
System change: the political economy of ecological transformation

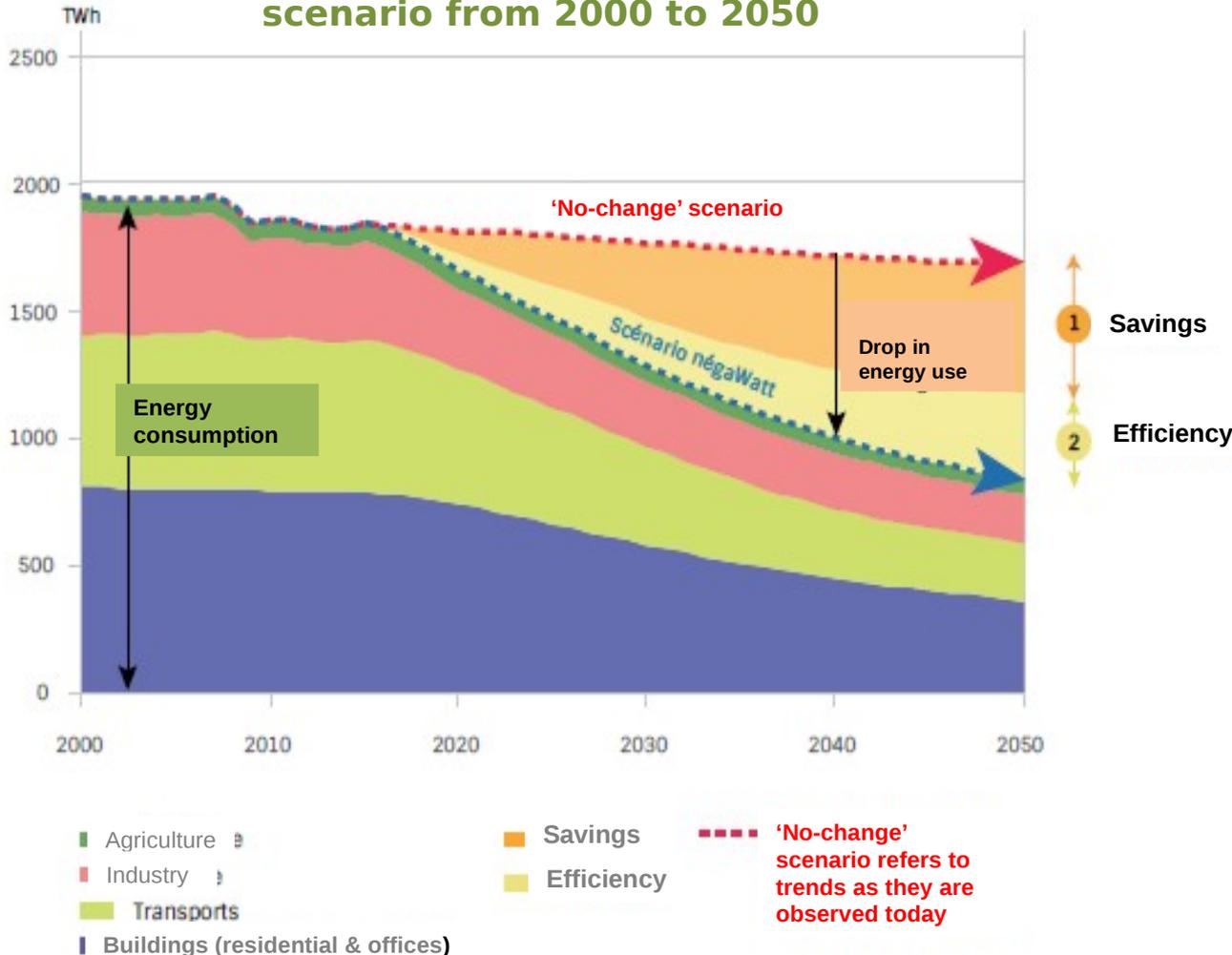
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Transform Denmark
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Context (1): To achieve zero CO2 emissions by 2050 we need massive energy savings and efficiencies plus a

switch to 100% renewable sources

Evolution of total energy consumption in the négaWatt scenario from 2000 to 2050

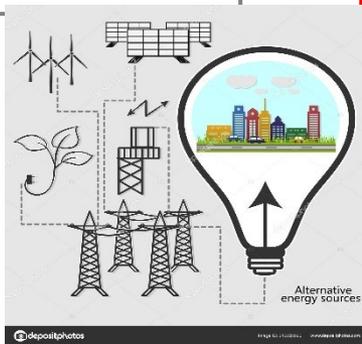


In the 2050 négaWatt scenario, combining energy savings with efficiency yields a **total energy saving of 28%** over 2015 by the year 2050. The economic evaluation of the scenarios also shows a positive outcome in terms of job creations. Among the key measures are an increase in rail freight (from 11% to 41%); a retro-fitting of 85% of residential buildings (to energy efficiency ratings A or B); the regulated manufacturing of longer lasting and repairable objects with strict design requirements; a 50% drop in waste of food products from production to sales; a 50% reduction in meat consumption.

