

EXECUTIVE SUMMARY



Corporate Sourcing of Renewables: Market and Industry Trends

REmade Index **2018**

With input from:



Executive Summary



Source: Acciona

More and more companies around the world are voluntarily and actively procuring or investing in self-generation of renewable energy. Driven by the last decade's unprecedented reduction in the cost of renewables in combination with a growing demand for corporate sustainability among investors and consumers, renewables have become an attractive source of energy.



2 410

companies have been analysed for this report

Corporate sourcing of renewables has the potential to drive significant additional investment in renewable energy. With the right framework in place, it can also help accelerate the energy transformation and move the world closer to achieving the Paris Agreement's objective of keeping the rise in global average temperatures to well below 2°C above pre-industrial levels.

As the first global comprehensive analysis of corporate sourcing of renewable electricity, this report highlights the latest trends and provides recommendations to more fully exploit its potential. The analysis builds on data collected from the member states of the International Renewable Energy Agency (IRENA) and from more than 2 400 large corporate entities headquartered in more than 40 countries.

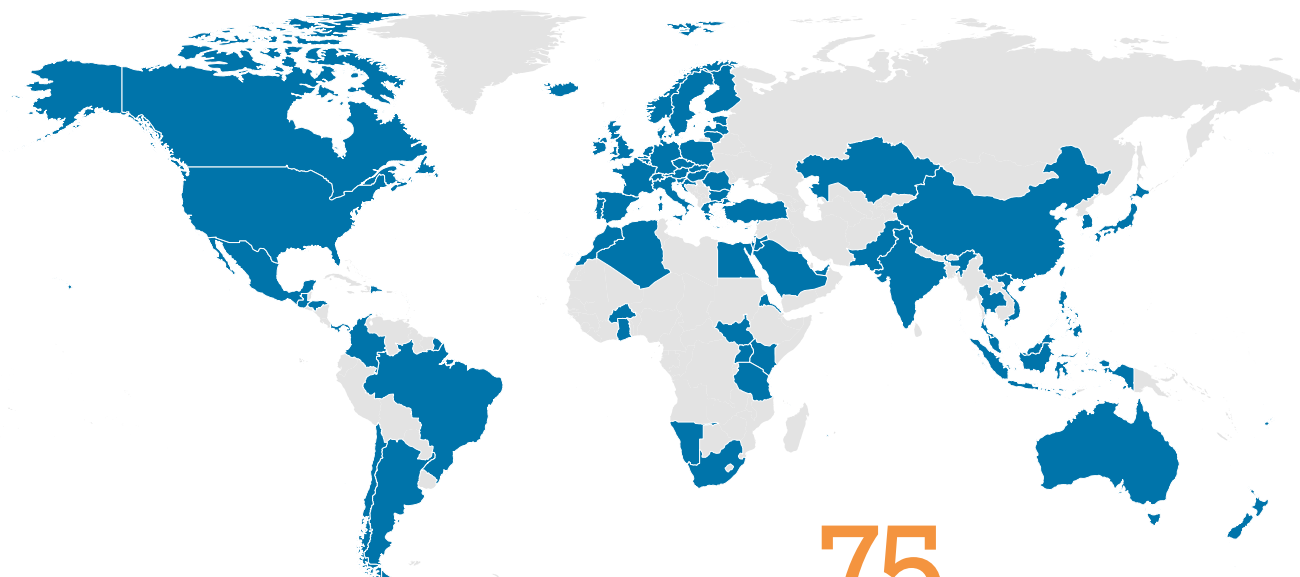
The overall findings indicate that corporate sourcing occurs in roughly a third of the world's countries. The report also shows that there is substantial scope to further enable corporate entities to source more renewable electricity and ensure that their efforts result in additional deployment. The analysis further suggests that while roughly one in five corporations has committed to renewable electricity targets, an opportunity exists to strengthen these targets and ambitions across all industry sectors.

Key findings

01 Corporate sourcing of renewable electricity is a growing global trend, already seen in more than 70 countries around the world. The majority of companies reporting active sourcing are head-quartered in Europe and North America, with emerging markets on the rise.

As of early 2018, companies sourced renewable electricity in 75 countries either through power purchase agreements (PPAs), utility green procurement programmes or unbundled energy attribute certificates (EACs) (see Map ES.1). Countries in Europe and North America continue to account for the bulk of corporate sourcing and are home to a large number of companies that are actively procuring renewables not only in the country where they are headquartered but also for their operations around the world. Lately, rising demand for renewable electricity has been noted among companies headquartered in the Asia Pacific region and Latin America. In Africa and the Middle East, few corporate procurement deals have been struck so far, but the region promises high potential.

Map ES.1. Corporate renewable electricity sourcing globally



Note: This map shows countries where corporate sourcing takes place as of early 2018, either through power purchase agreements, utility green procurement programmes and/or the purchase of unbundled renewable energy attribute certificates. Direct investments in production for self-consumption are not included.

