GREEN ECONOMY?

Campaigner's Manual

GEF GREEN EUROPEAN FOUNDATION

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What is a Green Economy?

Useful terms and definitions

A green economy is one that generates increasing prosperity while maintaining the natural systems that sustain us (EEA). A green economy aims at reducing environmental risks and ecological scarcities and promotes sustainable development without degrading the environment. To be green, an economy must not only be efficient but also fair - recognising equity dimensions on a global and country level, particularly in assuring a just transition to an economy that is low-carbon, resource-efficient, and socially inclusive (UNEP).

A circular economy - a concept in which growth and prosperity are decoupled from natural resource consumption and ecosystem degradation. By refraining from throwing away used products, components and materials and instead re-routing them into the right value chains, we can create a society with a healthy economy inspired by and in balance with nature.

Eco-innovations - solutions that enable efficient use of resources via technologies, processes and business models in order to protect the environment and make industry more competitive (EU). Based on the concept of Innovation: planned and goal-oriented modernisation of existing (social) systems through the use of new ideas and technologies; the creation and introduction of new products, product technologies and forms of organisation in the economy (Brockhaus Dictionary).

Green jobs - work in agricultural, manufacturing, research and development, administrative and service activities that contribute(s) substantially to preserving or restoring environmental quality . This includes jobs that help to:

- protect ecosystems and biodiversity;
- reduce energy, materials and water consumption through high-efficiency strategies;
- de-carbonise the economy; and

- minimise or altogether avoid generation of all forms of waste and pollution (UNEP).

Decent jobs that contribute to preserving or restoring the environment, be they in traditional sectors such as manufacturing and construction or in new, emerging green sectors such as renewable energy and energy efficiency . Green jobs help:

- improve energy and raw materials efficiency;
- limit greenhouse gas emissions;
- minimise waste and pollution;
- protect and restore ecosystems; and
- support adaptation to the effects of climate change (ILO).

Why a Green Economy?

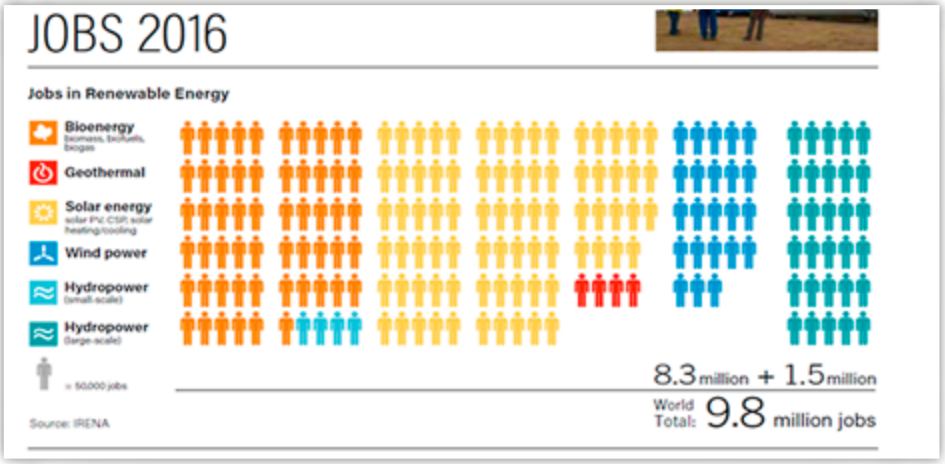
Arguments and facts to be used in support of a green economy

A green economy is about creating a better, happier life rather than greater profits and consumption. Money, food, water, energy and material resources are limited. Demand for well-being and happiness is, instead, unlimited. There are areas and sectors where the green economy is already in place. As it is associated not only with income, wages and GDP but with well-being and happiness. To accomplish a better quality of life, we need to break our society's addiction to the "growth at all costs" economic paradigm, fossil fuels, and over-consumption. A shared vision of a more sustainable and desirable future that focuses on the well-being of all life. (Robert Costanza 2017).

