



# With great technology comes great responsibility. **Technology Obliges!**

The European Technology Chamber is a registered NGO that enables European businesses to use their technologies for the benefit of Europe and humankind. The EUTEC Chamber has three major goals and believes that technology is the answer to reaching them.



# Competitiveness

Strengthening Europe's competitiveness and transformation capabilities in its Global positioning



# **Sustainability**

Leveraging innovation, key technologies and business opportunities to achieve the 17 UN Sustainable Development Goals



# Growth

Building bridges to international markets and establishing partnerships for inclusive growth







# **About the Climate Action Commission**

Raising awareness for companies to become climate neutral through use of European technologies while contributing to the fulfillment of the UN SDGs at home but also where they have the biggest impact, in developing countries.

Climate change is affecting every country on every continent, disrupting national economies and affecting lives. Weather patterns are changing, sea levels are rising, and weather events are becoming more extreme.

The EU Tech Climate Action Commission aims to indicate good solutions and to initiate industry-wide cooperation for companies to become climate neutral using European technologies





Reduce



Compensate & Communicate





# **METHODOLOGY**

#### **EU Tech Chamber White Paper**

This EU Tech Chamber White Paper serves as an informational document for sharing knowledge, fostering exchange and collaboration and creating value for our advocates and the larger EUTEC community from society to businesses and from industry professionals to technological innovators.

Sharing technology-driven solutions and methods will help to solve some of our most challenging questions about how we can improve our lives by providing insights from engineers, experts and researchers.

This White Paper is carefully curated in collaboration with EU Tech Chamber advocates, supporters and contributors who share EU Tech's vision and values; it is published by ETUEC Sections for educational and knowledge sharing purposes.



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### **EXECUTIVE SUMMARY**

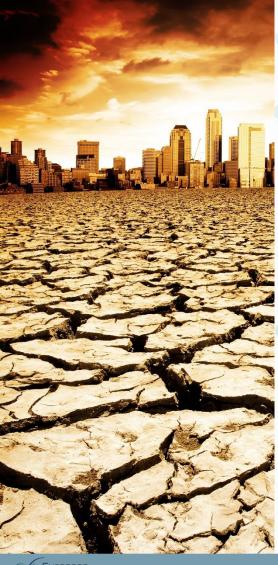
The United Nations' Framework Convention on Climate Change (UNFCCC) defines climate change as 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.' Since 1988, the Intergovernmental Panel on Climate Change (IPCC), as established by the United Nations Environment Programme (UNEP) and the World Meteorological Organisation (WMO), has regularly published reports and papers that indicate that climate change is increasingly impacting Earth's physical, biological and human systems. In addition, the World Health Organisation has documented the fact that this change has the potential to affect human health in a number of ways, including, but not limited to: altering the geographic range and seasonality of certain infectious diseases, disturbing foodproducing ecosystems, causing a rise in sea level and increasing the frequency of extreme-weather events such as hurricanes.

At the United Nations' Climate Change Conference (Conference of the Parties (COP21)) in Paris in December 2015, 195 Parties to the UN Framework Convention on Climate Change (UNFCCC) pledged to curb emissions, strengthen resilience, and join forces to take common climate action and reached the Paris Agreement.

The agreement covered all crucial areas identified as essential for a landmark conclusion:

- Supporting the long-term goal to hold the increase in global average temperatures well below 2 °C and to pursue efforts to limit the increase to 1.5 °C;
- Establishing a transparent system and global accounting for climate action;
- Strengthening the ability of countries to deal with climate impacts;
- Strengthening the ability of countries to recover from climate impacts;
- Offering support, including financial support, for nations to build clean, resilient futures;
- Decoupling of economic growth from Green House Gas emissions.





# Why Do We Care About Climate Change?

Air, water and soil pollution, improper waste management and degradation of ecosystems all negatively impact human health. According to the WHO, climate change is among the greatest health risks of the 21st Century. Climate change influences health whether directly or indirectly by changing infectious-disease patterns; increasing extreme weather events and the risk of drought, floods and subsequent food insecurity; and increasing respiratory disease through poor air quality. The WHO estimates that one in every four premature deaths today is due to environmental factors; this illustrates that our personal health depends on a healthy planet.

The European Technology Chamber is committed to making a positive impact on the lives of people and companies while operating sustainably and therefore wants to contribute to a healthy environment and demonstrate leadership in doing what is necessary to mitigate climate change. The driving motivation of the EU Tech Chamber is to improve living conditions on our planet and to provide sustainable development of the EU Tech Advocates.

