

SOLAR'S MOST TRUSTED



REC GROUP CSR REPORT 2020

TIME TO SWITCH TO
RESPONSIBLE SOLAR ENERGY



INTRODUCTION

Solar energy is booming worldwide at double digit growth rates. The drivers for this increased uptake are technology innovations and lower costs – but also, increasingly, greater awareness worldwide of sustainability issues, particularly since COVID-19.

The world is changing. We are on the threshold of leaving the fossil fuel age behind – and solar is playing a key role in the transition to renewable energy sources. Solar power has long since become competitive. In many places, grid parity can already be achieved without funding.

Technological leaps and growing awareness

There is also more awareness for sustainability issues within the political arena. With the European Green Deal, the EU has set itself the ambitious goal of being the first continent to be climate-neutral by 2050. The USA has returned to the international stage in the fight against climate change. The COVID-19 pandemic also shows how quickly climate targets can be achieved if environmentally damaging processes are scaled down.

»As the solar industry grows in importance, so does its responsibility to be more sustainable«

However, with the solar industry playing an ever-growing role in the power mix worldwide, it bears greater responsibility to be even more sustainable, not just in terms of energy generation, but also at the manufacturing stage. Not every solar panel is equally sustainable in terms of how it is produced. Therefore, a greater focus on corporate social responsibility is required to achieve a more sustainable environmental footprint at every stage in the solar value chain, from sourcing through to manufacturing and disposal.

In this report on our corporate social responsibility for 2019 – 2020, REC Group presents a comprehensive and transparent overview of our contribution. The report is structured according to the core subjects defined in standard ISO 26000, which provides holistic guidance for corporate social responsibility reporting.



Steve O'Neil, CEO REC Group March 2015 to February 2021.

WHO WE ARE

Founded and headquartered in Norway, REC is a pioneering solar energy company – and a truly global brand.

Since its foundation in 1996, REC has come a long way – from hand-washing its first wafers to becoming a leading international solar energy company using Industry 4.0 practices. Our history is almost as old as the industry itself. By the end of 2019, REC had produced around 38 million solar panels, with a total installed capacity in excess of 10 GW: enough to supply more than 16 million people with clean energy. Today, we have 1,600 employees around the world. Our annual production capacity of solar modules is 1.5 GW.

»Our mission is to empower people with clean, affordable solar energy through innovative technology«

Photovoltaics is our business

REC produces reliable, high quality solar modules, as evidenced by the low claims rate of the products. Of four million modules produced every year, only around 400 have to be returned. In the unlikely event of a defective product, REC follows proven processes to resolve the problem quickly, in line with our comprehensive REC ProTrust warranty package.

Our solar panels have won multiple industry awards, including the 2020 Intersolar award for our REC Alpha Series. The REC Alpha Series provides a leading power density based on advanced heterojunction cell technology (HJT), and features our patented split cell and junction box technology, packed into REC's Twin Design.