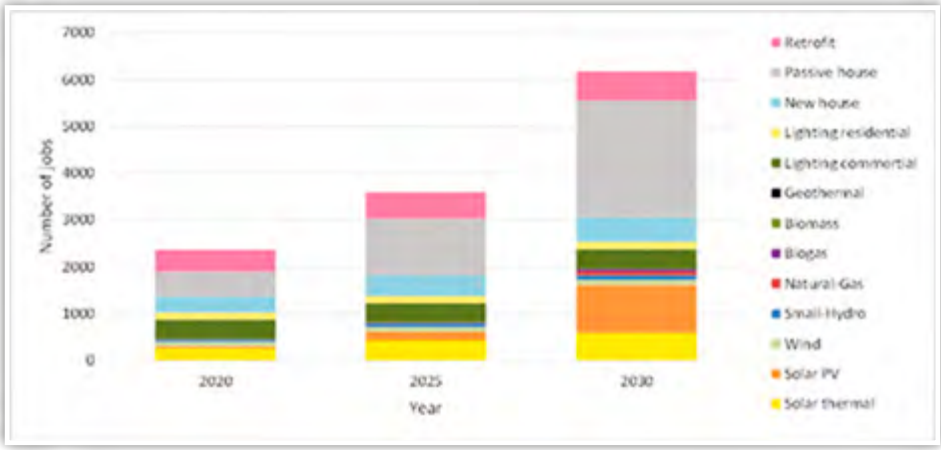
A green economy brings genuine progress (measured by GPI), rather than increased economic growth (measured by GDP). The industrial practice of polluting pumps-up GDP twice: it sums up the expense both for causing pollution and for cleaning it up later. In contrast, GPI shows a realistic estimate by counting pollution as a loss generally equal to the cost for cleaning it up plus the cost of any negative impact on the environment.

A green economy creates jobs

- 200,000 new jobs in Europe by 2030 in the sorting and recycling industries, according to the EC.
- 1,155,000 jobs had been created by the global wind industry by the end of 2016, and 9.8 million people were already employed by the renewable energy sector around the world in 2016.
- 240,000 people were employed by the wind industry in the EU in 2011, a 30% increase from 2007, despite EU unemployment which rose by 9.6%.
- 9.8 million jobs were registered globally in the renewable energy sector in 2016 (IRENA).



- By implementing energy-efficiency measures in buildings and by introducing low-carbon technologies for energy supply (renewables and gas), about 6,000 green jobs can be created in Macedonia by 2030 (Balkan Green Energy News).



A green economy pays better. Clean-economy jobs in the USA pay higher wages than other jobs. In 2015, the average wage for a clean-economy job was $ 62,089, while it was $ $52,942 for other jobs (UIC).

A green economy saves resources

Business case: plastic recycling. More plastic recycling helps reduce Europe's dependence on imported fossil fuel and cut CO2 emissions, in line with commitments under the Paris Agreement. Around 26 million tonnes of plastic waste are generated in the EU every year. But less than 30% of such waste is collected for recycling - 31% of plastic waste goes to landfills and 39% to incineration. Plastic waste from European sources ends up in vulnerable marine areas, such as the Mediterranean Sea and the Arctic. The annual loss from plastic packaging ends up being between €70 and €105 billion. Only 5% of the value of plastic packaging material is estimated to remain in the economy; the rest is lost after a very short time of use. The market for recycled and innovative plastics is successfully established with clear growth perspectives as more products incorporate some recycled content. Demand for recycled plastics in Europe has grown fourfold, providing a stable flow of revenues for the recycling sector and job security for its growing workforce.

- A 10 MW wind farm can easily be built in two months. A larger 50 MW wind farm can be built in six months. Twenty 50 MW wind farms can be built in… six months. The building of a nuclear plant of 1000 MW (= twenty 50 MW wind farms) takes between eight and 15 years.
- In Macedonia, investing in the greening of tourism can reduce the cost of energy, water and waste and enhance the value of biodiversity, ecosystems and cultural heritage. Significant environmental benefits include reductions in water consumption (18%), energy use (44%) and CO2 emissions (52%).