It has been well documented that climate change can adversely impact human health. Further understanding of these impacts and the interface between people, health and the environment is critical for ensuring that technology companies can form and execute an effective response. Technology companies are, in absolute terms, generally considered to be a medium-impact sector with regard to CO2 emissions. We are committed to contributing responsibly to progress in regard to CO2e-reduction targets, specifically addressing increased energy efficiency and lowered energy intensity across our value chains. Additionally, early evidence suggests that innovation that improves growth outcomes while optimising resources also reduces carbon impacts. As our mission is to create a collaborative environment that enables our members to innovate, discover, develop and deliver new technological solutions for people across Europe, we believe that innovation that also considers the use of resources will reduce the footprint of technology companies.





#### 10 KEY RECOMMENDATIONS

To push companies to become climate neutral through the use of European technologies while contributing to the fulfilment of the UN SDGs

- **1.** Understand the urgency of humanity's situation and immediately commence effective climate action. Solid knowledge of scientific climate facts is crucial for differentiating between overhyped buzz and necessary action. Scientists agree that climate change is real, manmade, endangers all live on earth...and that fast and effective action can keep its effects to a minimum.
- 2. Take immediate steps to calculate and improve the transparency of your carbon-emission data and establish a procedure that captures, analyses and reports all of the scope 1, 2 and 3 during footprint calculation data from its operation. Repeat footprint calculations every 2 years, evaluate your results and compile a list of suggested improvements. Document and report the results of this experience such that knowledge of what does and does not work is shared with those who can put it to good use. Prepare, implement, monitor and report the implementation of detailed climate-change response strategies and action plans that clearly articulate your roles, responsibilities, measures, and interventions or actions towards the achievement of the climate-change response objective in a measurable way.
- **3. Pursue science-based CO2e-reduction targets** and publicly disclose the  $CO_2$  performance calculated according to recognized methodologies such as the Greenhouse Gas Protocol. Make headline data for scopes 1, 2 and 3 public to demonstrate transparency and explain issues around the boundaries of this data.
- **4. Prioritize cost-effective and beneficial mitigation measures and interventions** that significantly contribute to the world's deviation from the GHG emission 'business as usual' trajectory, as measured against a benchmark 'peak, plateau and decline' GHG-emission trajectory whereby GHG emissions peak between 2020 and 2025, plateau for approximately a decade and begin declining in absolute terms.
- **5.** Prioritize interventions already envisioned by your strategies that have climate-change cobenefits—particularly those that also contribute towards the priorities of job creation or poverty alleviation or have other positive socio-economic benefits.





#### **10 KEY RECOMMENDATIONS**

To push companies to become climate neutral through the use of European technologies while contributing to the fulfilment of the UN SDGs

- **6. Technological research, development and innovation** prioritise cooperation and the promotion of research and investment in and/or acquisition of adaptive, lower-carbon and energy-efficient technologies, practices and processes for employment by existing or new sectors or subsectors.
- **7. Behaviour change through choice** prioritise education in the company as well as training and public-awareness programmes to build general awareness of climate change so as to empower all people to make informed choices that contribute to an economy and society that is resilient to climate change.
- **8. Resource mobilisation** prioritise the development of comprehensive resource and investment-mobilisation strategies, capacities, mechanisms or instruments that support and enable implementation of climate-change responses on a global scale, including, technical cooperation and partnership agreements and technology transfers at the domestic, regional and international levels.
- **9. Informed decision-making and planning** prioritise research, systemic observation, knowledge generation, information management and early-warning systems that increase our ability to measure and predict climate change and the implications of its adverse effects for the economy, company and environment.
- **10. Don't waste resources and seek opportunities to use energy from renewable sources throughout the value chain.** Apply solutions and technologies to save water, energy, transport and materials. Educate your employees and subcontractors to reduce consumption and waste of resources. Contribute to reducing energy consumption and increasing energy efficiency and seeking opportunities to use more energy from renewable sources throughout the value chain.

