



Action Plan for Businesses in China

HOW TO COVER YOUR CONSUMPTION WITH RENEWABLE ELECTRICITY?

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PAPER PREVIEW

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China is the world's largest emitter of greenhouse gases. This results in an urgent need for decarbonization with renewable energies. Industrial corporates have a major role to play in realizing the decarbonization in China. This Action Plan is designed to help these corporates get an overall view and holistic understanding of the decarbonization opportunities available in the Chinese market in the current regulatory environment."

Dr. STEFFEN HUNDT

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EVERYONE CAN TAKE ACTION

Every concrete step taken gives the right signals to the market. All methods of procurement mentioned below contribute to creating tangible, extra impact in various degrees in the Chinese market: Consumers taking an active path especially at early stages of developing renewable energies which help shape the Chinese energy market. This paper aims to give an overview of the current situation in China, the institutional consumer is the best judge of which sourcing method suits them the best.

There are options available for consumers in China to make claims about renewable electricity use thanks to those who showed leadership by taking action. The extra steps taken have helped pave the way for others.

The RE100 paper [Business Leadership in the Transition to Renewable Electricity](#) coins 5 dimensions of leadership: Ambition, impactful procurement, sustainability, influence and transparency. What can be done right now is the best action to start with: After the first steps it's always possible to build on.

A more detailed analysis of the available sourcing methods for renewable electricity and the regulatory framework in China is available on the paper "[Decarbonisation & Power Purchase Agreements – An economic Analysis of the regulatory Status Quo in China](#)" by Dr. Steffen Hundt and Johanna Jahnel.

The instruments for 100% renewable energy consumption can be coupled with additional ways to increase the positive impact (Table 1), e.g. unbundled certificates or direct purchase agreements can be coupled with increased locality, longer term commitment and more recent installations favoured as well as going for extra impact with ecolabelled energy.

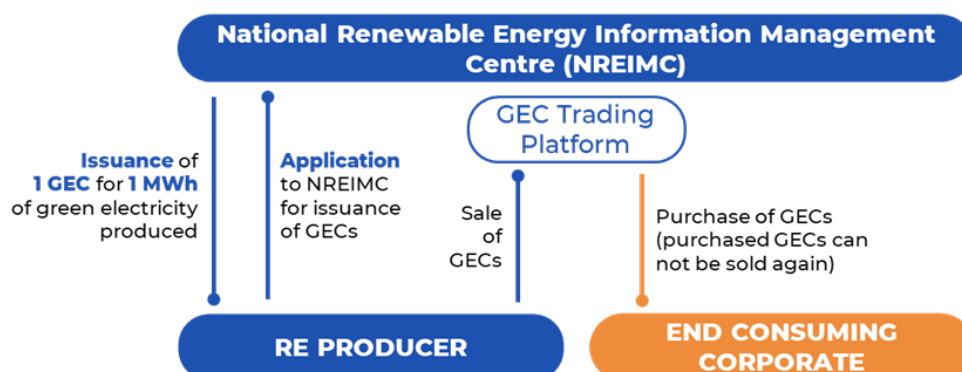
The positive impact of every procurement option can be increased by the involvement of the supply chain, and partners can be encouraged to use renewables as well. Choosing local generation, as close to the consumption site as possible has been a common practice among energy consumers. Buyers can opt for locations with more proximity since this information is available for every instrument. For those who look for additionality by adding new generation to the grid, choosing GECs, I-RECs or making PPAs for newer powerplants is possible, though not every Energy Attribute Certificate or direct purchase (PPA) comes from new capacity added.

Climate conscious buyers can choose EKOenergy-labelled energy in China too, so that their consumption comes from installations that fulfil extra sustainability criteria, supports advocacy work for renewables worldwide and contributes to new installations in developing countries. The EKOenergy label can be combined with GECs, direct purchase agreements or direct investments, but this depends on the eligibility and how the buyer proceeds for being the first example. There already are examples of EKOenergy deals that have been made by using I-RECs that received EKOenergy's approval.

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UNBUNDLED ENERGY ATTRIBUTE CERTIFICATES

Figure 1: GEC system in China

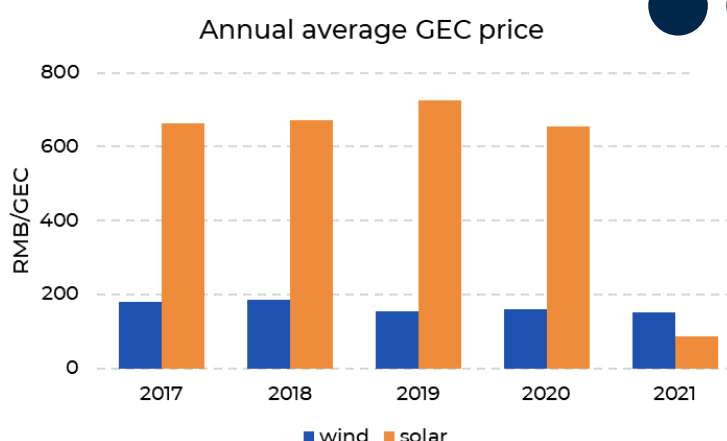


As noted above, GEC prices were initially based on the feed-in tariffs (FiTs) due to the original goal of the system to reduce government spending on RE subsidies. This resulted in market prices for GECs at levels similar to the fixed FiTs, which are 10-50 times higher than EAC prices in Europe and the US (EnergyTag, 2021; NDRC et al., 2017). The FiT levels were significantly higher for solar than for wind, which also explains the price trend for GECs shown in Figure 2. From 2017 to 2020, solar GEC prices consistently ranged above 650 RMB/GEC, peaking at an average price of 725 RMB/GEC in 2019. The average prices for wind GECs ranged between 155 and 185 RMB/GEC, significantly lower than solar GEC prices.

The announced opening of the system for subsidy-free projects in 2019 was expected to allow decoupling of the GEC price from FiT levels and thus significantly reduce the price for the certificates (Porter et al., 2019). This effect did not become apparent in the price development until 2021, when the government subsidy payments expired.

Nevertheless, GEC prices are still higher than prices for alternative EACs, like I-RECs, and this also resulted in low demand for GECs by end users. As of February 22nd 2022, the total number of GECs issued was approx. 41.3 m but only an amount of 1 m GECs was sold, representing around 2% (greenenergy.org.cn, 2022). Yet, some corporates are using the voluntary GEC market as a first step to decarbonize their electricity consumption. On January 18, 2021 for example, FAW-Volkswagen executed a transaction described as the largest since the launch of the GEC market in 2017. The transaction involved 30,160 GECs, which allowed the company to claim renewable energy attributes for 30,160 MWh from the Hebei Huadian Kangbao Wind Power Co. (Liu, 2021).

Figure 2: Annual average GEC price



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ABOUT US

Think RE GmbH is a renewable energy advisory boutique which is specialized on power purchase agreements and direct investment in renewable energy assets. With its renewable energy platform RE WAVE, the company helps buyers and sellers of renewable energy to find the appropriate contractual counterparty in over 32 countries worldwide. For further information use the following link: www.re-wave.com.

EKOenergy is an international not-for-profit ecolabel for energy (renewable electricity as well as renewable gas, heat and cold). In addition to being renewable, the energy sold with the EKOenergy label fulfils additional sustainability criteria and finances projects that combat energy poverty. This way, the EKOenergy ecolabel brings additionality to renewable energy certificates such as Guarantees of Origin (GOs), RECs and I-RECs. For further information use the following link: www.ekoenergy.org.

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