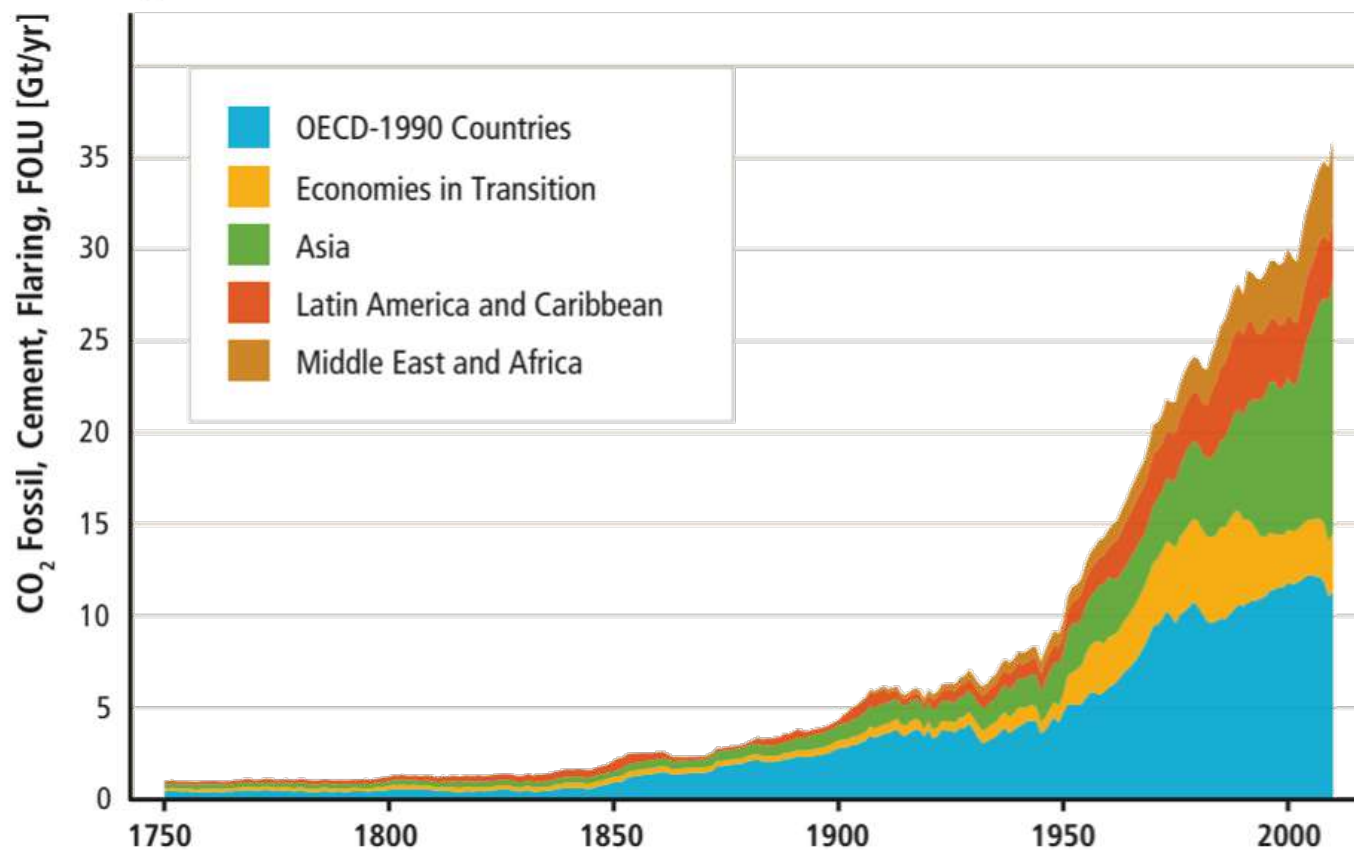


Our 100% renewable energy future



Lasse Bruun, Head of Global Campaigns, CAN international
Japan 2017

Total anthropogenic CO₂ emissions



Our mission is clear:



STOP CLIMATE CHANGE

We need to transition from fossil fuels to 100% renewable energy



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The shift to a 100% RE future is possible. And it's happening.

In 2016, there was **more RE** being installed worldwide (55.3%) **than fossils** or big hydros.

Wind and solar prices went down **more than 17%** in only one year.

And that's not all.