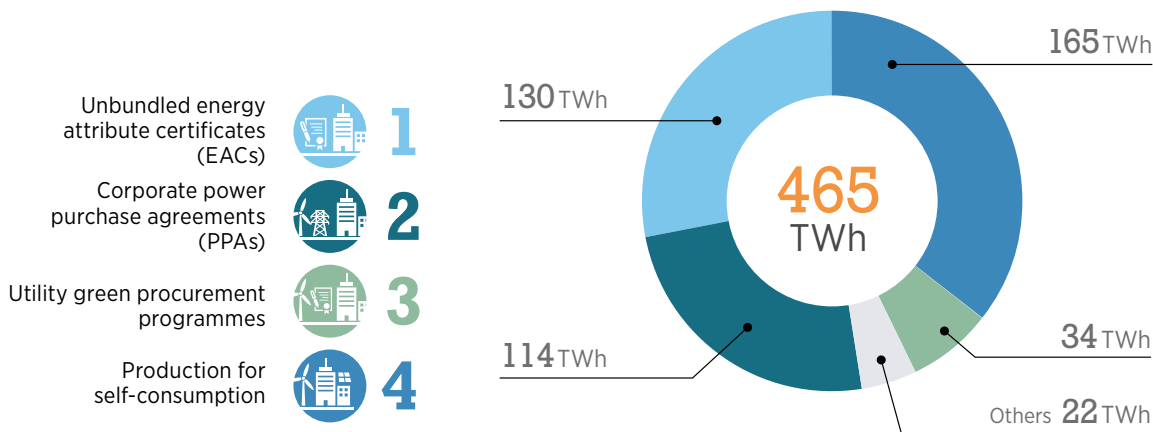
Disclaimer: The boundaries and names shown on this map do not imply any official endorsement or acceptance by IRENA. The term “country” as used in this material also refers, as appropriate, to territories or areas.

75
 countries have PPAs, utility green procurement programmes and/or unbundled EACs

02 The world market for corporate sourcing of renewables in 2017 reached about 465 terawatt-hours, placing it close to France's overall electricity demand.

Active corporate sourcing of renewable electricity reached 465 terawatt-hours (TWh) in 2017, representing approximately 3.5% of total electricity demand in the Commercial & Industrial sector, and 18.5% of total renewable electricity demand in the Commercial & Industrial sector (see Figure ES.1). Production for self-consumption is the most common sourcing model, followed by the purchase of unbundled energy attribute certificates (EACs) and power purchase agreements (PPAs).

Figure ES.1. Global corporate sourcing of renewable electricity by sourcing model



Ventikas 252 MW wind farms in Mexican state Nuevo Leon, of which cement manufacturer CEMEX is acquiring 25% of the generation for a period of 20 years.