# 1. Understand the urgency of mankind's situation and immediately start with effective climate action.

Warming in Germany (1881 - 2017) as a colourful barcode



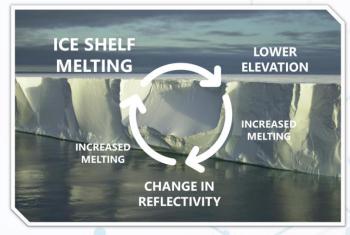
The Earth is currently experiencing an unprecedented <u>accumulation of records</u>. Since the 1980s, each decade has been warmer than the previous decade since 1850. According to data from NASA and NOAA, 2019 was the second warmest year in the world since recordings began, and the 43rd consecutive year in which the average temperature on the Earth's surface was above the 20th century average. The effects are illustrated by the following examples:

- ➤ Since 1900, **sea levels** have already risen by around 16 centimeters on average worldwide. Since 2006, the annual rate of increase has been around 3.6 mm, more than double the previous rate.
- Both the volume of <u>ice in the Arctic</u> and the ice-covered ocean area there have steadily declined since satellite measurements began in 1979 by an average of more than ten percent per decade.
- **Extreme weather** events have increased significantly worldwide. Global warming has already led to an increase in the number, intensity, and duration of heat waves and droughts in most onshore areas. In addition, the risk of local heavy rainfall and river flooding has increased.

Some elements in the Earth's climate system change not gradually, but in leaps and bounds as the temperature rises. In this context, science speaks of **tipping points** and has identified more than a dozen of them; when reached, a return to the previous state is practically impossible. One example is the ice sheet in Greenland: it is currently several kilometres thick, so that the surface is at a height where it is much cooler (as in the mountains). If it melts, the surface sinks into warmer air layers, which leads to an acceleration of the melting process. For the ice mass to theoretically grow again, temperatures on Earth would have to drop to levels like those of the last ice age (and thus by around 4 °C on a global average compared to today). The lower ability of darker water compared to sparkling ice to reflect sun light further accelerates this effect.

Other tipping points include melting of the Antarctic ice sheet, destruction of the Amazon rainforest, death to tropical coral reefs and thawing of the permafrost soils, which could release huge amounts of methane and CO2

#### **Example for tipping point vicious circle**





# 2. Take immediate steps to calculate and improve the transparency of your carbonemission data



#### How is a company's carbon footprint determined?

The carbon footprint is the measure of the amount of greenhouse gases (measured in  $CO_2$  equivalents) produced directly and indirectly by an activity. The larger this value, the more negative impact this activity has on global warming. In order to limit the increase in temperature to a maximum of 1.5°C compared to the pre-industrial era, it is essential to keep the CO2 footprint as low as possible.

For being able to establish a climate strategy of a company, it is important to reach transparency of your carbon-emission data. To do so we recommend you to calculate the carbon footprint of a company (corporate carbon footprint = CCF) in accordance with the Greenhouse Gas Protocol.

The Greenhouse Gas Protocol (GHG) is the most widely used and recognized international standard for accounting for greenhouse gas emissions of companies. It was developed by the World Resources Institute (WRI) and the World Business Council on Sustainable Development (WBCSD). The GHG defines the basic principles of relevance, completeness, consistency, transparency and accuracy and is based on the principles of financial accounting.

The Greenhouse Gas Protocol also defines rules for the organizational delimitation of a greenhouse gas balance and for operational delimitation. The division of emissions into three so-called "scopes" is particularly relevant here: While Scope 1 includes all emissions generated directly by combustion of the comany's activity, Scope 2 emissions are associated with purchased energy (e.g. electricity, district heating). Scope 3 in turn encompasses emissions from services and third-party services.



# In practical terms to calculate a corporate carbon footprint these steps should be followed:

Define system boundaries

Capture the consumption data of all business activities

Convert collected consumption values into CO<sub>2</sub> equivalents using emission factors from databases such as DEFRA\*, Probas\* & Ecoinvent

Determine partial results for scopes 1, 2 and 3



Calculate total value of carbon footprint

### 3. Pursue science-based CO2e-reduction targets

To achieve potential reduction targets, effective savings measures should be derived. We recommend to elaborate a reduction plan with concrete savings measures that can measurably reduce the impact on the climate and establish a long-term corporate climate strategy. In addition, the emissions balance can be offset with high-quality climate-protection certificates.

To pursue science-based CO2e-reduction targets the Science Based Targets Initiative (SBTi) has established a widely used platform for companies to announce their commitments to CO2e reduction targets that are calculated on a scientific basis. SBTi was created in mid-2015 as a result of a merger of the organizations CDP (Carbon Disclosure Project), WRI (World Resources Institute), WWF (World Wide Fund for Nature) and UNGC (United Nations Global Compact).