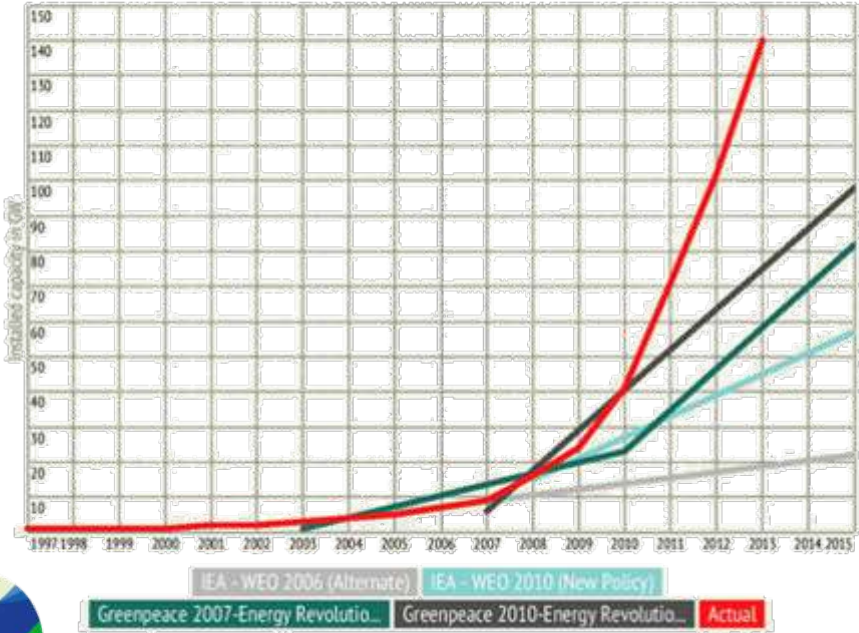


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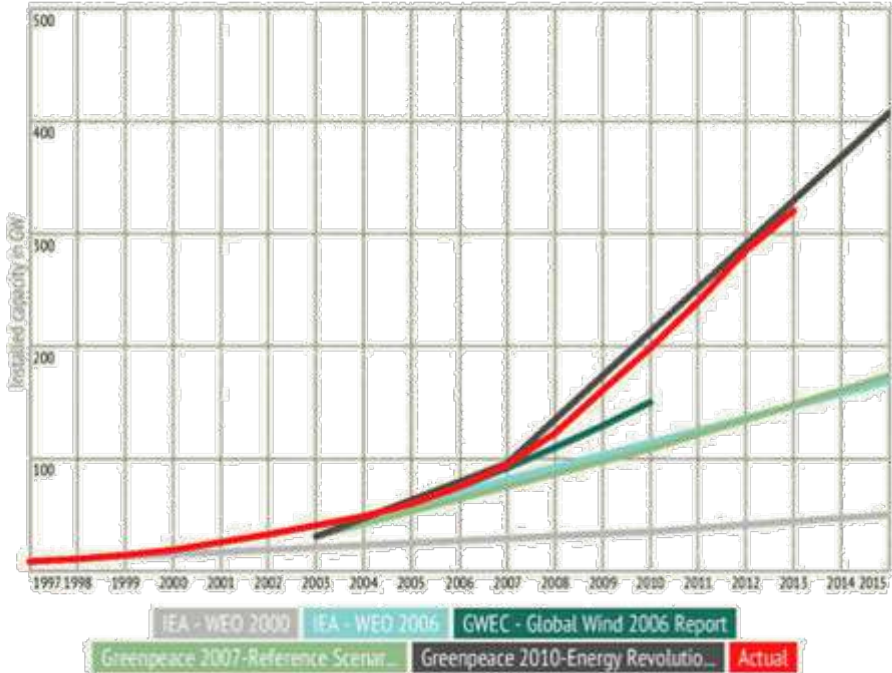
Source: REN 21 - Global Status Report

RE uptaken is happening faster than expected

Cumulative installed solar PV capacity: Global



Cumulative installed wind capacity: Global



Over 55 countries committed to a 100% RE future, and another **140** called for the Paris agreement to limit warming to 1.5°C.

More than **6,000 European cities** have signed up to the Covenant of Mayors, committing to go faster and further than EU climate targets.

And the business sector is leading the way:
more than 100 companies have set 100% RE as a goal.



Some examples:

IKEA: 100% RE before 2020:

IKEA already deployed €1.5 billion into renewable energy projects, and aims to invest another €600 million in solar and wind.



“Electricity and energy are essentially just costs to your business, until you start generating your own when you can turn a cost into a profit center.” (Steve Howard, IKEA’s Chief Sustainability Officer)



Apple: 100% before 2020:

Apple's operations in 24 countries run on 100% renewable power. Worldwide, 96% of its power consumption in 2016 came from RE. Its new campus in the US operates on 100% RE from solar and biofuels.



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BMW: 100% RE before 2020

Nowadays, 50% of the purchased electricity is renewable.

“The BMW Group is continually reducing its energy consumption and is intensifying its efforts to produce more power in-house and to use energy from local renewable sources. The company also actively supports the expansion of renewable energy. This enables us to increase our autonomy and profitability.” (Markus Schramm, Senior Vice President, Corporate Planning and Product strategy)

Influencing business as well: by 2020, the company will reduce the energy used to produce each vehicle by 45%, compared with 2006.