We define quality more broadly

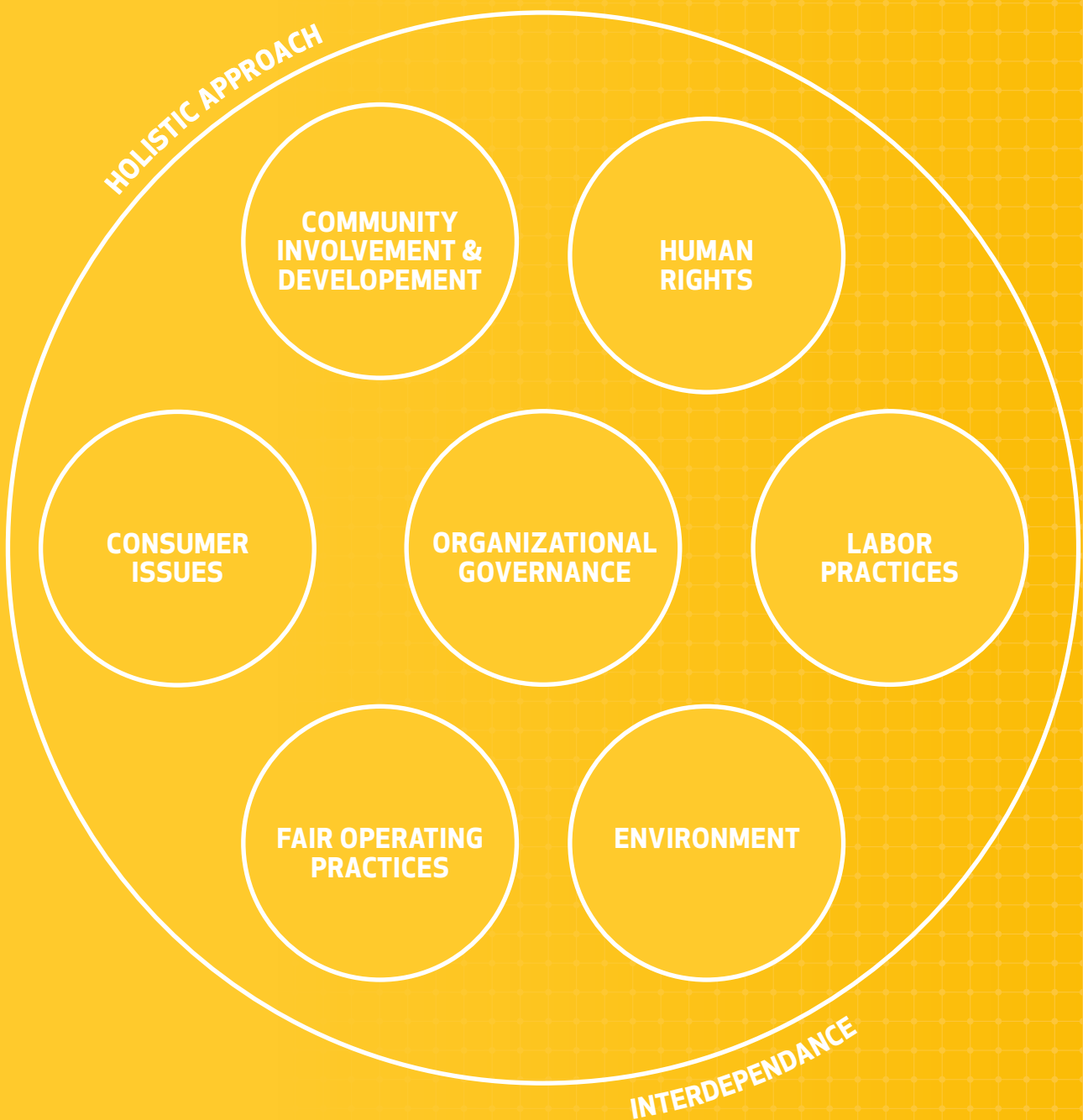
Our focus on sustainable innovation and quality embraces not only technology, but also the entire value chain, from sourcing and production through to disposal of solar panels at the end of their service life. Sustainability is key to our Code of Conduct, and our entire senior management is committed to upholding these principles in all business activities.



ISO 26000

SOCIAL RESPONSIBILITY CORE SUBJECTS

We want to provide as complete a picture as possible of our practices and principles concerning social responsibility. REC reports in alignment with the core subjects defined in ISO 26000, the international standard that provides guidelines for corporate social responsibility.



REC GROUP CSR KEY FACTS

As the solar industry grows in importance, so does its responsibility to be sustainable. Since its foundation, REC has aimed to empower people with clean, affordable solar energy while upholding responsible, sustainable business practices. In line with this understanding of corporate social responsibility, we report on our activities and achievements in each of the core subject areas defined in the standard ISO 26000.

Improvements 2019:



Human Rights:

REC continues to refrain from any business activities that might compromise human rights or involve child labor, prison labor or forced labor.

Supplier audits: **43 (+80%)**

No violations identified of CSR or HSE principles, or of human rights or labor practices.



Labor Practices:

In all HR management practices, REC is committed to diversity and equality, irrespective of gender, age or qualification, as well as to employee safety.

Female employees: **30% (+/- 0)**

In line with our aim of zero HSE incidents, REC immediately put in place strict COVID-19 Safe Management Measures at the start of the pandemic.



Environment:

REC continued to reduce the environmental footprint of its production by saving more resources and increasing circular production thanks to innovations.

Process water*: **1,197,079 m³ (-41%)**

Energy use*: **160 GWh (-23%)**

Yearly recycled scrap module rate* **100% (+/- 0)**

REC's Kerf Recycling innovation at the silicon production site in Norway further reduces the carbon footprint to **6-7 kg CO_{2-eq} / kg silicon** (-95% vs standard Siemens process by Chinese suppliers).



