



nadace

**partnerství**

| LIDÉ A PŘÍRODA

# GREEN ECONOMY:

# RECENT ACCELERATORS

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**MIROSLAV KUNDRATA**

**[WWW.NADACEPARTNERSTVI.CZ](http://WWW.NADACEPARTNERSTVI.CZ)**

# NO. 1 thing which influenced the environment in last 12 months?

WHAT WAS IT FOR YOU and how???

- Political changes and policies?
- Economic impact of pandemia?
- Nature disasters?

# WHAT IMPACT ON ENVIRONMENT / ECONOMICS?

## Politics and policies:

- Trump is gone
- Green Deal approved and launched
- Climate Summit in Glasgow (COP26), emission trading approved
- States, cities, corporation announcing their zero carbon plans and strategies

# WHAT IMPACT ON ENVIRONMENT / ECONOMICS?

## GLOBAL EXTERNAL UNCERTAINTIES:

- Impact of pandemia
- Collapse of global supply chains
- Energy crises
- Accelerated disasters on all continents

# June tornado, 6 SM villages destroyed in 2 hours





# July 2021 flash flood on the Ahr river

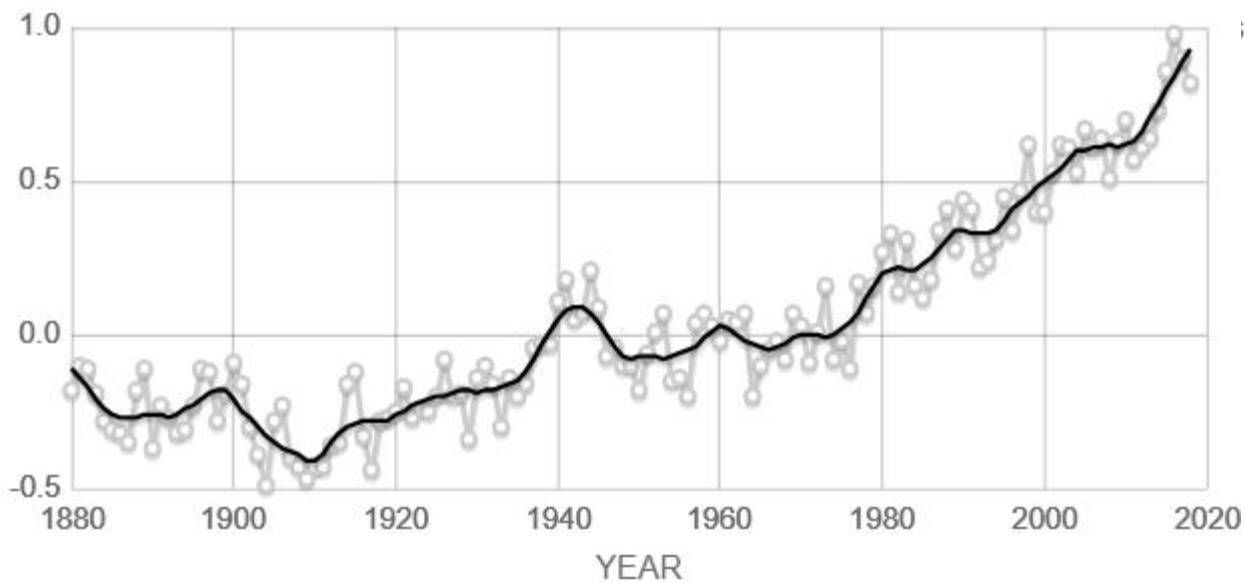
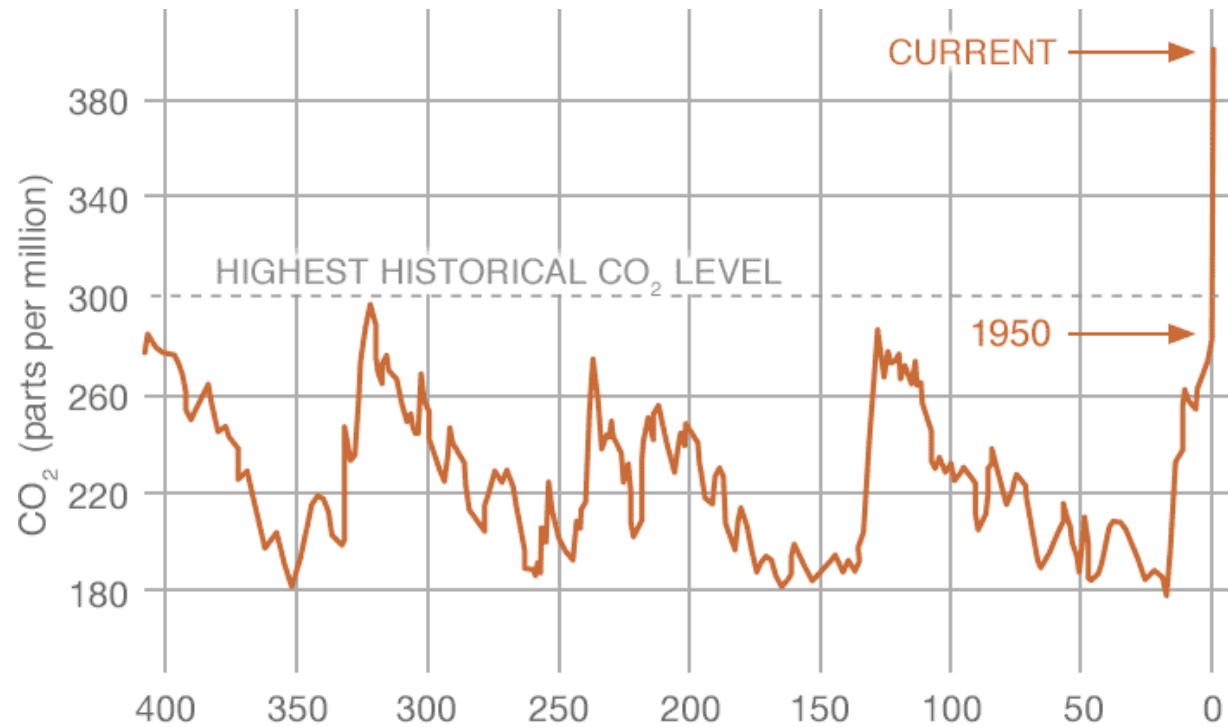




# Implications of COP26 and of the Green Deal

New situation stop talking, start acting

- Price for carbon emissions
- Ambitious zero carbon strategies (2030, latest 2050 – to keep global warming below 1,5 C increase)
- New opportunities for decarbonized business
- Booster for green economy and innovations



before today (0 = 1950)



# CARBON FOOTPRINT REPORT 50 CZ COMPANIES

Data 2019, study published by



[www.ci2.co.cz](http://www.ci2.co.cz)

- 44 % reporting only as part of global corporation
- 10 % reports for the Czech operation
- 46 % do not report neither inform at all
- 52 % commits decrease of CO2 emissions (85% foreign)
- 78 % non-disclosure are CZ companies
- 88 % having commitments reflect them in their plans
- 6 companies published zero carbon commitment

# Structure of the carbon footprint

**SCOPE 1** (přímé emise) – aktivity, které spadají pod daný podnik a jsou jím kontrolovány, při nichž jsou emise uvolňovány přímo do ovzduší. Jde o přímé emise. Zahrnují například emise z kotlů či generátorů spalujících fosilní paliva v podniku, emise z mobilních zdrojů (např. automobilů) vlastněných podnikem či emise z průmyslových procesů, emise ze zpracování odpadů či čištění odpadních vod v zařízeních provozovaných podnikem.