Apple: 100%RE programme in Japan to suppliers

Unilever: 100%RE electricity since 2015

Ricoh: 100%RE by 2050

“As the regional headquarter in the Asia Pacific region, we recognized that business activities depended greatly on natural resources and the global eco systems. We also realized that environmental issues such as global warming and limited natural resources present both risks and opportunities for businesses, so it is important for us to strive for a balance on conservation activities with business sustainability to ensure the betterment of the environment.” (Mr. Kazuhisa Goto, Managing Director of Ricoh Asia Pacific)



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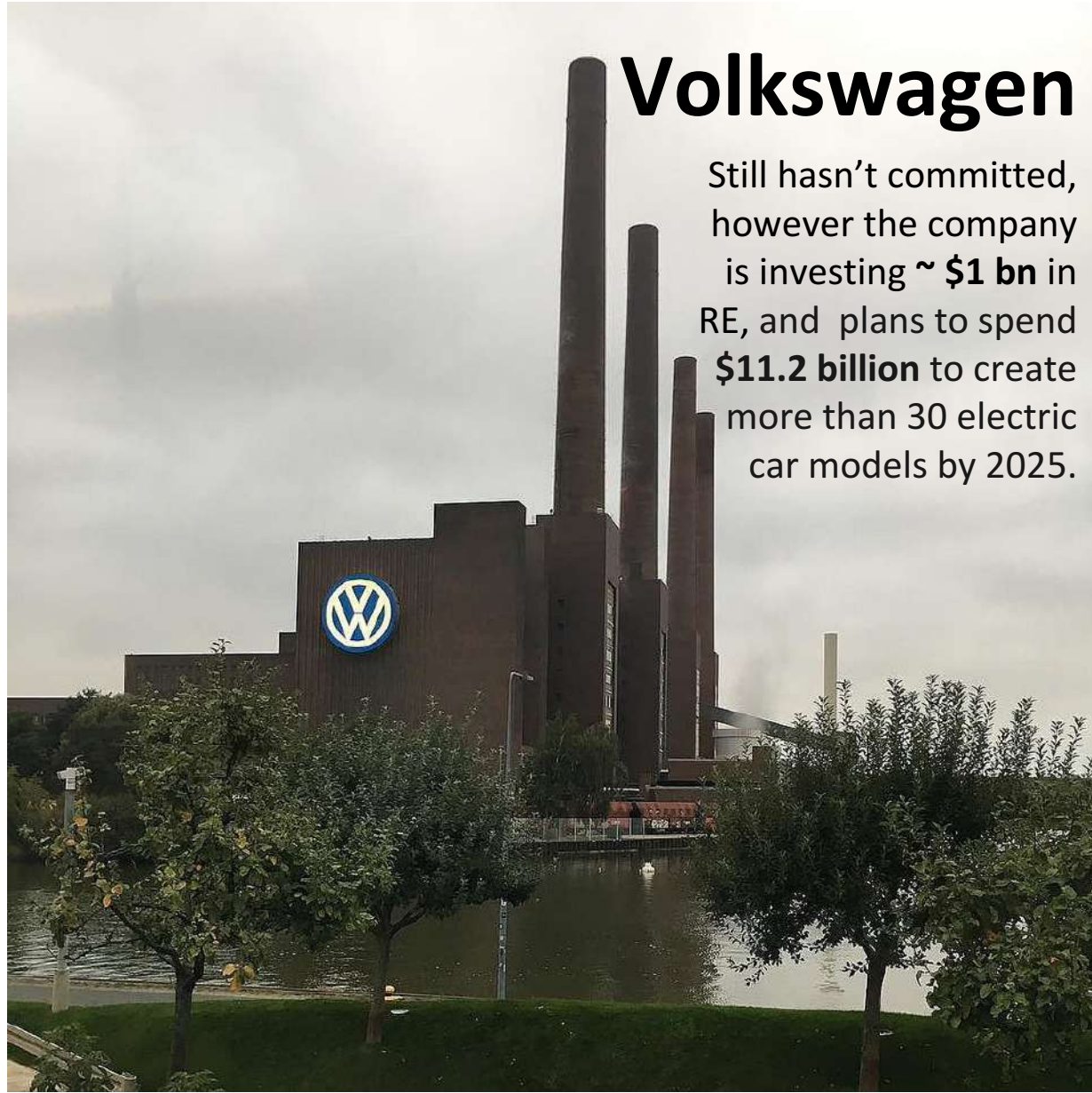
General Motors

100% RE before 2050

Today GM saves \$5 million annually from using renewable energy.


Volkswagen

Still hasn't committed, however the company is investing ~ **\$1 bn** in RE, and plans to spend **\$11.2 billion** to create more than 30 electric car models by 2025.