Context (2): It also means a gigantic worldwide effort

Installations for electricity production from renewable sources *

Transforming
electricity
production



1. 4 million five-megawatt wind turbines.
2. 4 million three-kilowatt roof-top solar voltaic panels (PV)
3. 90,000 three-hundred megawatt solar (PV) and concentrated-solar power plants
4. 900 hydro-electric plants (70% are already in place).
5. 5,350 geothermal plants
6. 720,000 wave devices and 490,000 tidal turbines



At the global level, the German Advisory council on Global Change (2011) estimates that \$200 billion to \$1 trillion per annum will be required to decarbonise the global energy system by 2050. Mark Jacobson and Mark Delucchi (2011) project US\$100 trillion will be required over 20 years, that is approximately US\$5 trillion per annum, to switch the global energy system to 100% renewable energy by 2050. Zero Carbon Britain requires approximately £50 billion per year (2015) to reduce the net GHG emissions in the UK to zero by 2030.

Estimates



Context (3): The EU and “inclusive growth” 2020, capitalist story-telling

In December 2019, the President of the European Commission, Mrs Ursula von der Leyen, described in several prominent newspapers the new EU ‘Green Pact’, the “new strategy of inclusive growth for Europe” to reduce CO2 emissions, create employment and improve life quality for all. *

What is inclusive growth?  A new strategy for trans-national capitalism



HUMAN RESOURCES Recruitment Workforce Management Compensation and Benefits	PRODUCTS AND SERVICES Research and Development Sales and Marketing	OPERATIONS MANAGEMENT Logistics and Distribution Procurement and Supply Chain Information Technology	FIRM MANAGEMENT AND GOVERNANCE Strategy Finance and Accounting External Relations Governance and Risk Management
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On 23rd August 2019 in the margins of G7 Leaders’ Summit, B4IG companies committed to play their part in advancing the G7 agenda to strengthen equality of opportunity; reduce territorial inequalities; promote diversity and inclusion; and reduce gender inequality by:

- 1. Advancing human rights in direct operations and supply chains;**
- 2. Building inclusive workplaces; and**
- 3. Strengthening inclusion in company value chains and business ecosystems.**

 Coordinated by the OECD, the Business for Inclusive Growth initiative (B4IG) is made up of a number of leading trans-national companies such as L’Oréal, Johnson & Johnson and Accenture among the founding members. It also includes notorious polluters, among them BASF, Danone, Unilever, and Engie as well as predatory financial institutions, JP Morgan Chase, BNP- Paribas and AXA Insurance.

The solution: energy commons and system change

The goal of capitalism is exponential growth and compounded accumulation to achieve maximum profitability at the least cost. It is based on competition, free access to natural resources and, human exploitation. Its logic consists of a constant drive to overcome natural and human limits.

We need a new political economy called eco-socialism to satisfy the needs of people instead of the requirements of capital. The starting point is that nature, what capitalism calls natural resources, will become **commons**. Our common friend, Dr. Marx, suggests that the three key aspects of the political economy of the commons are as follows:



- 1** Collective ownership: production performed by **freely associated** producers.
- 2** Democratic planning: production planned according to **needs** and for **usage**.
- 3** Social and economic transformation: going beyond the capitalist division of labour and ending the separation between humans and nature.

System change for the banks: a socialised sector

Socialisation of the banking sector is a requirement to construct and finance a new development model. This is a measure that changes the core of the capitalist system. It calls for citizens participation. Two scenarios are possible: either socialising part of the banking sector via the creation of a publicly-owner 'core' before proceeding with the socialisation of all banks and financial institutions (scenario 1), or socialising the financial sector at once, including investment banking and insurance (scenario 2).*

1. Control of capital movements.
2. Regulation of the banking sector and separation of retail banking from investment banking.
3. Minimal threshold of own capital (20-30%) .
4. Free access to public banking services for all citizens.
5. Democratic control of the central bank
6. Local projects to be financed under democratic supervision of citizens