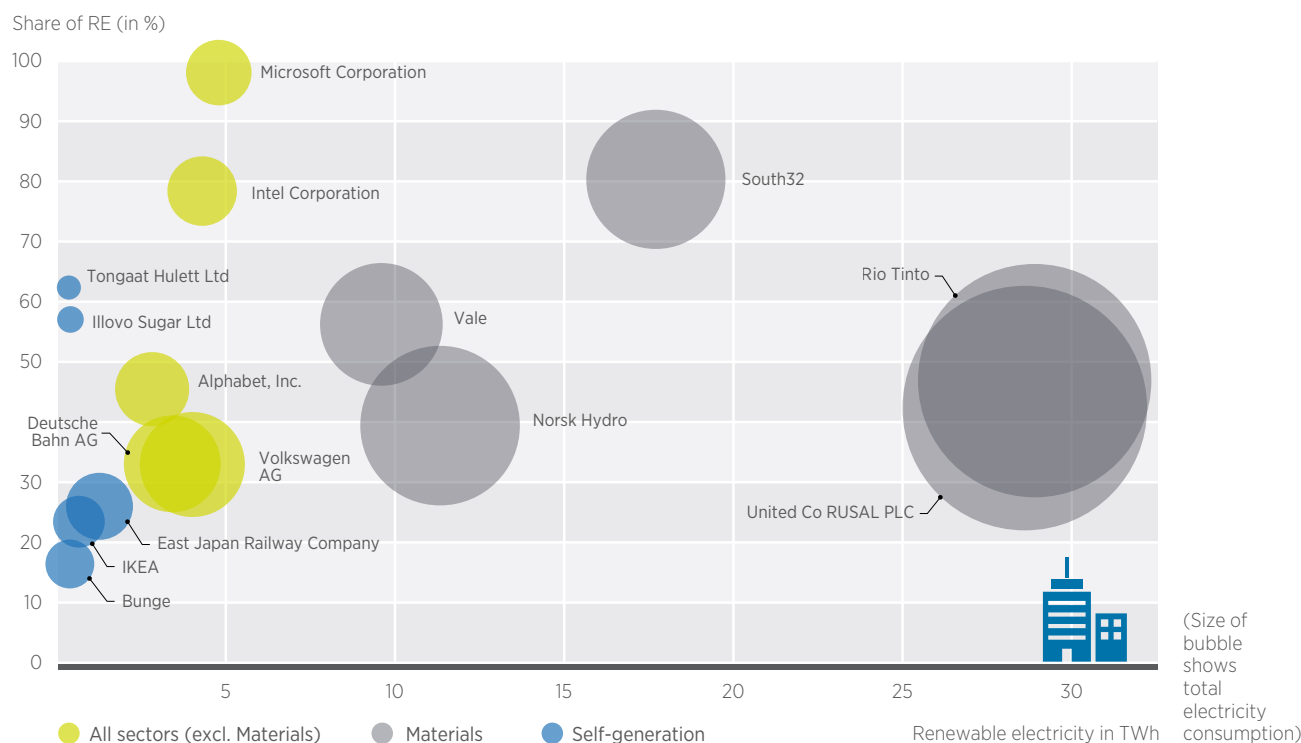
Source: CEMEX

03 Companies sourcing renewable electricity come from various sectors, demonstrating that the trend is widespread and dynamic.

According to the data from 2 410 companies analysed, about 200 companies reported that more than half of the electricity they consumed was sourced from renewables; 50 companies reported a share of 100%.

Companies sourcing renewable electricity come from a diverse set of sectors and geographic areas. By volume, the majority of renewable electricity was consumed in the Materials sector (165 TWh), which includes mining, pulp and paper, and chemicals (see Figure ES.2). The highest shares of renewable electricity consumption are found in the Financial (24%) and Information Technology (12%) sectors.

Figure ES.2. Major consumers and self-generators of renewable electricity (by volume)



Note: The information in the figure is based solely on data reported by each company in 2017. Accordingly, the amount of electricity from renewable sources generated or consumed by any given company may have changed since the data were reported.

Disclaimer: The presentation of material in this figure does not imply the expression of any opinion whatsoever concerning the company, including but not limited to any endorsement of or preference for the company relative to other companies that are not mentioned.

04 Corporate demand for renewable electricity has the potential to drive investment in renewables and accelerate the global energy transformation.

Companies in the Commercial & Industrial sector account for about two thirds of the

world's end-use of electricity. As their demand for renewable energy increases, they have the potential to play an important role in driving investment in renewables and contributing to global climate objectives. IRENA analysis projects that to achieve a global energy transformation that can deliver on the climate objectives set in the Paris Agreement, the

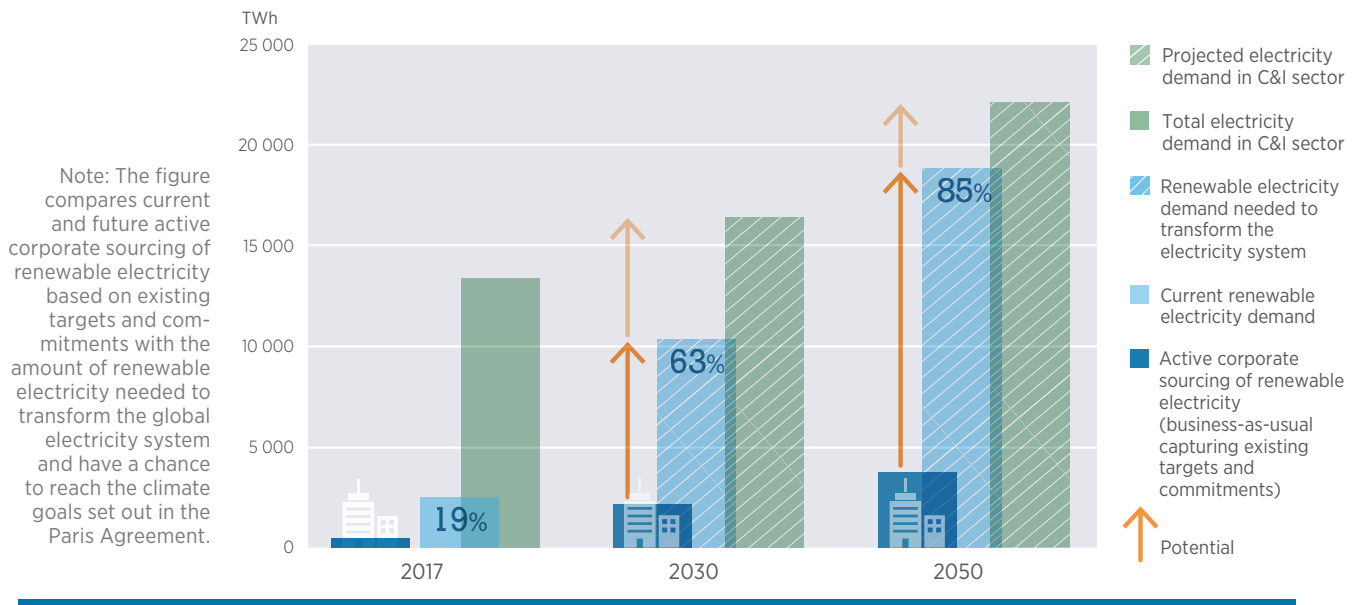
111
companies have reached 85-100% renewable electricity