Telefonica IFF Gatwick Amalgamated Dalmia Cement
 Unilever SGS Heathrow DNB America
 ABInBev Vail Resorts Nike Infosys
 Coca-Cola Relx Group BMW Group La Poste Landsec
 Fia Formula E Tata Motors Philips Helvetia Interface YooNet-a-porter
 Calrsberg Equinix VF Broad-Group SwissRe Diageo
 Adobe Starbucks HP Elion Bankia RE Proximus
 Elopak Steelcase KPN IHS Markit Lego Walmart
 Colruyt Group SAP Ikea Nestle TD Bank Tesco Mars
 H&M ING Apple Pearson
 Nordea CaixaBank Tetra Pak Hewlett Packard Voya J Safra Sarasin
 L'Occitane Axa Novo Nordisk Workday Google Sky
 Ebay Vaisala Biogen Commerzbank Alstria Burberry
 General Motors P&G VMware Ricoh Save BT Bloomberg
 AstraZeneca Danske Swiss post Microsoft
 Dentsy Aegis British Land Autodesk Corbion
 Facebook Marks and Spencer Givaudan Rackspace Kingspan
 Wells Fargo Aviva Royal DSM Goldman Sachs
 UBS AkzoNobel Johnson Johnson
 Credit Agricole





“If 1,000 of the world’s most influential companies became 100% powered by renewable electricity, they could save around 1080Mt of CO2 every year – 3.4% of total global emissions, and more than the emissions of the entire continent of Africa.”

(source: The Climate Group and CDP)

**Business need to
lead the way**

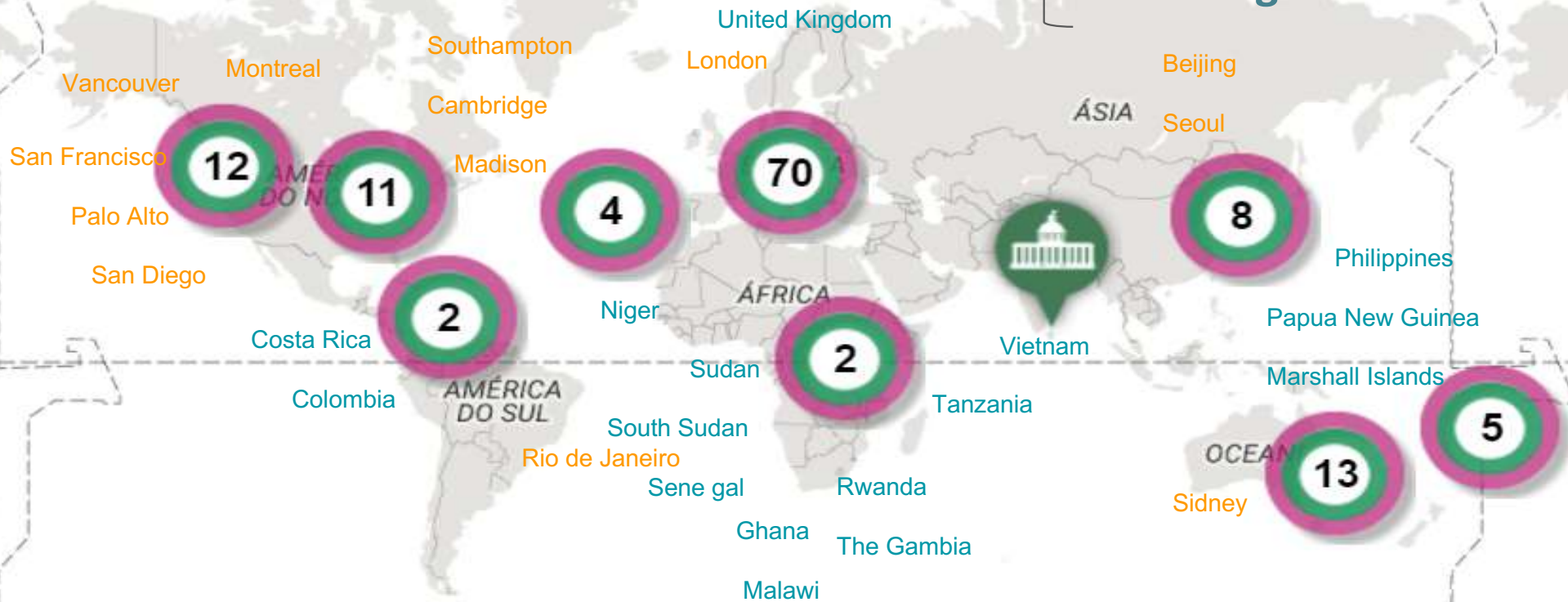


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And so do Governments

Many of them are already committing and taking action:

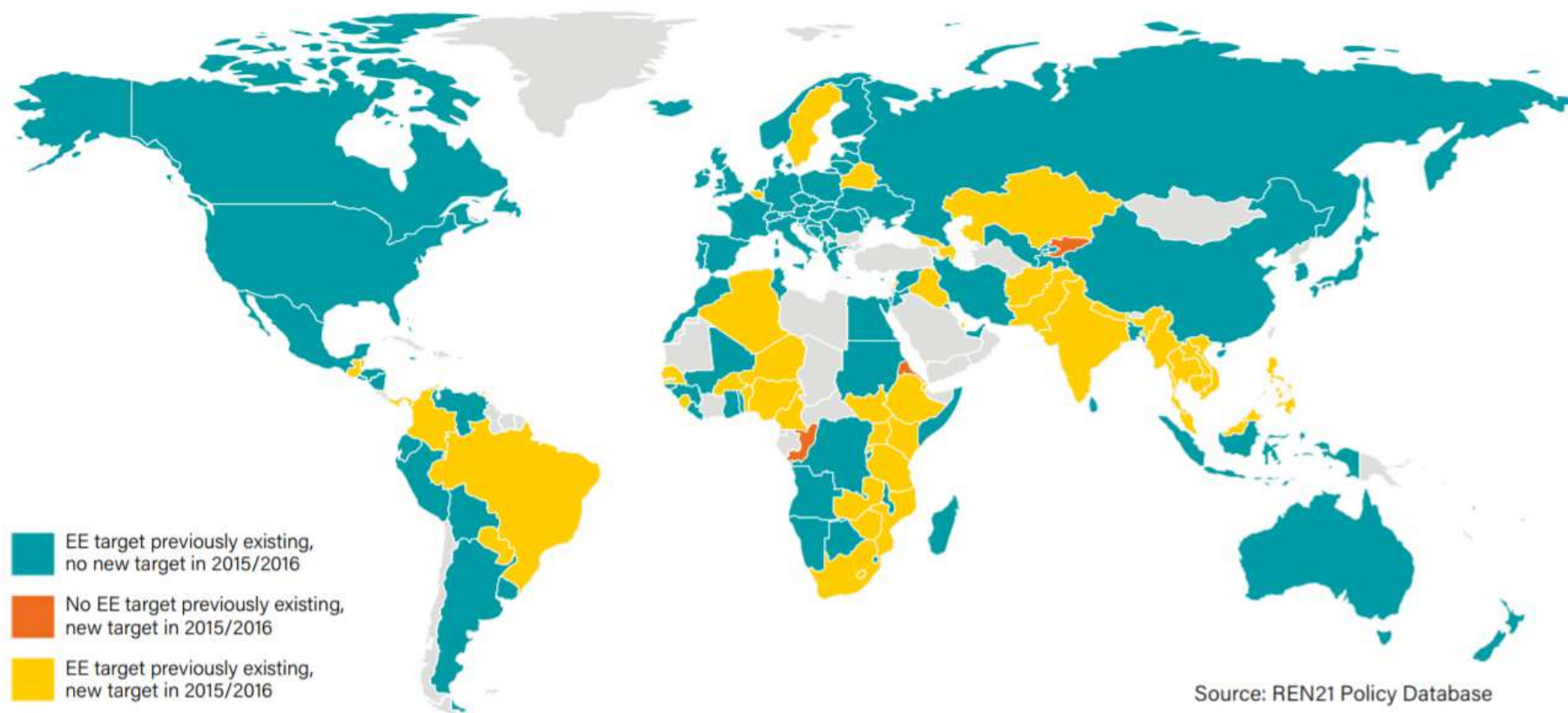


Let's have a look at some examples



Countries with Energy Efficiency Targets

By end-2016, at least 137 countries had enacted some kind of energy efficiency policy, and at least 149 had enacted one or more energy efficiency targets.



United States

2016 was a groundbreaking year for solar: on average, a new megawatt of solar PV capacity came on-line every 36 minutes.

Electric vehicles market had a 32% annual growth over the past 04 years.

In spite of everything, US cities and states are taking action and showcasing how the transition can be done and will benefit society.



“100 by 50 ACT”

Calls for 50 percent of U.S. electricity to be produced by renewable energy sources like wind or solar by 2030, and 100 percent by 2050.

Requires zero carbon emission vehicle standards and prohibit federal approval of oil and gas pipelines, among other measures.



China

installed 64 GW of RE in 2016, totalling also 3.5 million jobs in clean energy.



In January 2017, the country committed with a 20% share of RE in the energy matrix by 2030, and to invest \$367 billion in renewable power by 2020.

However, it's important to remember that, even though 2016 saw a 25% decline in commissioning of new coal-fired plants, coal still makes up the largest part of China's energy consumption.

Vancouver

In 2015, the city with 600,000 habitants committed to run on 100% RE - being currently at 38%.

Among actions being taken are:

Government built a heating system that operates with sewage heat (instead of natural gas) and supplies an entire neighborhood. Downtown, they are trying to convert an old system that heats over 200 buildings to biomass. In transportation, the largest smart-bike (1,500) system in North America is being developed.