**SCOPE 2** (nepřímé emise z energie) – emise spojené se spotřebou nakupované energie (elektriny, tepla, páry či chlazení), které nevznikají přímo v podniku, ale jsou důsledkem aktivit podniku. Jde o nepřímé emise ze zdrojů, jež podnik přímo nekontroluje, přesto má na jejich velikost zásadní vliv. Pokud podnik sám produkuje elektrinu/teplo a prodává je dalším odběratelům či pokud nakupovanou elektrinu/teplo prodává dalším odběratelům (například nájemcům) a množství této elektriny je měřeno, odečítá se od celkových Scope 2 emisí.

**SCOPE 3** (další nepřímé emise) – emise, které jsou následkem aktivit podniku a které vznikají ze zdrojů mimo kontrolu či vlastnictví podniku, ale nejsou klasifikovány jako Scope 2 (např. služební cesty letadlem, ukládání odpadu na skládku, nákup a doprava materiálu třetí stranou). Z definice vyplývá, že jde o nejširší a logicky nejméně přesně vymezenou kategorii. Zatímco Scope 1 a Scope 2 emise jsou mezi podniky dobře porovnatelné, Scope 3 emise jsou porovnatelné jen v omezené míře.

# Example of food companies

Accelerate, Transform, Regenerate:

## NESTLÉ'S NET ZERO ROADMAP

December 2020



Nestlé

Good food, Good life

### Nestlé's total GHG emissions by Scope

million tonnes of CO<sub>2</sub>e, in 2018

#### Scope 1

**Emitted directly** 3.3 3.0%

from sources we own or control such as on-site combustion (coal, natural gas, fuel for company's vehicle fleet).

#### Scope 2

**Emitted indirectly** 2.5 2.2%

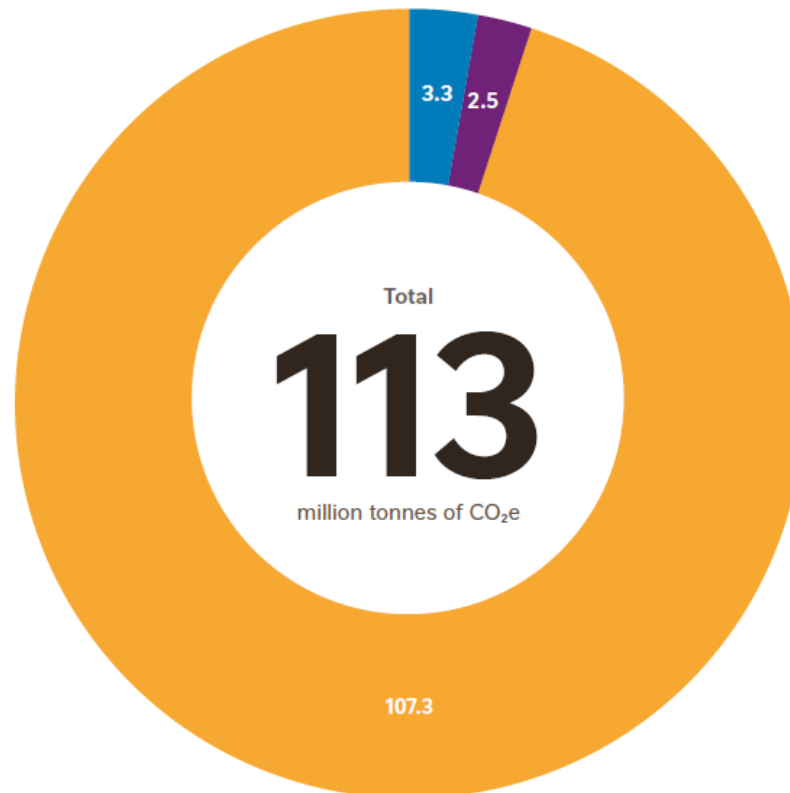
from the generation of purchased energy like electricity and heating/cooling network.

#### Scope 3

**All other indirect emissions** 107.3 94.8%

in our value chain, both upstream and downstream, such as sourcing and use of sold products.

Figures have been rounded.



# To keep the global warming below 1,5 C growth

## NESTLÉ'S NET ZERO ROADMAP

### Our path to regeneration for future generations

Solving the problems means identifying the problems. We found Nestlé emitted 92 million tonnes of greenhouse gas emissions in 2018\*. Now we know the extent, we know the road ahead.

\*Total GHG emissions was 123 million tonnes (CO<sub>2</sub>-equivalent) in 2018, 92 of which are in scope of our UN TNC program.

Companies and their emissions grow over time. That's why we're promising to be net zero based on our 2018 baseline, no matter how much our company grows.

— Path to net zero emissions by 2050  
 - - Business as usual

Emissions by operation  
 (million tonnes of CO<sub>2</sub>e, 2018)

- 88.1 Sourcing our ingredients
- 7.0 Manufacturing our products
- 71.0 Packaging our products
- 7.8 Managing logistics
- 9.0 Travel and employee commuting

### Moving faster

We've excited to hit the road naming. We're accelerating our work in manufacturing, packaging and carbon-neutral brands. We're also investing CHF 1.2 billion to help spark regenerative agriculture across our supply chain, as part of a total investment of CHF 9.2 billion by 2025.

#### Our milestones

- 100% electrification free for primary supply chain by 2022
- Switch our global fleet of vehicles to lower-carbon options by 2022
- 100% certified sustainable palm oil by 2025
- 30% renewable electricity in all our sites by 2025
- 100% of our packaging recyclable or reusable by 2025
- 100% certified sustainable cocoa and coffee by 2025
- Source 20% of key ingredients through regenerative agricultural methods by 2025
- Plant 20 million trees a year
- Nestlé Waters becomes carbon neutral by 2025
- Cut virgin plastic in our packaging by a third by 2025

By 2025, we will reduce our emissions by 20%

### Scaling up

Further down the greener path, we will invest in new technologies and fundamental changes to our products and businesses around the globe.

- Use more renewable thermal energy in our manufacturing
- Plant 300 million trees by 2030
- Source 50% of key ingredients through regenerative agricultural methods by 2030

By 2030, we will reduce our emissions by 50%

### Delivering our promise

Advanced agricultural techniques will deliver a regenerative food system at scale, supported by zero-emission logistics and company operations. We will balance any remaining emissions through high-quality natural climate solutions that benefit people and the planet.