overall share of renewables in total electricity use would need to reach at least 85% by 2050, which translates into 19 000 TWh for the Commercial & Industrial sector. In the current trajectory, corporate global demand for renewable electricity will grow to at least 2 150 TWh by 2030 and 3 800 TWh by 2050 (see Figure ES.3). This would correspond to only 20% of the required renewable electricity demand in the Commercial and & Industrial

sector in 2050, still not of the growth rate required. More than 111 companies have reached levels of in between 85-100% of renewable electricity sourcing, showing that high ambitions and significant acceleration of uptake is feasible.

To enable the full energy transformation, corporate renewable energy sourcing will need to go beyond the electricity sector and focus on all end-uses as well as energy efficiency measures.

Figure ES.3. Potential for corporate sourcing of renewable electricity in the Commercial & Industrial sector



05 Although more than half of the analysed companies source renewable electricity, only 17% have a target in place. Significant potential exists to strengthen corporate renewable electricity commitments.

17%
of companies have renewable electricity targets in place

Setting a specific renewable electricity target is still uncommon among companies. Although almost half of the companies analysed are actively sourcing renewable electricity, only 17% reported having a target. While only a relatively low number of companies are committing to a renewable electricity target, many more have actually set emission

reduction targets. Of the existing renewable electricity targets, three quarters are short-term and will expire before 2020. This presents a significant opportunity to strengthen corporate ambitions in the years to come. Half of the companies that have a target in place have committed to sourcing more than 80% of their electricity from renewable resources. In addition to environmental and social benefits, such as cutting emissions and promoting corporate social responsibility, the economic benefits of sourcing renewables may also include cost savings, long-term price stability, security of supply and the possibility of new business opportunities.

Recommendations

To enable the energy transformation, corporate sourcing of renewables will need to be scaled up. This requires a broader participation of companies of all sizes to:

- » Establish, revise or increase their current corporate sourcing ambitions to accelerate the decarbonisation of their operations.
- » Raise their efforts to support projects that trigger additional investment in renewable energy.



Corporate sourcing of renewables will realise its full potential through long-term, stable and predictable policy frameworks. Already light policy adjustments can stimulate a rapid market pick-up.

While many countries have in place at least one option for companies to source renewables, there is ample scope for improved enabling frameworks to ensure that rising demand is translated into additional installed renewable electricity capacity. The strength and potential of corporate sourcing lay in the fact that relatively few and cost friendly policy adjustments can induce a quick increase in corporate procurement of electricity, both in vertically integrated and liberalised energy markets. IRENA's 2017 country survey indicates that a large majority of governments have not yet included or specifically addressed the potential of corporate sourcing of renewables in their energy strategies and policies. To fully capture the potential, governments may wish to:

» **Support an effective system for issuing and tracking of energy attribute certificates, enabling companies to make credible renewable electricity use claims.** An energy attribute scheme is crucial to support renewable electricity sourcing whether through PPAs, utility purchases, unbundled certificates or direct investment in self-generation. A transparent tracking system clarifies origin and ownership.

- » **Ensure an energy market structure that allows for direct contracting between companies and renewable energy developers.** Increasingly popular corporate PPA deals thrive in markets which allow for direct contracts between companies and energy developers. Additional market conditions enabling the participation of companies of all sizes in the energy market include clearly defined grid transmission policies with priority access for renewables, as well as retail rates which closely track wholesale rates.
- » **Work with utilities or electricity suppliers to provide corporate renewable procurement options.** Retail access and the tailoring of retail products to the specific needs of companies is a key enabler for increasing corporate renewable procurement. In vertically integrated markets, where direct trade is not an option, governments can encourage longer-term contracts (PPAs or so-called green tariff programmes) directly between the corporate buyer of electricity and the utility.
- » **Stimulate direct investments in corporate production of renewable electricity for self-consumption.** Key policies to drive self-generation include clear and efficient interconnection and permitting practices, and, in the case of off-site projects, the ability to carry electricity to where it is needed. A mechanism to feed excess electricity into the grid, e.g. through a net metering/net billing scheme, may encourage direct investments in particular among small and medium-sized enterprises.



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