Nordic countries

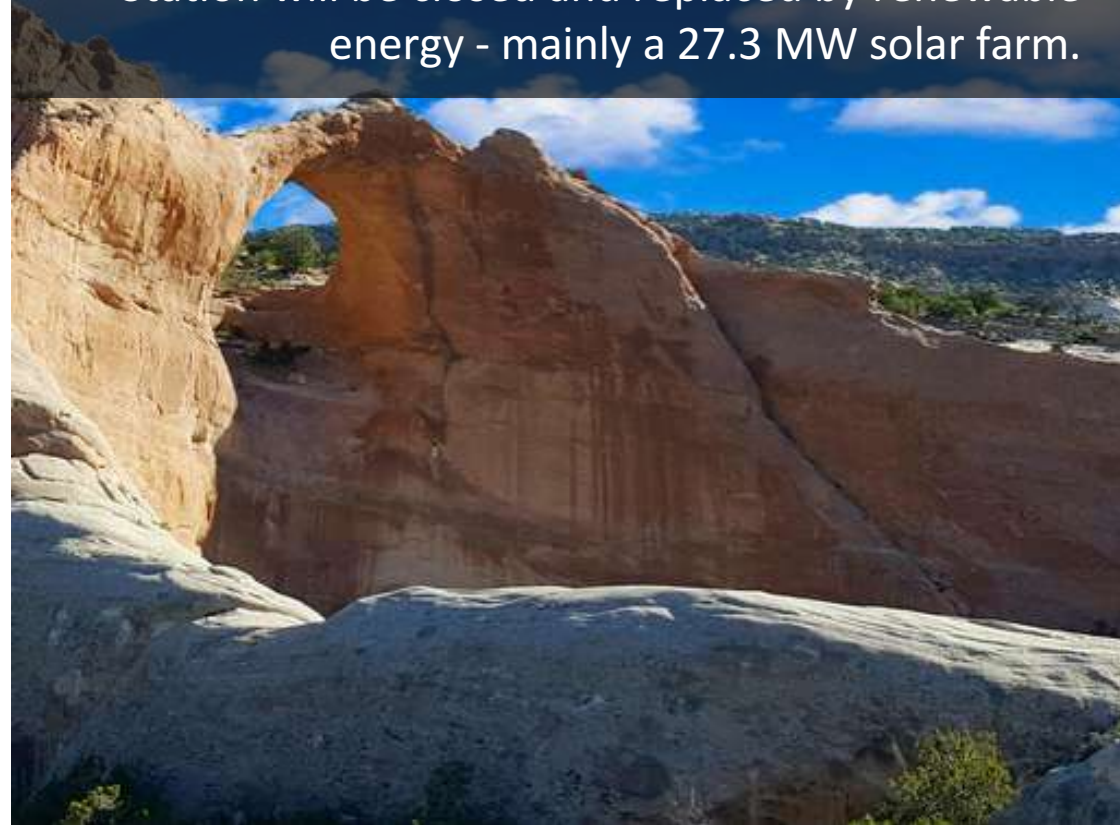
Denmark, Norway and Sweden are committed to 100% renewable energy use. Finland has a 80% target, and Iceland a 50–75% one.



“The Nordic countries demonstrate the reliability and positive cost balance of renewable and low-carbon energy systems: total estimated cost of the Nordic energy transition is roughly \$357 (€318) billion, less than 1% of cumulative GDP over this period — and almost all of the costs will be offset by fuel savings.”
(IEA & European Commission report)

Navajo Nation

7,700 homes will be powered by solar energy in 2019, when the coal-fired Navajo Generating Station will be closed and replaced by renewable energy - mainly a 27.3 MW solar farm.





Climate Vulnerable Forum

Afghanistan, Bangladesh, Barbados, Bhutan, Burkina Faso, Cambodia, Comoros, Costa Rica, Democratic Republic of the Congo, Dominican Republic, Ethiopia, Fiji, Ghana, Grenada, Guatemala, Haïti, Honduras, Kenya, Kiribati, Madagascar, Malawi, Maldives, Marshall Islands, Mongolia, Morocco, Nepal, Niger, Palau, Papua New Guinea, Philippines, Rwanda, Saint Lucia, Senegal, South Sudan, Sri Lanka, Sudan, Tanzania, Timor-Leste, Tunisia, Tuvalu, Vanuatu, Viet Nam and Yemen.



Historic commitment at COP22 by the CVF for stronger climate action, including 100%RE



Just like business,
countries and cities,
investors are also
shifting to 100% RE.

“Investor hunger for what many regard as mature technologies helped to fuel record acquisition activity in the clean power sector worldwide last year, **totalling \$110.3 billion, up 17%**. Purchases of assets such as wind farms and solar parks reached a highest-ever figure of \$72.7 billion, while corporate takeovers reached \$27.6 billion, some 58% more than in 2015.” (FS-Unep, 2017)



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Why invest in RE?

Consumers are evaluating and prioritizing companies that are committed to reducing and/or eliminating dependence on fossil fuels.

Government regulations will likely soon have an even bigger impact on companies and their energy usages.