By 2050, we will reach

# net zero

2018

2021

2025

2030

2050



# ASAHI strategic goals



## Pilzeňský Prazdroj

## STRATEGICKÉ CÍLE

3

20 25



### UHLÍKOVÁ NEUTRALITA

Veškerá elektřina pro naše pivovary bude pocházet z obnovitelných zdrojů.



### VODA

Snížíme průměrnou spotřebu vody potřebnou na výrobu 1 hl piva na 2,78 hl.



↓ 30%

### ODPADY

O 30% snížíme celkový objem odpadu.



Žádný odpad z našich pivovarů neskončí na skládce.

20 30



### UHLÍKOVÁ NEUTRALITA

Naše pivovary budou uhlíkově neutrální.

O 30% snížíme uhlíkovou stopu našeho dodavatelsko-odběratelského řetězce.



### VODA

Voda pro naše pivovary bude pocházet jen z udržitelných zdrojů.



### CIRKULARITA OBALŮ

Všechny obaly našich výrobků budou znovu použitelné či recyklovatelné a zároveň alespoň z poloviny vyrobené z recyklátu.



Ukončíme používání jednorázových plastů vyrobených z primárních surovin.



### SUROVINY

Všechny zemědělské suroviny používané pro naše pivo budou z udržitelných zdrojů.

20 50



### UHLÍKOVÁ NEUTRALITA

Naše uhlíková stopa bude nulová napříč celým dodavatelsko-odběratelským řetězcem.



**Jannis Samaras**

Kofola Group CEO



UHLÍKOVÁ STOPA

OCHRANA VODY

SUROVINY A PRODUKTY

ODPADOVÁ POLITIKA

LOKÁLNOST

LIDÉ

# UHLÍKOVÁ STOPA

Snižujeme uhlíkovou stopu našeho podnikání tak, abychom do roku 2030 dosáhli uhlíkové neutrality. Identifikovali jsme 20 nejdůležitějších faktorů a aktivně s nimi pracujeme: Snižujeme spotřebu energií a preferujeme využívání zelené elektřiny. Na Slovensku dosahuje její podíl již 100 %. Omezujeme spotřebu paliva při dopravě – jak vstupních surovin, tak finálních výrobků. Část uhlíkové stopy, kterou nedokážeme zredukovat, plánujeme offsetovat výsadbou stromů a dalšími zelenými opatřeními.



## PROVOZUJEME NEJVĚTŠÍ FLOTILU KAMIONŮ NA CNG VE STŘEDNÍ EVROPĚ

Skoro polovina naší flotily nejezdí na naftu, ale na stlačený zemní plyn (CNG). Ve srovnání s běžnými kamiony je jejich uhlíková stopa o čtvrtinu nižší. V roce 2020 naši CNG flotilu posílíme na celkových 60 kamionů. Provozujeme dokonce vlastní CNG čerpací stanici, kterou jsme otevřeli i pro veřejnost.

## MEZIROČNĚ JSME SNÍŽILI UHLÍKOVOU STOPU O DESETINU

Uhlíková stopa Skupiny Kofola v tunách CO<sub>2e</sub>



### OBLAST 3

Další nepřímé emise v důsledku aktivit Skupiny Kofola (zejména vozový park na leasing, nakupované zboží, odpady)

### OBLAST 2

Nepřímé emise z nakupovaných energií

### OBLAST 1

Přímé emise do ovzduší z aktivit Skupiny Kofola

# Indirect impacts of GHG company commitments

## Unexpected coalitions for agriculture reform

**3,2**

MILIONY VLASTNÍKŮ  
PŮDY

**4 200**

TISÍC HEKTARŮ  
ZEMĚĎELSKÉ PŮDY V  
ČR

**74**

% PŮDY JE  
PRONAJÍMÁNO

nadace  
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| LIDÉ A PŘÍRODA

## Živá půda

Živá půda pomáhá zastavit masivní znehodnocování půdy. Vlastníkům radí, jak zlepšit kvalitu své půdy a zhodnotit ji. Zemědělcům pomáhá hospodařit lépe a udržitelně. Veřejnost zapojuje do monitoringu eroze. U politiků lobbuje za udržitelné zemědělství a ochranu půdy.

#pudochranci





# Risks

- Complexity of ecosystems compared to business KPIs
- Overestimating CO2 emissions market
- Off setting – new business models; reputation risk of the whole concept
- Example of tree plantings
  - 1 tree 80 years (2100) – 3,5 tons CO2
  - In 30 years (2050) – 1,2 tons CO2
- Fair reporting – annual growth of biomass
- Other ecological functions of trees are more important than sequestration of CO2
- Carbon seq potential of other than forest ecosystems?  
wetlands, meadows, peatlands, humus in farming soils



# GREEN ECONOMY: EXCUSE OR SOLUTION?

Q 1: CAN TECHNOLOGY ITSELF COMBAT GLOBAL IMPACT OF GROWING POPULATION ON CLIMATE CHANGE AND ON DEGRADATION OF ECOSYSTEMS?

Q 2: IS THE CONSUMER SOCIETY PREPARED AND ABLE TO CHANGE ITS BEHAVIOUR? WHAT MAKES IT HAPPEN? DID GRETA THUNBERG START IT?

Q 3: WILL COVID19 CRISES ACCELERATE REFORM OF THE WORLD ECONOMY OR IS IT GOING TO BE FLASH BACK?

Q 4: WHAT EACH OF US CAN DO ON INDIVIDUAL LEVEL?

# PILLARS OF THE GREEN ECONOMY:

- Karl Burkart defines a green economy as based on six main sectors:[\[6\]](#)
- Renewable energy
- Green buildings
- Sustainable transport
- Water management
- Waste management
- Land management

# TRANSITION TOWARDS GREEN ECONOMY

## 10 CONDITIONS:

- Open and competitive markets
- Metrics, accounting, and reporting
- Finance and investment
- Awareness
- Life cycle approach
- Resource efficiency and decoupling
- Employment
- Education and skills
- Governance and partnership
- Integrated policy and decision-making

# GREEN ECONOMY: FACTOR 4, FACTOR 10 → CIRCULAR ECONOMY, ZERO CARBON.....

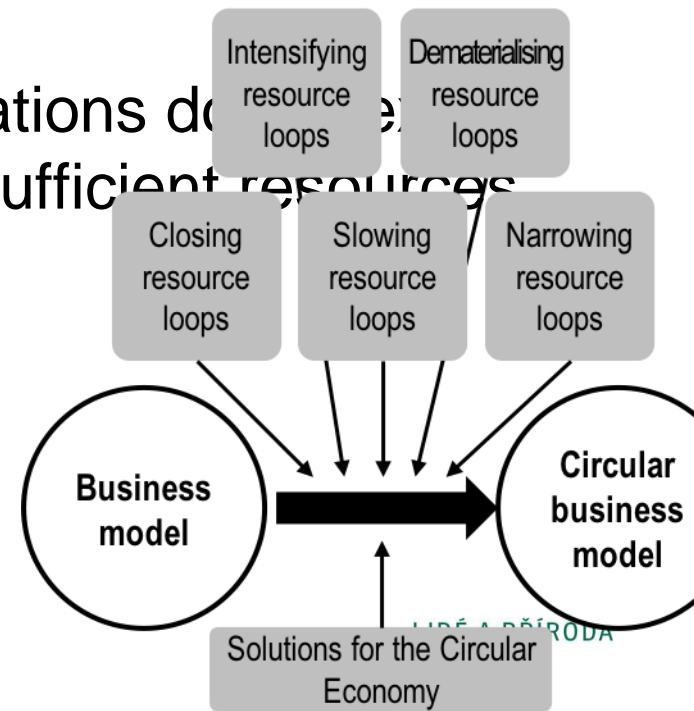
Factor 10 evolved from the less dramatic **Factor 4**