Fair Operating Practices:

REC does not conduct any business with countries that are subject to sanctions

(39 countries in total).

Non-compliance with REC's Trade Controls Policy: **0 identified.**



Consumer Issues:

Installed REC solar panels:

10GW (+14%)

Generated clean solar energy:

3TWh per year

Empowered people: **16+ million**

Avoided CO₂ emissions:

9 million t per year



Community Involvement and Development:

REC is strongly committed to social responsibility, also beyond our company, and is engaged in numerous community projects worldwide.

6 community projects worldwide (+200%).

*in Singapore

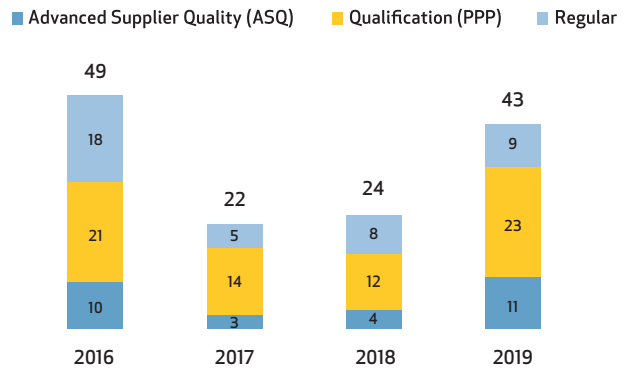
HUMAN RIGHTS

Efficiencies in production and sourcing are key to module prices. However, REC also pays close attention to the conditions under which employees work - also at our upstream suppliers.

To be globally competitive, any manufacturer has to keep a keen eye on costs. For REC, this never means exploitation of employees. Human rights violations are however an issue in many manufacturing industries worldwide, including solar. REC abstains from any business activities that might compromise human rights, or which involve child labor, prison labor or forced labor. We manufacture mainly in Singapore, and also in Norway. Both countries have strict human rights laws, which REC of course follows.

Supplier audits

We also expect high standards from our upstream suppliers and undertake regular audits. The audits examine labor practices, working conditions and HSE management systems at supplier companies, as well as their observance of human rights standards. In 2019, REC conducted a total of 43 supplier audits, including of 11 new suppliers and 23 major changes of materials. The audits revealed no deviation from our high standards.



Number of supplier audits performed annually. Zero non-conformance identified in suppliers' CSR & HSE management system.

Responsible employee management practices

We operate responsible employee management practices to develop talent and ensure equal opportunities. We take complaints seriously, promote retraining and have measures in place to reintegrate older people into the workplace. Job security is provided through fair contracts. REC is committed to empowering women and all employees, regardless of gender, age or qualifications.



LABOR PRACTICES

The COVID-19 pandemic brought crisis and upheaval all over the world. However, it has also been an opportunity for a fresh look at how - and where - we work.

Protecting employees

When COVID-19 struck, many companies operating strict on-site-only working policies struggled to respond quickly. At REC, staff safety comes first. REC's responsibility toward its employees includes carefully designed workplaces (on-site and mobile) and support for flexible working. Through our flexible REC@Home initiative, we quickly installed a full functioning remote working infrastructure, encouraging and enabling staff to work safely from home while staying connected with colleagues. Additionally, because not all jobs can be performed from home, comprehensive safety and security policies were also developed and put in place to protect employees working on site.

Social responsibility means trust

With the right technology and security, many tasks, even entire processes, can be completed without people coming to the office. However, it is also a matter of companies trusting their employees to get the job done wherever they are - and also of helping people achieve a better work life balance through the option of working from home.



The solar industry is full of amazing women making technology revolutions possible and driving the global energy transition. At REC, we are celebrating their stunning work.

ENVIRONMENT

WATER, ENERGY AND WASTE MANAGEMENT

Process water: use less, reuse more

REC is committed to responsible use of the water required for production (process water). We have put measures in place to continuously reduce our consumption, and also to treat as much water as possible for reuse. We recycle the water from our cooling towers, reuse treated wastewater and also harvest rainwater for use in our plants.

