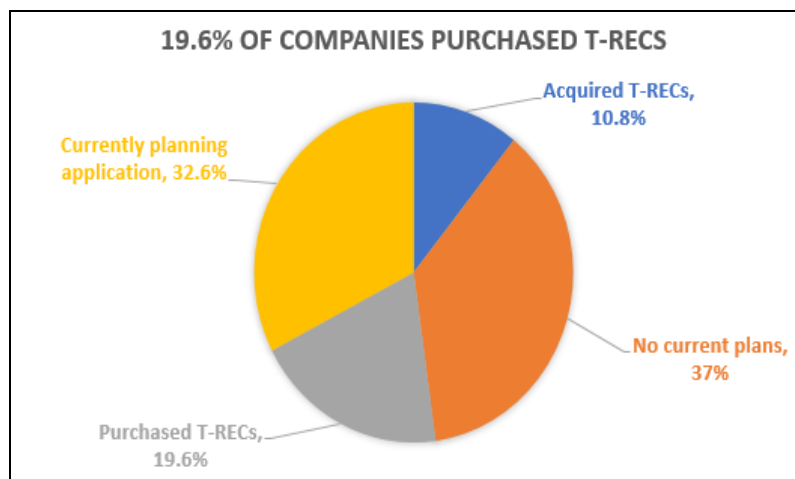


Figure 6 Illustration of T-RECs by companies in the survey for 2018's 14th CSR Awards given by *Global Views Monthly*⁷

The T-REC Team of the BSMI, MOEA will continue to engage with CDP and share experience related to T-REC and companies' purchasing of green energy. The team hopes to increase the international visibility of T-RECs through the CDP platform. The team also hopes to continuously promote the linkage between T-RECs and corporate sustainability evaluation mechanisms in Taiwan and overseas, such as the Dow Jones Sustainability Index (DJSI) and MSCI's ESG Index, in order to expand the application range of T-RECs for domestic companies.

V. References

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