Early 90-ies by [L. Hunter Lovins](#) and [Amory Lovins](#) of the [Rocky Mountain Institute](#) and [Ernst von Weizsäcker](#), from the [Wuppertal Institute](#) for Climate, Environment & Energy.

*Factor 4* explains how simple it is for nations to achieve 400% savings with existing technologies.

The goal of Factor 10 is to assure that nations do not exceed the planet's [carrying capacity](#) but leave sufficient resources for future generations.

Latest concept of **circular economy** is based on SDGs (EU-2014)







# SUSTAINABLE DEVELOPMENT GOALS



Developed in collaboration with **TROLLBACK + COMPANY** | [TheGlobalFundforTrollback.com](http://TheGlobalFundforTrollback.com) | +1 212 826 1110  
For further images contact: [sp@trollback.com](mailto:sp@trollback.com)

# First priority: no consumption!

**CIRCULAR ECONOMY**



**LINEAR ECONOMY**



**REFUSE**

ACQUISITION OF RAW MATERIALS

**REFORM**

DESIGN

**REDUCE**

PRODUCTION AND RE-TRANSFORMATION

**RECYCLE**

RECYCLING END-OF-LIFE TREATMENT

**CIRCULAR ECONOMY**

TRANSPORTATION DISTRIBUTION

FINAL DESTINATION WITH MINIMUM WASTE

CONSUMPTION USE REUSE AND REPAIR

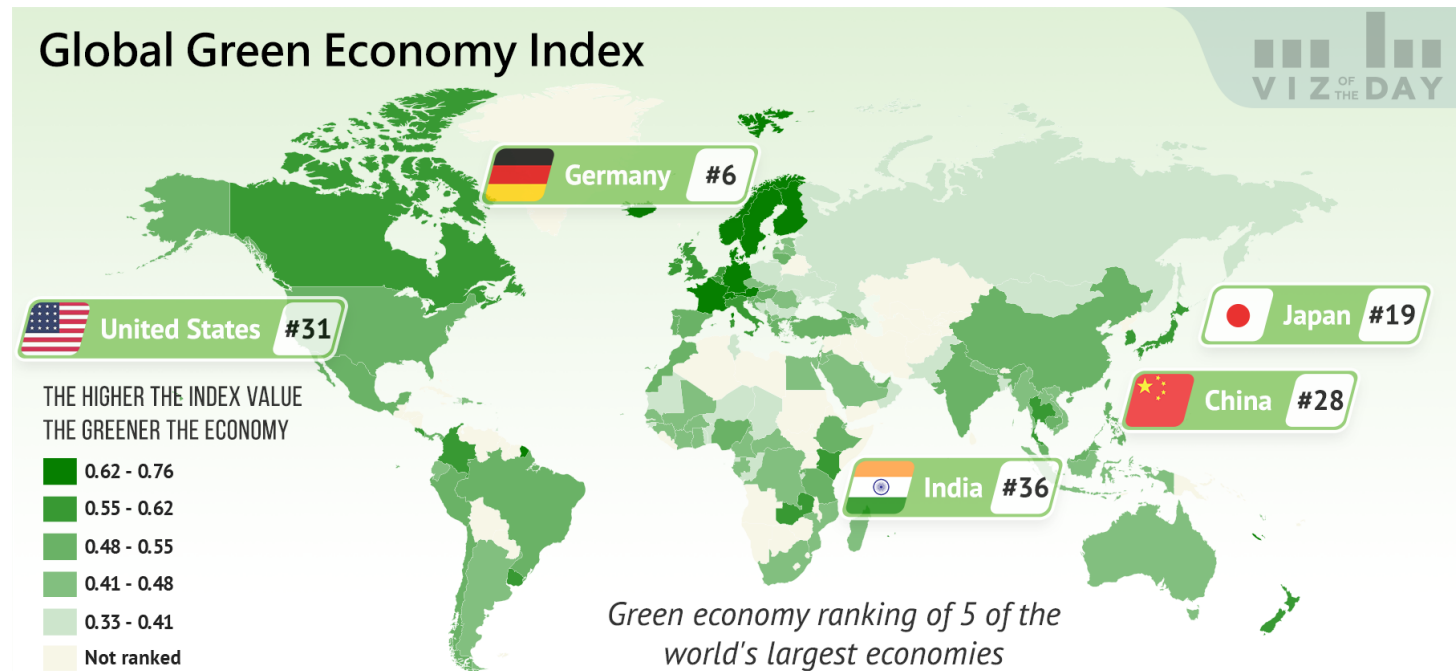
**REUSE**



# GREEN ECONOMY

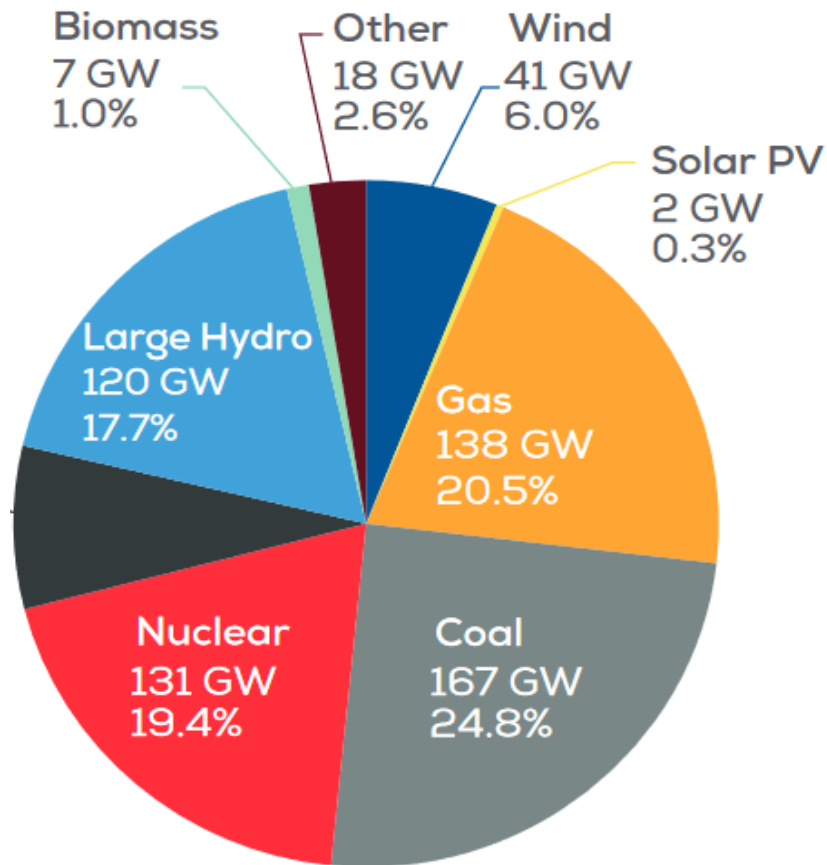
Increasing share of „green bussineses“ on the markets:

- Energy sector
- Smart cities and green buildings, E-mobility
- Recycling, Organic agriculture, food, cosmetics, etc.