Process water use*	
Year 2019	1,197,079 m ³
	- 41% compared to 2018

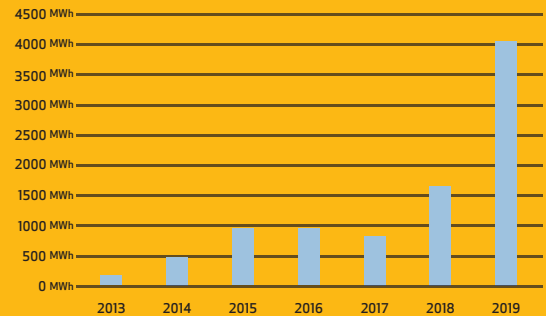
Energy savings

We constantly monitor our workflows and manufacturing processes to identify potential energy savings and thereby reduce our own energy consumption. Initiatives in 2019 included conversion of lighting to LED, and pump conversions for cooling towers.

Energy use*	
Year 2019	160,033,666.96 kWh
	- 23% compared to 2018

PV installation at REC in Singapore

REC generates energy through our own rooftop solar installations, reducing our energy consumption and our own carbon footprint. To date, around 3,000 kWp of REC solar panels have been installed at our production site in Singapore. In 2019, the rooftop installation at our Singapore factory generated approximately 4,000 MWh, well over double that of 2018.



MODULE RECYCLING

Since 2014, the year after the REC recycling program for scrap solar modules was launched, REC has achieved a recycling rate of 100 percent. Based on the long lifetime of REC solar panels – 25 years and more – the scrap rate is low, averaging out at 0.5 percent of production.

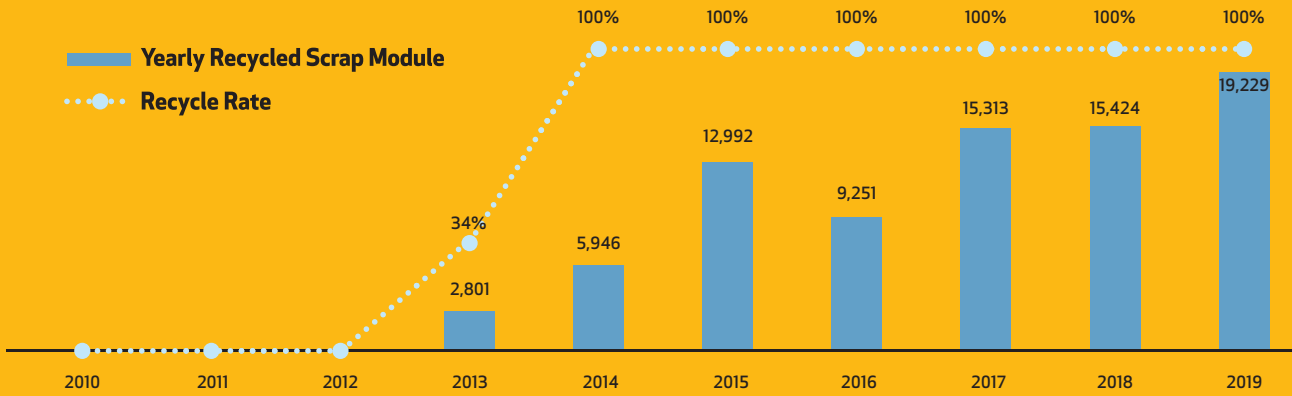
REC retrieves the following materials from module recycling:

- aluminum (from frame)
- silver (from the cell)
- copper (from cables, connections and ribbons)

Recycling requirements differ from country to country. REC acts in accordance with local regulations in its key markets. In Europe, for instance, we partner in the “take-e-away” program, which offers businesses easy solutions for WEEE.

*in Singapore

Yearly Recycled Scrap Module

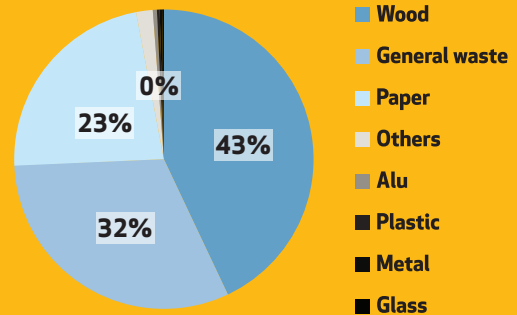


We differentiate and separate waste to achieve maximum recycling of reusable materials.

Non-hazardous waste

Non-hazardous recyclables include glass, metal, aluminum, paper, wood and plastics. In 2019, we achieved an average recycling rate of recyclable materials of 69 percent.