Political leadership for system change

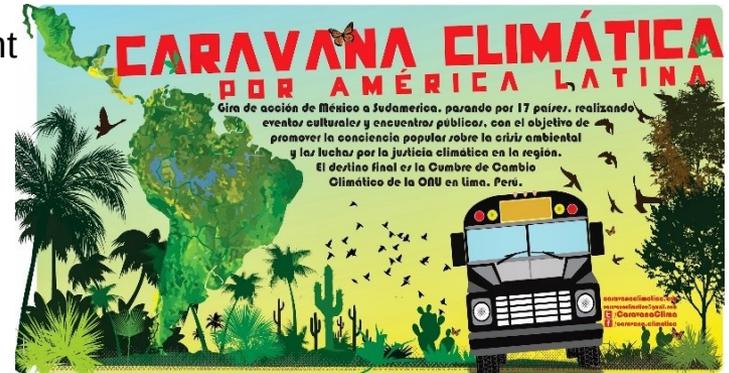
Examples of political economy measures proposed in Europe to effect a democratic eco-transformation

Constitutionalise the 'energy commons' as a new form of social ownership based on the association of free producers. The commons will not have owners and will be run on the usufruct principle with no own-capital. Funding will be provided by the socialised banks. Worker management will be the main activation mechanism of socialisation.

Combine the cooperative model of energy production with new forms of municipal or regional ownership with citizen control and worker self-management practices. Define operational principles with the energy commons

Empower a High Commission for the energy transition whose role in terms of energy poverty will be to define and regulate the access to public energy networks for electricity, gas and heat as well as enforce tariffs and fiscal measures to guarantee access for all households.

Place energy production and distribution, including those to be phased-out under public ownership and control. Develop long-term policies (present to at least 2050) to implement a 'just transition' for all concerned. Realistically this means on-going dialogues with citizens, wage earners and users together with trade unions and other organisations as well as large-scale job creation.



Priority areas to apply system change policies (1)

Electricity

Public investments in the production of clean electricity (renewable sources – RES) and gradual elimination of nuclear, coal, petrol and gas-based production. Sector closing will take place in parallel with training of employees presently in place (no green unemployment, no lay-offs). These new training activities must start now. Adaptation of the European distribution grid to intermittent production and to load balancing



Transport

National and European programmes for a very dense rail network at the local, regional and international levels, complemented by other public transport modes.

The objective is to maximise public transport use. Switch road transport and rivers except for short distances. Minimise air transport with high-

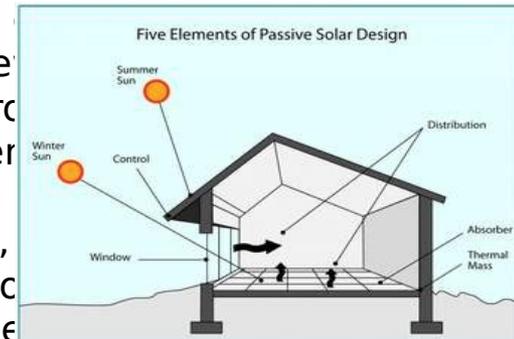


speed rail programmes.

Programme to reduce energy consumption by 50% (2050) in parallel with switch to RES. At least 85% of existing buildings must be upgraded (cold and hot insulation) and outfitted with energy efficient equipment (heating/cooling/cooking/lighting or rebuilt altogether in order to be in conformity with A or B

Construction and industry

Industrial sites will be re-fitted to operate according to new requirements based on very strict norms. Job creation programme to maximise speed of realisation. Most technical requirements must be ready to use so that industries will be able to switch to new products. Product engineering will be required to design repairable, durable, (warranties) and recyclable products according to new norms and collaborative industries will become the norm in order to reduce waste



Priority areas to apply system change policies (2)

Motor energy

Industrial transformation to eliminate vehicles based on internal combustion engines by 2030 and their replacement by fuel-cell vehicles using hydrogen (H₂ made from 100% F) or vehicles using bio-gas. This will require the mobilisation of the know-how and technical capabilities of the entire automotive sector under the leadership of state ecological planning and their local and regional commissions. A European programme for the creation and implementation of a hydrogen production and distribution network with shared norms and requirements will be launched.



Policies and programmes of regional and local development intended to 'deglobalise' and relocate industries outside of the main urban centres in order to revitalise areas hard hit by unequal development. These will need to be coordinated across regions and European countries in order to promote sustainable forms of development.

Balanced and Sustainable development



These policies outlined as above and to complement other policies, such as the relocation of industries, will be implemented in order to reduce movements.

Future planning will focus on the building of eco-neighborhoods with instructions and with proximity as a priority: close proximity between residence, work places, schools, health-care services, etc.