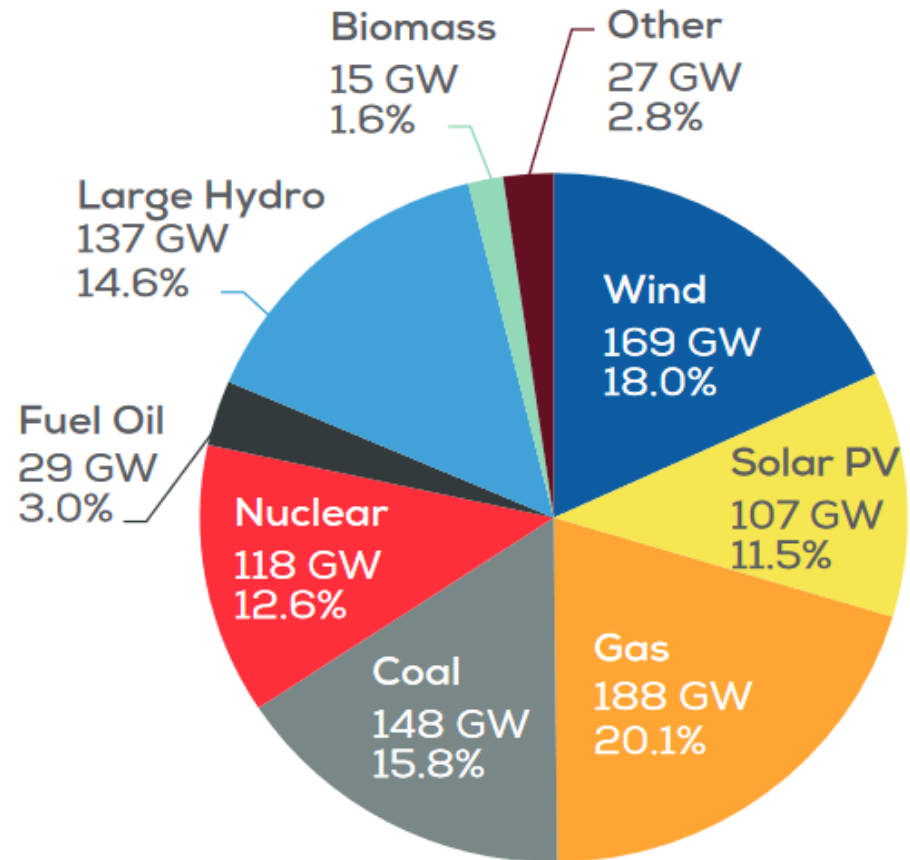


# ENERGY SHIFT IN EUROPE

Installed capacity in 2005 and 2017



2005



2017

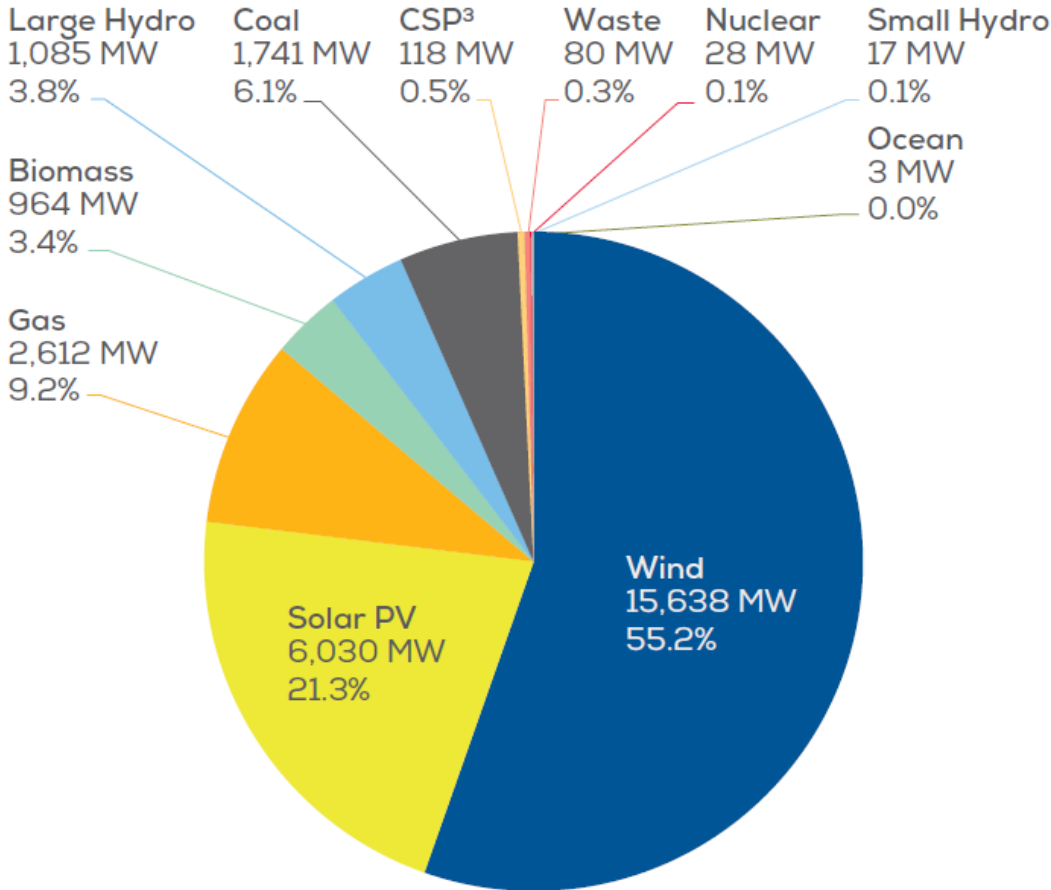


# RENEWABLE ENERGY FIRST – HOT ISSUE!

## 1.2 TOTAL NEW POWER GENERATION IN 2017

FIGURE 3

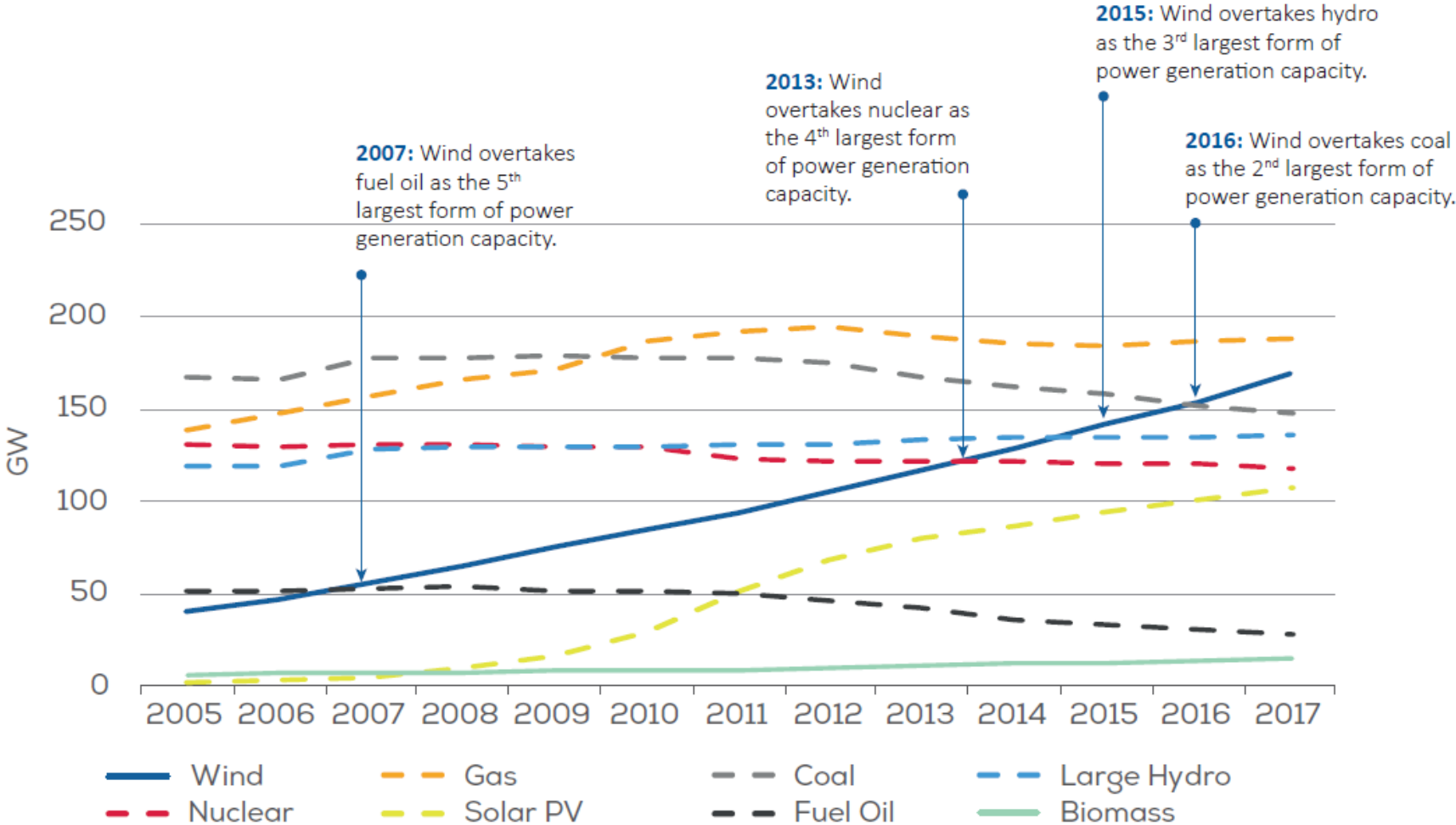
Share of new installed capacity. Total 28,316 MW