The Science Based Targets are in line with the 2°C (if possible 1.5°C) target of the Paris climate agreement of 2015. Accordingly, the 195 signatory states have agreed to reduce global warming to below 2°C by 2050 (if possible 1.5°C) compared to pre-industrial times.

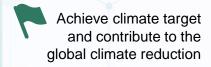
Since governments have limited influence, the Science Based Targets initiative can be a trend-setting element for achieving the climate goal in the future. Since companies in particular emit large amounts of greenhouse gases, these can make a decisive contribution to global climate protection with the help of an ambitious and structured objective. The overall goal of the Science Based Target initiative is to achieve a low-emission economy in the long term despite the steadily increasing population growth.

If you need any assistance we kindly support you in every step towards your CO2-reduction target recognition by the Science Based Target Initiative.





# **Steps to join the Science-based Target Initiative**

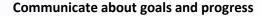


#### **Submit 'Commitment Letter'**

- Sign and send Commitment Letter to SBTi
- Separate declaration for SMEs (>500 MA) and C. from the financial sector
- Listed as 'committed' on SBTi website

#### **Developing the goals**

 After submitting the commitment letter, 24 months to develop goals in line with SBTi



- Become listed on the SBTi website and receive SBTi communication package, including logo.
- Communicate annual progress

#### Submit targets for validation

- Fill in questionnaire and send to SBTi
- Validation fee
  - SME: USD 1,000
  - Others: USD 4,950 (USD 2,490 for resubmission if applicable).



### 4. Prioritize cost-effective and beneficial mitigation measures and interventions

Major changes in behaviour and production methods will be needed to achieve GHG mitigation at the lowest possible cost.

Mitigation is achieved by reducing both the energy intensity of GDP and the carbon intensity of energy used.

As a side effect of these changes, GDP growth will also be affected.

Under the mitigation reference, it is estimated that the average growth of the world's economy over the period 2008–2050 would be some 0.13 percentage points lower than in the absence of climate-change policies.

The impact upon GDP growth will be small in the early years, but increase significantly after 2025. By 2050, the level of world GDP is estimated to be some 4.8% below what it would be in the absence of climate-change policies.

The reason for this GDP loss is that substantial human and capital resources will have to be shifted to working on GHG mitigation, thus reducing the resources available for producing other goods and services.

Adaptation involves modifying our decisions, cultivities and ways of thinking to adjust to a changing climate

Goals

Overlapping examples

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The mitigation options with the biggest mitigation potentials are:

- shifting to lower-carbon electricity-generation options;
- significant upscaling of energy-efficiency applications, especially industrial energy efficiency and energy efficiency in commercial and residential buildings and in transport
- promoting transport-related interventions including transport modal shifts (road to rail, private to public transport) and switches to alternative vehicles (e.g., electric and hybrid vehicles) and lower-carbon fuels.
- carbon capture and storage in the synthetic-fuels industry
- options for mitigating non-energy emissions in agriculture and land use
- transitioning the society and economy to more sustainable consumption and production patterns.



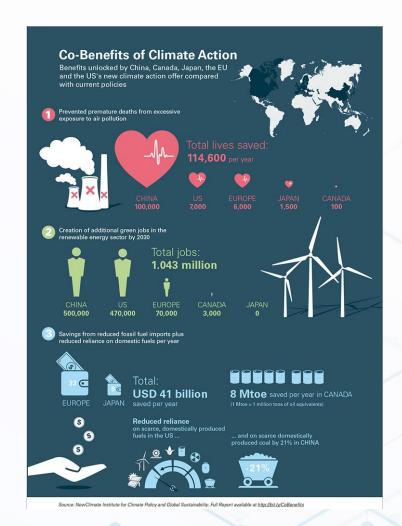
# 5. Prioritize interventions already envisioned by your strategies that have climate-change co-benefits

Many initiatives that reduce GHG emissions have benefits that go beyond contributing to climate change mitigation. Including co-benefits of climate mitigation can in many cases offset costs and inspire deeper and faster reductions in emissions from emissions of fossil fuels and the accompanying health and environmental impacts is the most obvious co-benefit, but there are many other areas, including resource efficiency, economic security, sustainability of ecosystems or increased economic dynamism where positive impacts can be expected.