Priority areas to apply system change policies (3)

AO's 10 elements
of agro-ecology



Diversity



Co-creation
and sharing of
knowledge



Synergies



Efficiency



Recycling



Resilience



Human and
social values



Culture and
food traditions



Responsible
governance



Circular and
solidarity economy



- ❑ Regional programmes and citizens initiatives in order to relocalise agricultural activities in harmony with the elements of agro-ecology and the eco-friendly neighbourhoods.
- ❑ The objective is to launch and develop practices of food sovereignty in the territories. The new agriculture will be organic and sustainable and therefore without chemical inputs.
- ❑ Meat consumption will be curtailed (50%) in order to maximise the use of vegetable proteins. It will also be necessary to reduce the utilisation of milk products and increase the share of fruit, vegetables, cereals, beans and lentils in daily diet.
- ❑ The priority for food distribution will be short chains with as few

New agricultural
practices

Citizens initiatives in system change: SCIC Rhôneá Vignobles

2017: Rhôneá is created, an artisan-vinters cooperative from Vacqueyras and Beaumes-de-Venise

« In order to protect artisanal wine-making, Rhôneá has launched **Rhôneá Vignobles**, a cooperative structure based on **participative financing and democratic management**, open to all interested in purchasing social shares.

The ethical and collective investment brings together working people, professionals, and institutions who are committed to developing a **local and sustainable** form of wine agriculture ».



AUX VIGNES CITOYENS !



3.000 Coop members
Active in solidarity.



100 hectares
of vineyards protected from urban creep.

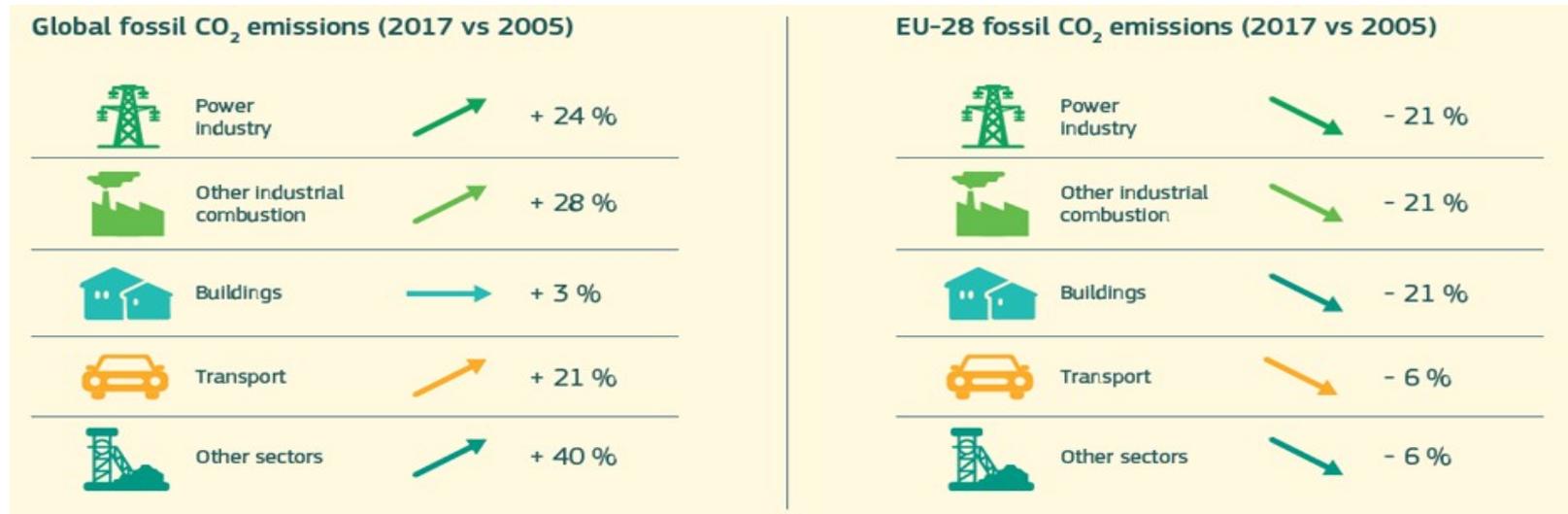


€ 5 millions, a sustainable and ethical investment based on collective practices.



250 artisan-vinters
involved in the project.

Appendix: a view of CO₂ emissions



Per capita CO₂ emissions 2017 in metric tons

<input type="checkbox"/> Burundi	0.03	<input type="checkbox"/> Japan	10.30
<input type="checkbox"/> Zambia	0.29	<input type="checkbox"/> Iceland	12.23
<input type="checkbox"/> Afghanistan	0.32	<input type="checkbox"/> Russia	12.26
<input type="checkbox"/> India	1.83	<input type="checkbox"/> South Korea	13.21
<input type="checkbox"/> Brazil	2.35	<input type="checkbox"/> USA	15.74
<input type="checkbox"/> France	5.20	<input type="checkbox"/> Australia	16.45
<input type="checkbox"/> Denmark	5.86	<input type="checkbox"/> Saudi	19.39
<input type="checkbox"/> China	7.72	<input type="checkbox"/> Kuwait	23.49
<input type="checkbox"/> Germany	9.70	<input type="checkbox"/> Qatar	37.05