Non-hazardous waste



Non-hazardous waste*	
Year 2019	5,337 tons
+8.7% compared to 2018	

Hazardous waste

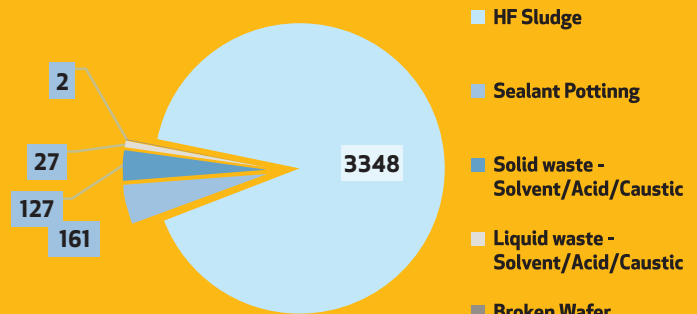
The largest category of non-recyclable waste is HF (Hydrogen Fluoride) sludge, a byproduct of cell production which is sent for landfill. Our focus here is on efforts to continue to reduce this waste.

Move Forward plan for hazardous waste reduction program

We maintain close ties with research and science institutions. Our Move Forward Plan includes research on the following topics:

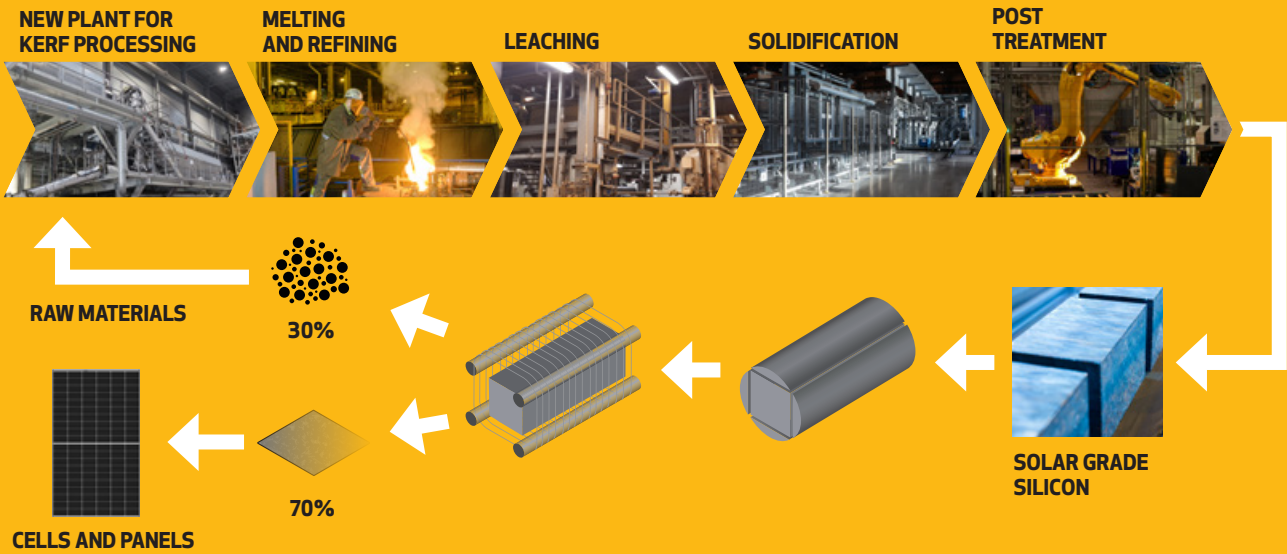
1. Reducing sludge from HF wastewater treatment
2. NEA and EDB support to reduce hazardous waste generation
3. Study on new treatment technologies

Hazardous waste (Ton)



HF Sludge*	
Year 2019	3,348 tons
+22.6% compared to 2018	

REC'S NEW E2M PROCESS



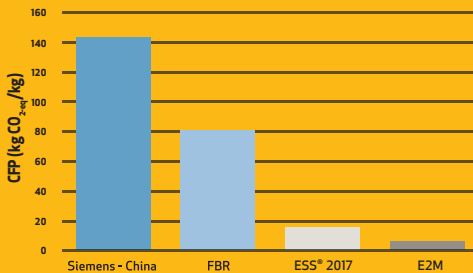
Innovation is in our DNA. The global energy transition cannot progress without new resources and technological leaps. This also includes the efficient use of raw materials and their reuse in a Circular Economy.