Try o review existing national policies, legislation or your company strategies, with a view to optimising and maximising the climate change co-benefits of their interventions. Integrate into the relevant existing or new policies, legislation or strategies those climate change response interventions that stimulate new economic activities as well as those that improve the efficiency and competitive advantage of existing activities.

Some of these co-benefits have a direct financial translation (e.g. savings from reduced fuel use) while others (like health or the preservation of biodiversity) do not have a direct monetary value and therefore need to be estimated.

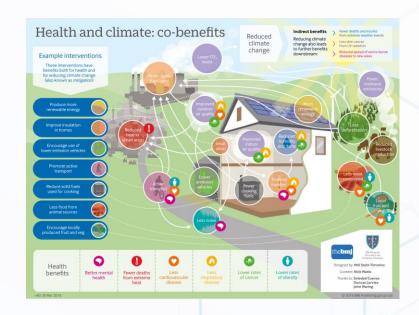
There are also second-order impacts, including those resulting from freeing public resources for alternative uses. In addition, there are macro effects associated with increased climate-related investments on growth and employment. But there are also distributional aspects (winners and losers) resulting from the shifts in the pattern of economic activity that need to be considered.



# 5. Prioritize interventions already envisioned by your strategies that have climate-change co-benefits

Our recommendations for the climate change co-benefits are:

- Try to review your company strategies with a view to optimizing and maximizing the climate-change co-benefits of their interventions.
- Integrate into the relevant existing or new policies, legislation or strategies those climate-change-response interventions that stimulate new economic activities,
- improve the efficiency and competitive advantage of existing activities.
- try to increase climate-related investments in growth and employment.
- Energy-efficiency and fuel-switching measures typically reduce emissions of non-GHG pollutants harmful to human health
- Check your indoor air quality
- Climate investments in the buildings and transport sectors can provide additional protection against external noise,
- Try to promote shifting from private car-based transport to act
- Reduce the heat island effect and its related health impacts





### 6. Technology research, development and innovation

It is no secret that teamwork is essential in achieving goals one can not achieve on her or his own. You can shoot a ball up a roof, but you'll only get it back if someone gives you a leg up. Everyone who did that once, knows it by heart.

For some generations now we are shooting our balls up the roof and it appears, that none of us can get it down there on her or his own. True, undoubtfully one of the major tasks in tackling climate change is rising awareness of individual scale. Not only showing the big picture of climate change but proposing seemingly small steps and actions that – in sum – can slowly change production, consumption and innovation due to changes in demand and behavior.

But imagine what we are able to achieve as a team. Research and innovation have always been areas where the team was so much more than the sum of its parts. Where you can achieve a lot on your own but skyrocket through partnering up. Imagine Larry Page without Sergey Brin, imagine Steve Jobs without Steve Wozniak. Through their cooperation world-changing products were developed.

Prioritizing cooperation in sustainable innovations not only in small teams but on companies or even international scale over inventing in our own little chambers is as crucial as engaging individually – in fact, it has the power to accelerate our transition to sustainable future of work and life in a way we may not even be able to imagine right now.

"We Don't Have Time" for example realized that and started a movement leveraging the power of social media-connections between leaders. Connecting people that drive change right now and connect them is building an increasingly strong movement in circularity.

With arising opportunities through this movement and by promoting research, investing in energy-efficient technologies we can change the face of this world. By creating room for a leg-up-surpassing innovations in practices & processes for employment we can make it last and be able to get our balls off of that roof.





### 7. Behaviour change through choice

Education is an essential element of the global response to climate change. It helps people to understand and address the impact of global warming, increases 'climate literacy' among young people, encourages changes in their attitudes and behavior and helps them adapt to climate-change-related trends. Education and awareness-raising enable informed decision-making, play an essential role in increasing the adaptation and mitigation capacities of communities and empower women and men to adopt sustainable lifestyles.

If you as a company want to be an initiator for a change in the behavior of your operational environment, you must start the change within yourself. Future-oriented values should be adopted not only by start-ups, but especially by traditional family-owned companies, which must fulfill their cultural and political responsibilities towards their operational environments.

In order to plant the seeds of a change in behavior, the following points are required.

- 1. Self-reflection on one's own behavior
- 2. Defining values and norms as a target.
- 3. Internal stakeholder analysis
- 4. Communication and self-commitment.

Behavioral therapy is long-term and intensive work. For internal stakeholders, the focus of a change is often on the meaning and the associated added value. Communication should focus upon the essential and the tangible, such that an employee can transfer the defined values and behavior patterns to their personal environment.