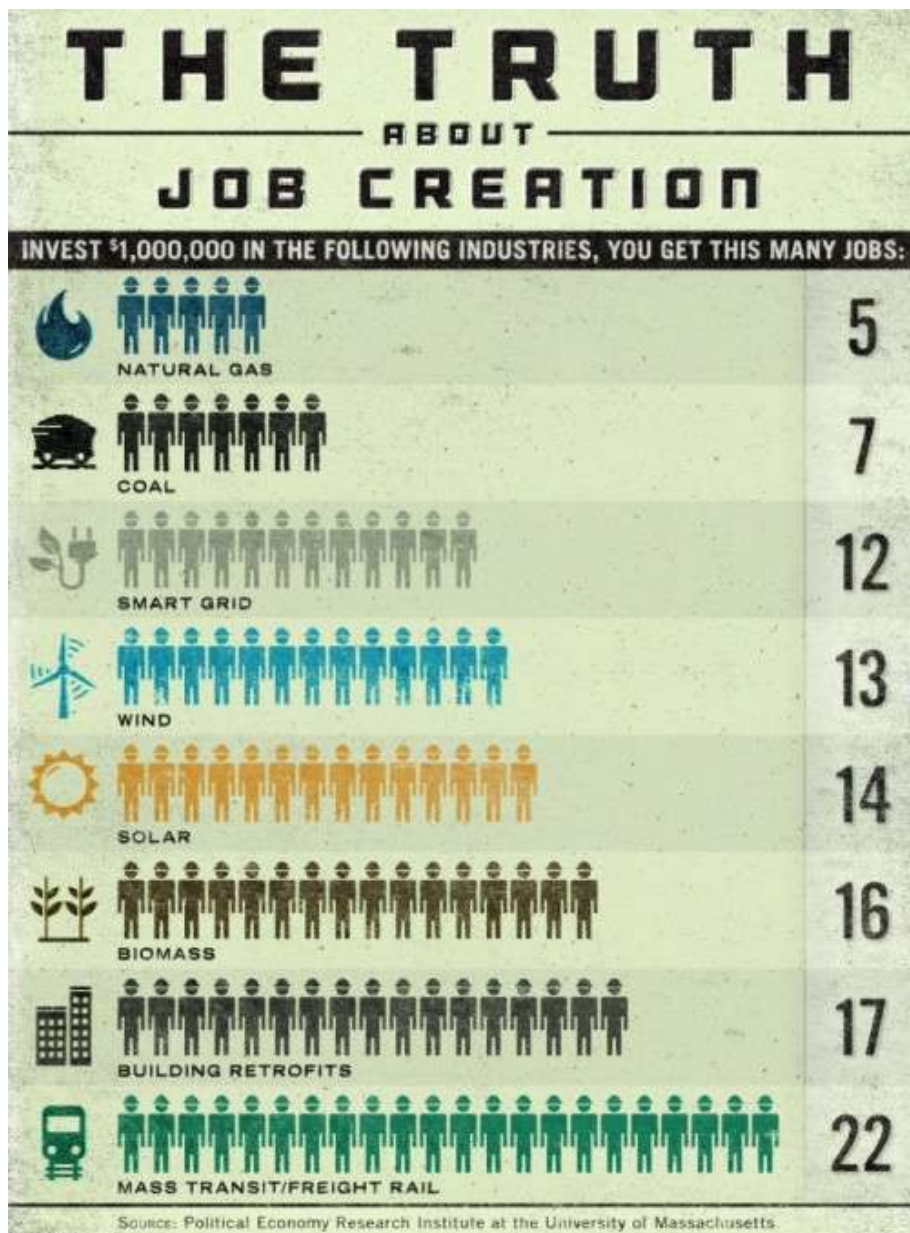
Companies are seeing the advantage of investing in renewable energy initiatives, and the possibility of financial savings.

“Early adopters are building a critical advantage by being ahead of this market...”
(The Energy Collective)

And, with that, jobs in RE are also growing:



In 2016, the solar industry employed more people in the US than coal.



Creating more jobs. Jobs that offer no harm to us or our planet.



“The basic facts are simple. When we invest, say, \$1 million in building the green economy, this creates about 17 jobs within the United States. By comparison, if we continue to spend as we do on fossil fuels and nuclear energy, you create only about 5 jobs per \$1 million in spending. **That is, we create about 12 more jobs for every \$1 million in spending — 300 percent more jobs — every time we spend on building the green economy as opposed to maintaining our dependence on dirty and dangerous oil, coal, natural gas, and nuclear power.**” (Robert Pollin, the President of Pear Energy and a professor of economics at the University of Massachusetts-Amherst)