REC not only manufactures solar panels, but also all of their main components, such as silicon, wafers and cells. A problem with the production of wafers from solar silicon is the waste. During the standard wafer slicing process, around 30 percent of the silicon remains as “waste”, or kerf.

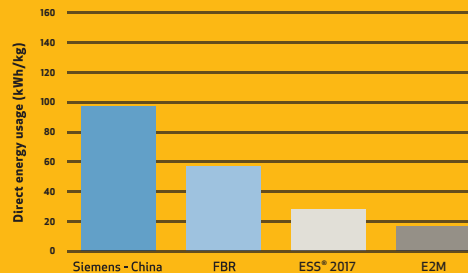
Kerf upcycling

REC is the first and to date only solar panel manufacturer worldwide to embark on the next big innovation to further reduce energy consumption and carbon footprint: Kerf upcycling.

REC has invented a unique new kerf processing technology which makes it possible to fully upgrade this otherwise wasted silicon material to a quality level which can be easily reused in wafer and solar panel production. Compared to the conventional Siemens process used by the majority of the industry players, mainly in China, we can drastically reduce energy consumption and the carbon footprint to 6-7 CO_{2-eq}/kg.



96% lower carbon footprint



85% lower energy consumption

What makes REC's Kerf innovation so important here:

- Circular and Low Carbon Footprint production of Solar Grade Silicon is set to become a key differentiator for solar panel brands.
- Silicon is the most energy intensive step of manufacturing solar panels, therefore an improvement here has the highest potential for an impact.
- Through this innovation, REC will be able to achieve a further 60 percent reduction in the carbon footprint of our silicon production.
- Considering the huge amount of kerf generated in silicon production worldwide, this recycling is not only an important innovation for REC, but also for the entire solar industry.

FAIR OPERATING PRACTICES

We also convey our values in international relationships. We do not conduct business with countries, organizations or persons that are subject to sanctions or selective sanctions.

We examine possible transactions or partnerships with regard to sanctions as published by the US (OFAC), the UN and the EU as well as other countries (e.g. UK). We operate a Trade Controls Policy which is strictly followed. Sanctioned countries are listed, updated and communicated periodically within REC in our policy.

We absolutely refrain without any exception from dealings with "red category countries" according to our Policy, which are for 2020: Cuba, Iran, North Korea, Sudan, Crimea Region of Ukraine, and Syria. For all other sanctioned countries (for example Afghanistan, Lebanon, and Venezuela), we have installed an Approval Committee headed by the CEO, CFO and Chief Legal Officer, which would have to approve deals in such countries, and only after clearance by a third-party screening (e.g. Designated Person Lists). Such approvals are granted only in exceptional cases (between 1-3 per year maximum).

Fair advertising & promotion

On the sales side, we implemented standards and policies for advertising and promotion in May 2020, and continue to develop these policies. They serve as guidelines to prevent unfair competition and unfair sales promotion.



CONSUMER ISSUES

The global energy transition to renewables is certainly a question of technology and affordability. But it is also a question of credibility and leading by example.

With 10 GW of REC solar panels installed worldwide by the end of 2019, we are empowering more than 16 million people with clean renewable energy. The modules generate a total of 13 TWh of solar energy every year and they make it possible to avoid 9 million tons of CO₂ emissions annually.

These figures result from a large number of individual projects around the world that we have been able to realize in the past years. Alongside large-scale flagship projects, such as the 4.5 MWp system at Arizona Veterans Hospital (USA), REC solar panels also power numerous smaller installations that are equally impressive – such as the 38 kWp system on Gloucester Cathedral (UK). This demonstrates how flexibly REC solar panels can meet energy needs.

In each of these lighthouse projects, REC operates clear procedures on social responsibility – also paying attention to the credibility of suppliers and project developers in terms of their CSR balance sheet.

Fair business relationships

When it comes to selecting partners and suppliers, we look for companies with a good record on sustainability – although companies operating in the solar industry are more likely to have these credentials. We are looking for companies whose values are in line with our mission to deliver clean energy. We focus on long-term, sustainable and fair business relationships, fostered through our Channel Programs worldwide. These programs continued to grow worldwide in 2019. By yearend, we had gained 12 new partners globally, bringing the total to 58, and had trained 318 new REC Certified Solar Professionals.