# 8. Resource mobilization – prioritize the development of comprehensive resource and investment mobilization strategies

#### **Drawing from Volvo's 1959 seat belt patent**



When Volvo received the patent for their engineer, Nils Bohlin's invention of the three-point seatbelt, they decided to release it for everyone to use free of charge, as they believed more good could be done this way, rather than exploiting the benefits exclusively for themselves. In 2014, Tesla Motors did a similar thing, when they "open sourced" their battery patents to speed up innovation for the EV industry.

Despite apparently giving away a competitive advantage, both companies have thrived afterwards, Volvo by gaining a reputation for safety, Tesla for innovation in EVs.

When redefining your corporate strategy, environmental considerations should be a top priority, as hard economic benefits and risks alike are materializing:

- growing public awareness for sustainability will lead to favorable perception of the company and its products
- the financial industry weighs ESG risks higher, resulting in better access to favorable corporate lending and investors for companies with a credible track record in sustainability
- but, any company's portfolio may be vulnerable to climate risk either directly from e.g. shifting weather patterns, rising sea levels or indirectly through regulation or taxation

Over recent years, research on quantification of exposure to and impact on climate change has been published. This will help you choose the most impactful measures and avoid the most dire consequences for the world – and your company.

While focusing your corporate strategy around sustainability and climate action is a good step forward, collaboration across the industry will be required to make a bigger impact. Take the Volvo example: sharing a great idea with everyone, including competitors, does make sense economically, when your priorities are guided by a mid to long-term

Actively engage with peers across industries to use their innovations, speeding up your own innovation cycles along the way.

The European Technology Chamber is one platform to facilitate such exchange, leveraging the impact each individual player has. Maybe someone already invented the seat belt for your industry, so you can just use that and focus all your resources on airbags instead.

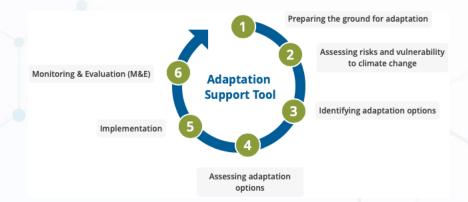


### 9. Informed decision-making and planning

Trying to find the best choice when decisions about corporate strategy, product portfolio or other topics with multiple variables and uncertainties have to be made, can be a daunting task.

However, when it comes to considerations on climate change, how your business and community may be exposed to it and what consequences your contributions have, a lot of research has happened on these topics in recent years. The EU, among others, has supported research and also the development of tools to enable accurate estimations on cause, impact and countermeasures of climate change. Therefore, quantifying climate change impacts from and to your

business is now possible, with a plethora of sources to pick from.



Therefore, make sure to include these inputs to make decisions led by science-based facts, not opinions. Examples of publicly available sources:

- the EU Climate-ADAPT platform: blueprints and suggestions to better understand all options to adapting your business for climate change, includes an "Adaptation Support Tool" (pictured above)
- the reInvent-Project: showing blueprint pathways to decarbonization for various industries
- the Project Management Institute: several papers have been published that show ways to quantify sustainability metrics in Portfolio Management, helping to understand exposure and impact

These are just a few examples; wherever publicly available data might be insufficient, specialized consultancies, industry associations, several European government institutions and also non-profits offer a broad range of support to close that knowledge gap and shine a light on the available options, their pros and cons. Make sure to include the latest science-based data for your decisions!



# 10. Don't waste resources and seek opportunities to use energy from renewable sources

Renewable energy is energy derived from natural resources that replenish themselves in less than a human lifetime without depleting the planet's resources. These resources – such as sunlight, wind, rain, tides, waves, biomass and thermal energy stored in the earth's crust – have the benefit of being available in one form or another nearly everywhere.

In transport, renewable energy can be used in the form of sustainable biofuels, high-percentage biofuel blends and drop-in biofuels. Renewable electricity can power the world's growing fleet of electric vehicles. Car batteries can be used as storage units so that the electricity can be used at a later time. Renewable electricity also can be used to produce electro-fuels, such as hydrogen to fuel long-haul transport, aviation and shipping.

Like any human activity, all energy sources have an impact on our environment. Renewable energy is no exception to the rule, and each source has its own trade-offs. However, the advantages over the devastating impacts of fossil fuels are undeniable: from the reduction of water and land use, less air and water pollution, less wildlife and habitat loss, to no or lower greenhouse gas emissions.