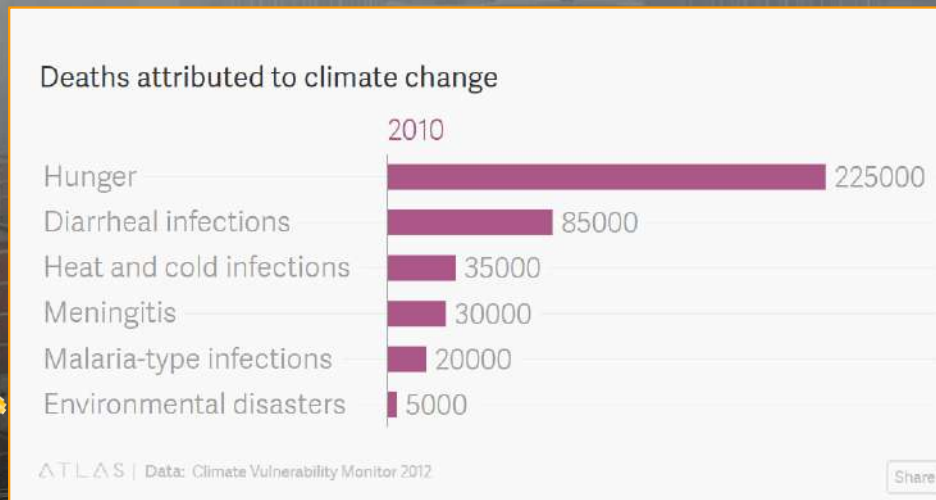
Transitioning to a 100% RE future is about saving lives.

In the EU, US and China, **1.3 million premature deaths** caused by excessive ambient exposure to fine particulate pollution can be prevented every year. In 2010, **4.5 million deaths** were attributed to air pollution.

In addition to that, there are still the ones already attributed to direct consequences of climate change.



CLIMATE ACTION. THE WORLD.



*“With economies around the world facing low growth, the renewable energy sector offers a way to **increase income, improve trade balances, contribute to industrial development and create jobs.**”*

(Renewables 2017 Global Status Report)



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But still, we need to **foster** this transition.



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And here's how:

A bold and effective policy framework

Our ambition is high and that needs to define the pace of change and the public policies within our governments and society.

We need a policy framework that is aligned and committed to enable the transition.

And we need it **faster than before.**



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Increasing Awareness

and Engagement



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Robert van Waarden | Survival Media Agency

As 100% RE becomes more and more normal, it is clear that it not only is a prerequisite to stay below 1.5,

but the only way forward we have.

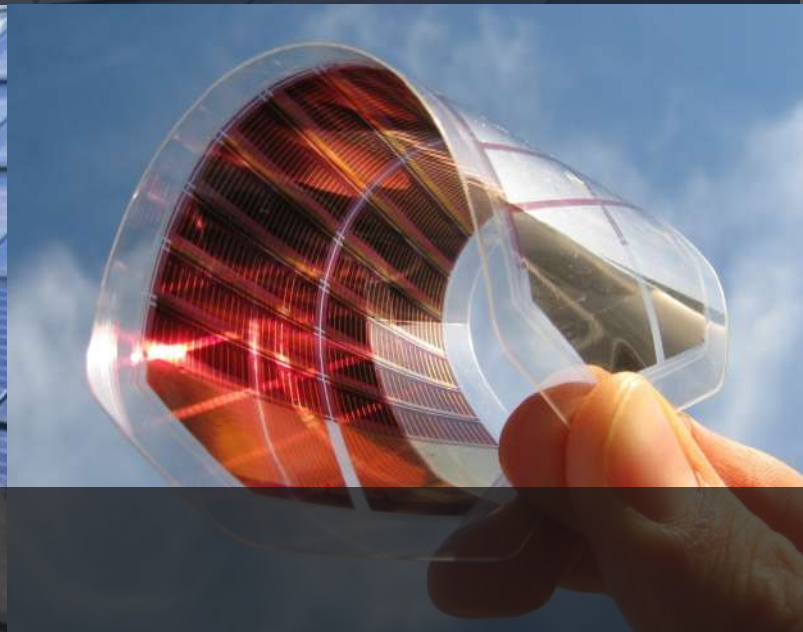


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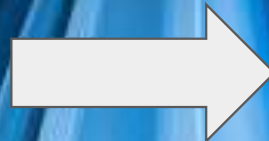
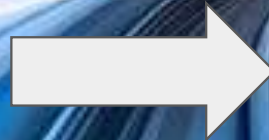
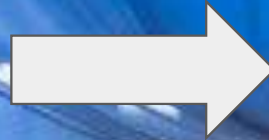
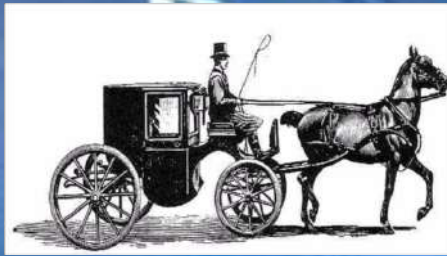
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DISRUPTION. Tomorrow will look nothing like today.



Let's embrace the next disruption



Our future will be **100% Renewable**.



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