A green economy makes money

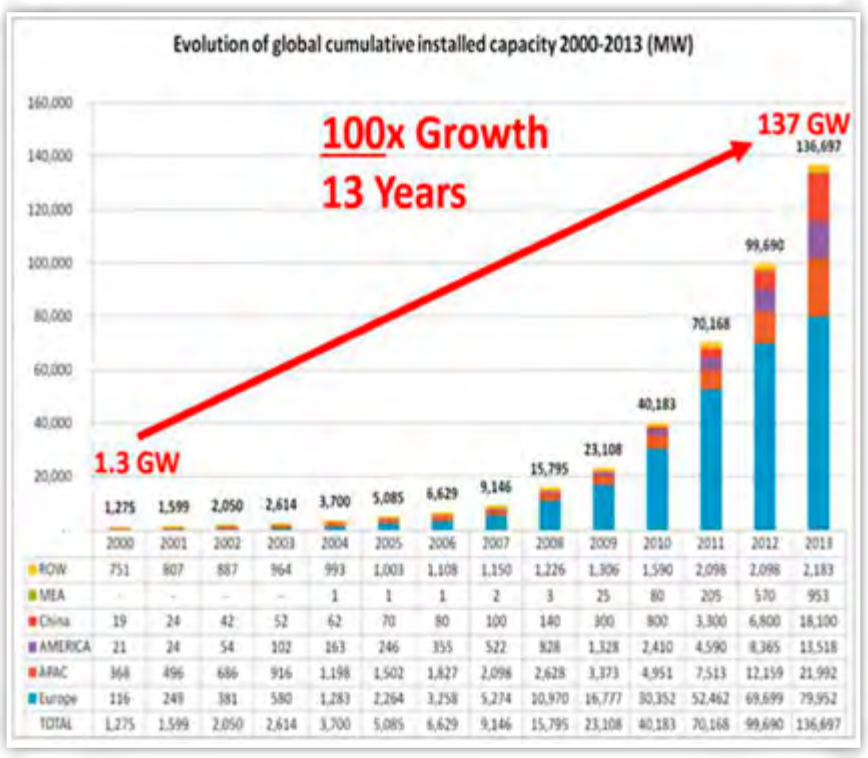
Business case: Renewable energy is cheaper, easier to get, and more profitable. Solar's rapid pace makes it the fastest growing energy resource in the world, and solar energy generation is already the cheapest. In December 2016, the cost of building and installing new solar electricity generation dropped to $1.65 per watt, beating out its renewable counterpart wind ($1.66/ Watt) and all fossil fuel competitors. In 2016 a commercial solar provider in Dubai offered solar electricity for sale at $0.029 cents per kilowatt hour, setting a world record for solar as well as all energy sources. In 40 years, one million solar systems were installed in the U.S. by early 2016; another million installations are expected by 2019. Solar panel efficiency levels have been increasing as quickly as solar costs are declining. The cost of solar has plummeted, while the cost of grid electricity has continued to gradually rise. Solar "break-even" points for individual homeowners with solar in the US are seeing payback periods between five and eight years, and it is estimated that these homeowners will save over $20,000 in five to 10 years. Even in Bulgaria, in spite of red tape and policy-making resistance from the fossil and nuclear sectors, over 30 individual homeowners already minimise their home consumption, produce their own solar power and sell it back to the grid.

- Corporations that are actively managing and planning for climate change secure an 18% higher return on investment than companies that aren't; this is 67% higher than companies who refuse to disclose their emissions (CDP).
- S&P 500 companies that build sustainability into their core strategies outperform those that fail to show leadership. Out of 10 oil and gas companies in the S&P 500 index in the late 1980's, today there is only one left: Exxon Mobil. Since 2014 Exxon has lagged the S&P 500 (*N*atural Capital Coalition*)*.

- A study of 365 oil and gas megaprojects by Ernst and Young shows 64% with cost overruns, and 73% behind schedule. This dismal delivery record is combining with low oil prices to create a potent squeeze on profitability, as the second quarter results of Big Oil showed clearly .
- Extractive industry companies have set a new record for junk bond defaults of over $28.8 bn in 2017, according to Fitch Ratings. With $500 bn+ outstanding, more bankruptcies can be expected. Some companies are trying to buy time by paying debt interest with more debt.
- By 2020, Serbia could increase the energy efficiency of its current housing stock by 50%. To achieve this, it is necessary to invest EUR 1.6 billion (Djurovic-Petrovic, 2014).

Smart business leaders move their investments to green economy.

Installed renewable power generation capacity is on a steady rise globally.



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
ROW	751	807	887	964	993	1,003	1,108	1,150	1,226	1,306	1,590	2,098	2,098	2,183
MEA	-	-	-	-	1	1	1	2	3	25	80	205	570	953
China	19	24	42	52	62	70	80	100	140	300	800	3,300	6,800	18,100
AMERICA	21	24	54	102	163	246	355	522	828	1,328	2,410	4,590	8,365	13,518
APAC	368	496	686	916	1,198	1,502	1,827	2,098	2,628	3,373	4,951	7,513	12,159	21,992
Europe	116	249	381	580	1,283	2,264	3,258	5,274	10,970	16,777	30,352	52,462	69,699	79,952
TOTAL	1,275	1,599	2,050	2,614	3,700	5,085	6,629	9,146	15,795	23,108	40,183	70,168	99,690	136,697

Natural Capital Coalition

The value of assets represented by institutions and individuals committing to some sort of divestment from fossil fuel companies has reached $5 trillion by December 2016. Pension funds and insurance companies now represent the largest sectors committing to divestment, reflecting increased financial and fiduciary risks of holding fossil fuels (Arabella Advisors).

Global business leaders in divestment from fossil fuels include:

- Warren Buffett, who dramatically cut shares in Exxon and other fossil fuel companies and obtained close to 10% of Berkshire's market cap in renewables;
- the Rockefeller Family - decided Sept 2015 to divest their family fund of fossil-fuel investments; and
- Unilever, Google, Ikea, Apple, among others, committed to be 100% renewably powered.

Healthy food is part of a green economy. The markets for green food are fast expanding. Across the EU in 2011, 9.6 million hectares were cultivated as organic up from 5.7 million in 2002. Areas being organically farmed in the EU increased by about 500,000 hectares per year over the past decade. New EU members since 2004 are quickly expanding the organic sector by registering a 13% yearly growth rate, and the number of holdings increased tenfold between 2003 and 2010 (EU-N12).