REC standards are:

- Fair, factual and unbiased marketing
- Comprehensive and convenient Installation manuals to ensure health and safety
- Training through the REC Solar Professional program
- Customer service throughout the entire life cycle
- REC Code of Conduct to Ensure Compliance
- Protection of customer data
- High customer satisfaction based on low claims rate and short process cycle times



COMMUNITY INVOLVEMENT & DEVELOPMENT

Following through on our commitment to social responsibility, also beyond our company, REC supports numerous community projects and initiatives around the world.

In 2019, we began a partnership with the Honnold Foundation, a solar energy foundation launched by the famous environmentalist and climber Alex Honnold to promote solar for a fairer world. The first Honnold Foundation project was launched in August 2019 to provide solar power to a low-income community in Detroit, Michigan, USA. In the first step we donated 50 kW of REC Alpha solar panels, enough to meet the energy needs of ten families and offset 50 percent of their energy bills.

We support projects like this – often very small-scale initiatives – all over the world. In India, we cooperated in a project to bring solar power to remote Himalayan villages. On our own doorstep in Singapore, we support the Seletar Aerospace Park.

REC also supports initiatives to educate the young generation: in February 2019 we organized a talk with students at Nanyang Technological University (NTU) in Singapore on “Go Green and Sustainable”, and in May 2019, we hosted 12 NTU & NUS students for a career discussion.



© Global Himalayan Expedition



Honnold Foundation project in Detroit, Michigan, US



Habitat for Humanity is a global non-profit housing organization working in local communities across all 50 states in the USA and in approximately 70 countries. Habitat’s vision is of a world where everyone has a decent place to live.



The Honnold Foundation, founded by professional climber Alex Honnold in 2012, envisions a world where all people have equal access to opportunity and live in balance with the environment. Honnold believes in solar as a proven, environmentally sound solution to global energy poverty.



Seletar Aerospace Park is Singapore’s first industry community greening initiative.

CONCLUSIONS & OUTLOOK

Organizational Governance - REC's CSR Management System						
Core Subject	Human Rights	Labour Practices	Environment	Fair Operating Practices	Consumer Issues	Community Involvement
Key Results 2019	<ul style="list-style-type: none"> Fair treatment before, during and after employment 	<ul style="list-style-type: none"> 24 supplier audits 0 deviation 	<ul style="list-style-type: none"> Water: 1,197,079 m³ Electricity: 160 GWh PV: 4 GWh Sludge: 3,348 tons 	<ul style="list-style-type: none"> Updated data protection regulation under EU and Sing laws 0 deviation due to new IT measures 0 deviation Trade Control Policy 	<ul style="list-style-type: none"> +7% REC panels sold +12 partners +318 RCSPs <60ppm claims <14d claims process time in 90+% cases 0 counterfeit cases 	<ul style="list-style-type: none"> Honnold Foundation Habitat for Humanity Greening our Workplace IEEE Smart Village
Key Targets 2020	<ul style="list-style-type: none"> Talent pipeline Employees participation in CSR activities Re-employment, Reskilling policies 	<ul style="list-style-type: none"> Supplier quality manual addition to include CSR / Sustainability 	<ul style="list-style-type: none"> Water: 1,100,000 m³ Electricity: 160 GWh PV: 4 GWh Sludge: 3,000 tons 	<ul style="list-style-type: none"> Continue and update policies where necessary 	<ul style="list-style-type: none"> Expand customer base for Alpha Keep up low claims rate 50-60ppm 	<ul style="list-style-type: none"> Continue educating communities on solar and climate change and high efficient technology Join forces with customers on CSR activities REConstruct
Challenges	<ul style="list-style-type: none"> Effective delivery of activities, training, communication 		<ul style="list-style-type: none"> HF sludge reduction 		<ul style="list-style-type: none"> Limited internal resources 	<ul style="list-style-type: none"> Limited internal resources
Solutions	<ul style="list-style-type: none"> Using of IT infrastructure for effective communication 		<ul style="list-style-type: none"> Collaboration with NEA & EDB, explore new technologies 		<ul style="list-style-type: none"> B2B2C communication approach Engage external experts 	<ul style="list-style-type: none"> Join forces with REC customers and partners

CSR Reporting

SOLAR'S MOST TRUSTED