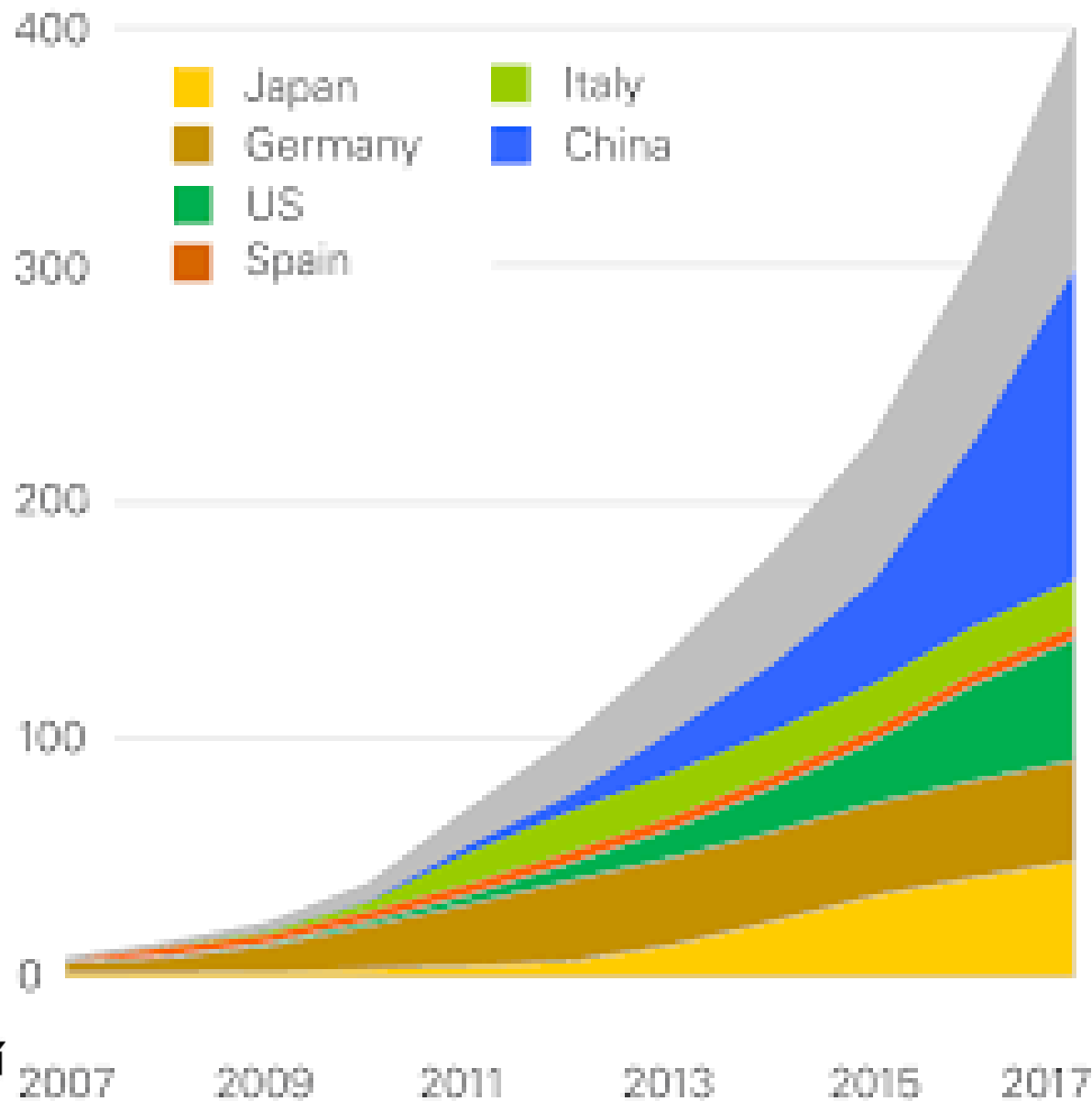
# RENEWABLE ENERGY FIRST: WIND

**FIGURE 1**  
Total power generation capacity in the European Union 2005-2017



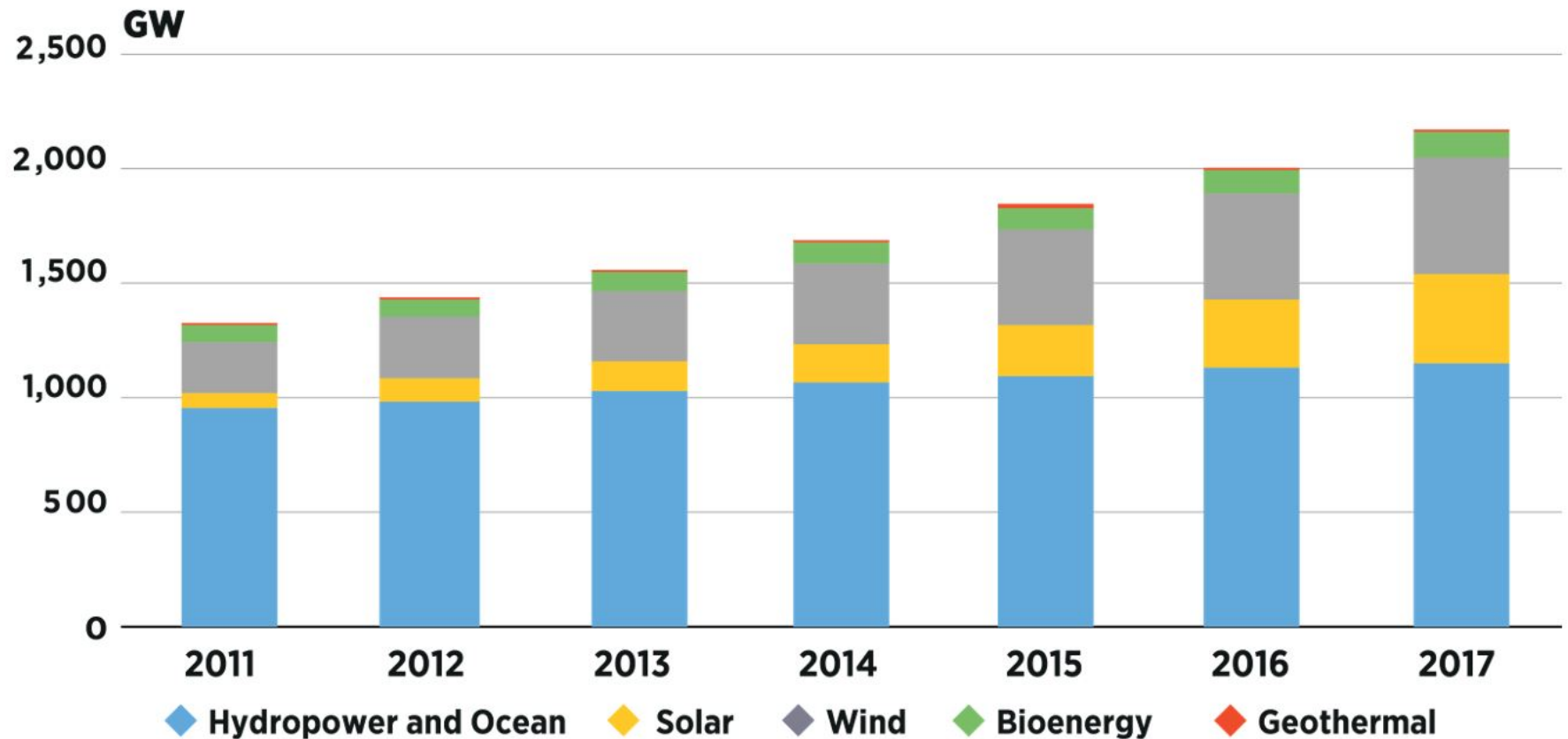
Source: WindEurope

# SOLAR ENERGY



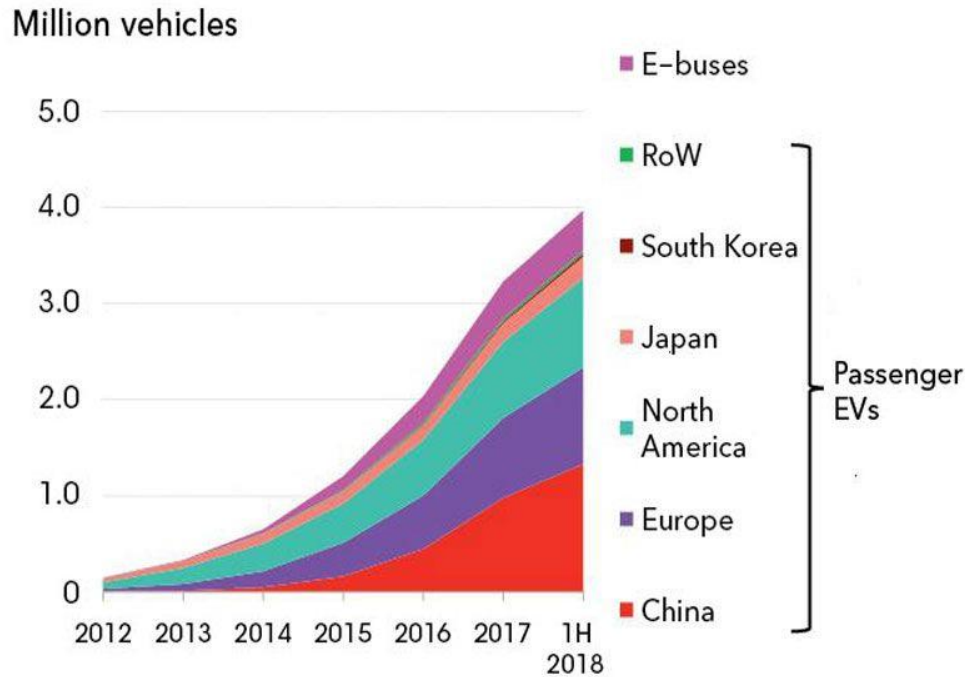
# RENEWABLES GLOBALLY

## Total Renewable Power Generation Capacity, 2011-2017



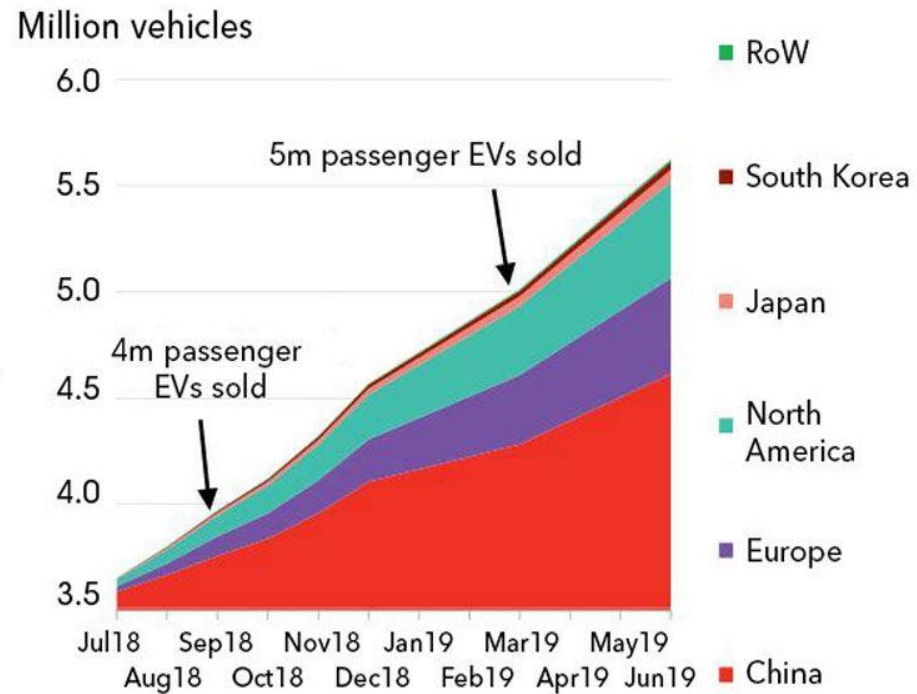
# ELECTRIC CARS

Figure 1: Cumulative global EVs sold



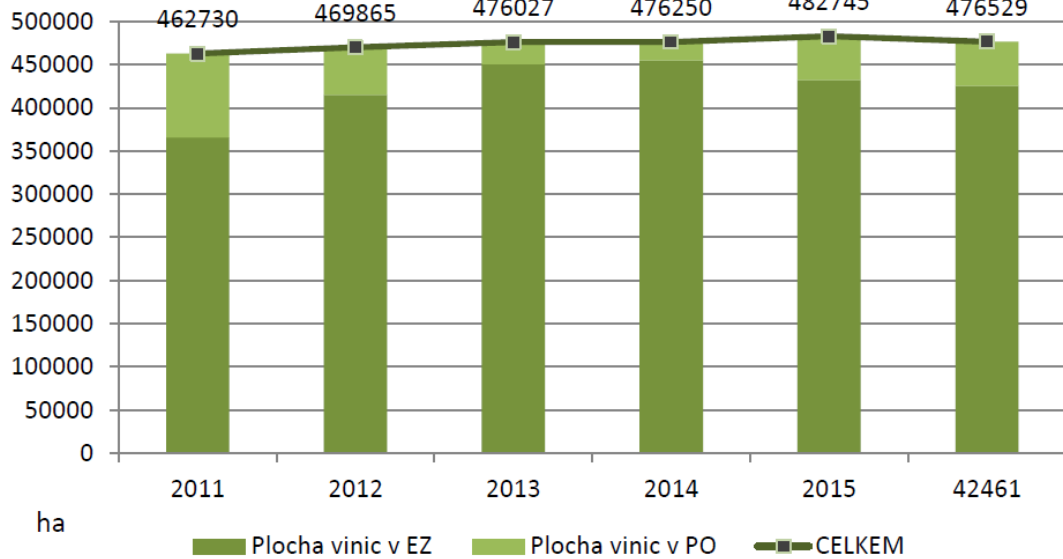
Source: Bloomberg NEF, Marklines

Figure 2: Forecast cumulative global passenger EVs sold



# ORGANIC AGRICULTURE, precise farming

Vývoj ekologického zemědělství