Why we should switch to renewable energy:

Renewable energy emits no or low greenhouse gases. That's good for the climate.

Renewable energy emits no or low air pollutants. That's better for our health.

Renewable energy comes with low costs. That's good for keeping energy prices at affordable levels. Renewable energy creates jobs. That's good for the local community.

Renewable energy makes the energy system resilient. That's important to prevent power shortages.

Renewable energy makes the energy system resilient. That's important to prevent power shortage Renewable energy is accessible to all. That's good for development.

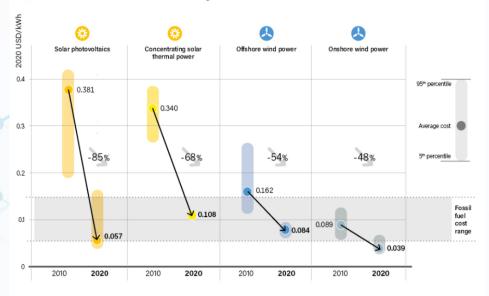
Renewable energy is secure. That's good for stability.

Renewable energy is democratic. That's good for acceptance.



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# Global Levelised Costs of Electricity from Newly Commissioned Utility-scale Renewable Power Generation Technologies, 2010 and 2020



Source: IRENA.

It is important to educate your employees and subcontractors to reduce consumption and waste of resources and the value of renewable energy sources. According to the United Nations, over 2.12 billion tons of waste is disposed of annually.

The easiest way to lower your facility's cost and its environmental impact is through your waste stream:

- Have a Centralized Purchasing and a Reuse Store for Office Supplies
- Offer Reusables in Break Rooms or Cafeterias
- Improve Your Recycling Program
- Manage Your Food Waste
- Conduct Waste Assessment on your Company's Environment





# CONCLUSION

This White Paper is primarily aimed at the companies associated with the European Technology Chamber, as well for other companies who want to join our chamber. Thus, this material is the primary means by which companies can influence climate change and maximize their derived benefits. These benefits include the creation of new mechanisms, infrastructure and arrangements and the encouragement of research and action. In each of these fields, companies have a number of instruments with which to achieve certain outcomes and this document outlines both the desired outcomes and the interventions by which they can be achieved.

However, it must be clearly understood that success will only be achieved through the total involvement of the private and non-governmental sectors. The climate-change-response strategy thus needs to be owned by them as much as by the public sector if it is to represent a truly international course of action. Rather than regarding this document as a rigid prescription for what must be done, it should be modified to accommodate new ideas and directions as needed, and when such issues are identified by any of the stakeholders.

While it is extremely important to understand the reality and constraints of the companies and different countries' economic systems, no door must be closed to any action based on sound economic principles that can bring tangible benefits to Europe and its people.





CONCLUSION



# CONCLUSION

As previously mentioned, companies should aim to fulfil certain obligations, including:

Preparing and periodically updating their inventory of greenhouse-gas emissions and sinks;

Formulating and implementing national and (where appropriate) regional programs to mitigate climate change and facilitate adequate adaptation to climate change;

Promoting and cooperating in the development, application and diffusion of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases;

- Promoting sustainable management and cooperation in the conservation and enhancement of sinks and reservoirs for all greenhouse gases;
- Cooperating in preparing for adaptation to the impacts of climate change;
- Taking climate-change considerations into account in the relevant social, economic and environmental strategies and actions with a view to minimizing adverse effects on the economy, public health and the quality of the environment;
- Promoting of and cooperating in scientific, technological, technical, socio-economic and other research and systematic observation and development of data archives related to the climate system with the intention of furthering understanding and reducing or eliminating uncertainties;
- Promoting of and cooperating in the full, open and prompt exchange of relevant scientific, technological, technical, socio-economic and legal information related to the climate system and climate change;
- Promoting of and cooperating in education, training and public awareness related to climate change.

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# **CONTRIBUTED BY**



Sacha Ghiglione Board Member Climate Action Commission



Manuel Rucker Board Member Climate Action Commission



Lena Dambmann Board Member Climate Action Commission



Max Jankowsky Board Member Climate Action Commission



Jörg Tuchen Chairman Climate Action Commission



Simon Lutzenberger Board Member Climate Action Commission



Marcin Kiełt Director Climate Action Commission



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