A green economy protects nature and prevents climate change. In 2016, wind power avoided over 637 million tonnes of CO2 emissions globally. Wind power farms generate between 17 and 39 times as much power as they consume, compared to 16 times for nuclear plants and 11 times for coal plants.

Germany's outperforming economy demonstrates decoupling of GDP from greenhouse gas emissions during 1991 - 2012.


Germany: growing economy, declining emissions
Change of Gross Domestic Product (GDP) and Greenhouse Gas (GHG) emissions in Germany, 1991-2012
Source: BMU, BMWi, Destatis
Change in %
140
120
100
80
60
1991 92 93 94 95 96 97 98 99 00 01 02 03 04 05 06 07 08 09 10 11 12
GDP +28%
GHG -22%
GDP per capita (1991 = 100)
GHG emissions in CO_2-equivalent (1991 = 100)
German Energy Transition

Risks and Drawbacks

Prepare for criticism of negative side effects - Green Economy should work for all!

COUNTERARGUMENT	SUGGESTED RESPONSE
A green economy also has an environmental footprint. The digital economy, Internet of Everything, electromobiles, batteries, etc. all have their own environmental and social footprints.	True. Own environmental footprint should be minimized by all existing technological and regulatory means. But even more importantly, a green economy is about choosing sustainable alternatives, not just replacing technologies. E.g. a shift to collective an rail transport and prioritising cyclists and pedestrians in urban planning rather than replacing diesel cars with electric ones and building more roads.
Innovations bring gains but also losses. Certain innovations bring losses to people and communities. Examples include: job losses in traditional professions; local small and medium businesses losing markets; decrease of local and national governments' tax incomes; pricier „greener" alternatives; digitalisation of public/customer communications; and exclusion of peripheral groups/regions who are left to do the "dirty work" that's still needed.	True. A green economy should work for everyone, and vulnerable, low-income groups and countries should be included as its beneficiaries by all means. With this purpose in mind, greener alternatives need to be made affordable and competitive, using market mechanisms, subsidies and regulations where applicable.

COUNTERARGUMENT	SUGGESTED RESPONSE
Fossil and nuclear power are needed to provide a "baseload" electricity supply when the sun isn't shining or the wind isn't blowing.	False. In 2016, Denmark and Germany successfully managed peaks of 140% and 86.3%, respectively, of electricity generation from renewable sources, and in several countries (Portugal, Ireland and Cyprus, for example), annual shares of 20-30% electricity from variable renewables without additional storage is becoming feasible. The key lesson for integrating large shares of variable renewable generation is to ensure maximum flexibility in the power system.
Green jobs lower "classic" job wages and undermine competitiveness to "dirty" industries - at home or abroad.	False. Being competitive means being greener and smarter. Qualified, educated workers in green economy sectors improve competitiveness. Not greening the economy keeps people and companies hostage to unsustainable, obsolete technologies and unhealthy lifestyles.

Promoting a Green Economy to Win Campaigns

Practical tips for communicators and campaigners

Proactive communication is essential. The green economy is a new issue and needs active promotion among all levels of society and decision making.

Get local! Inspire each community with an achievable improvement which will cost less and generate more jobs per unit of investment than business as usual. Options for projects include:

1. Circular agriculture (improving efficiency of irrigation, storage, machinery use; converting residues to bioenergy and biomaterials).
2. Improving the energy efficiency of public and private buildings (hospitals, schools, houses, etc) as well as domestic appliances.
3. "Urban mining": Collection and recovery of municipal waste (for biogas, syngas, still usable materials).
4. Recovery and recycling of electronic waste and equipment (computers, cell phones, home appliances).
5. Converting used cooking oil into biodiesel.
6. Wastewater treatment (recovery of water, energy and materials).
7. Implementing mass transport instead of private car transport for both passengers and freight.
8. Recovering and recycling construction and road materials.
9. Standardisation and certification (ISO 9001, 14001, 50001) of processes and systems.
10. Promoting capacity building.

Participate in decision making and get your voice heard. Speak up at consultations on local, regional and national levels, events, round tables, institutional and inter-institutional working groups, NGO workshops and seminars and discussions organised by public-private bodies, business associations, trade-unions and authorities; send journalists fact sheets and links to publications; give media events. Send emails, letters, publications, opinions, proposals and comments regarding legislative proposals; go to meetings, briefings and media events of your mayor, your local council member, your MP or your MEP. Share and engage online via social networks.

Offer Eco-innovations that bring profit to all. Involve local people and stakeholders in dreaming and deciding how common resources should be used, including beaches, ski runs and landscapes as well as water, forests, mineral resources and ores.

Promote a green economy as a better way for making money. Economic accounting is not enough. Natural capital and ecosystem services must always be included in the accounting.

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