## Innovations, young farmers





# NEW CONCEPT: REGENERATIVE AGRICULTURE

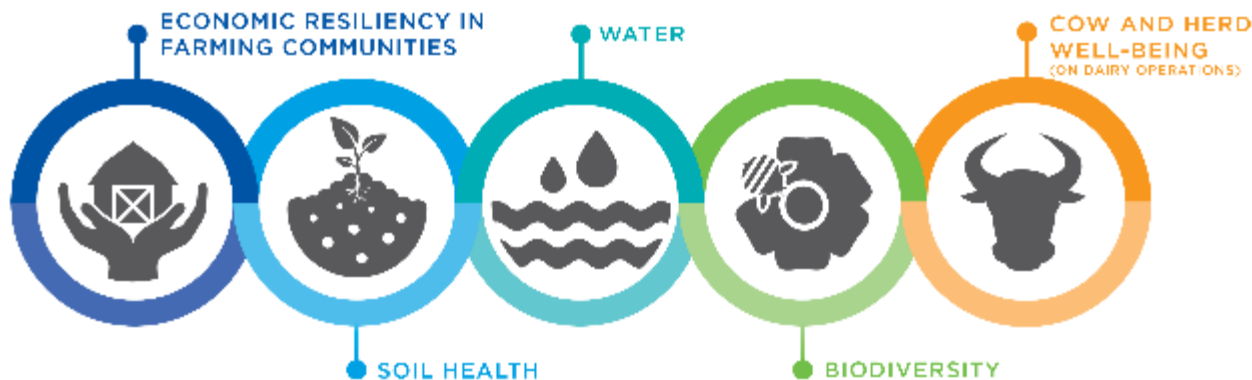
More direct connection with carbon sequestration

More acceptable by standard farming companies while improving biodiversity and nutrient cycle

Supported by food corporations

Challenge in **controlling** mechanisms

WE ARE MEASURING IMPACT ACROSS 5 KEY GOALS:



# COVID and the green economy: 5 insights

**1. Economies have been even harder hit than all expectations**

**2. The Green Economy has emerged as one of the top solutions to the global crisis**

- Green spending is already shaping national and regional stimulus and recovery packages, with the EU leading the charge by doubling down on their Green Deal

**3. Government is back in favour but the social contract is under considerable pressure from all directions**

**4. There have been winners and losers in the business and finance world**

OECD: "at least two of three jobs at risk are in an SME, and more than 30 percent of all jobs at risk are found within microenterprises consisting of nine employees or fewer"

**• 5. The call for “system reform” is coming from both usual and unusual suspects**

# FACTOR 10 IN PRACTICE

## Zero Carbon facility Open Gardens















<http://www.otevrenazahrada.cz/OZ-2/files/d8/d8bfe14b-ab62-43bb-879a-e0644b9181eb.pdf>

<http://www.otevrenazahrada.cz/energie>



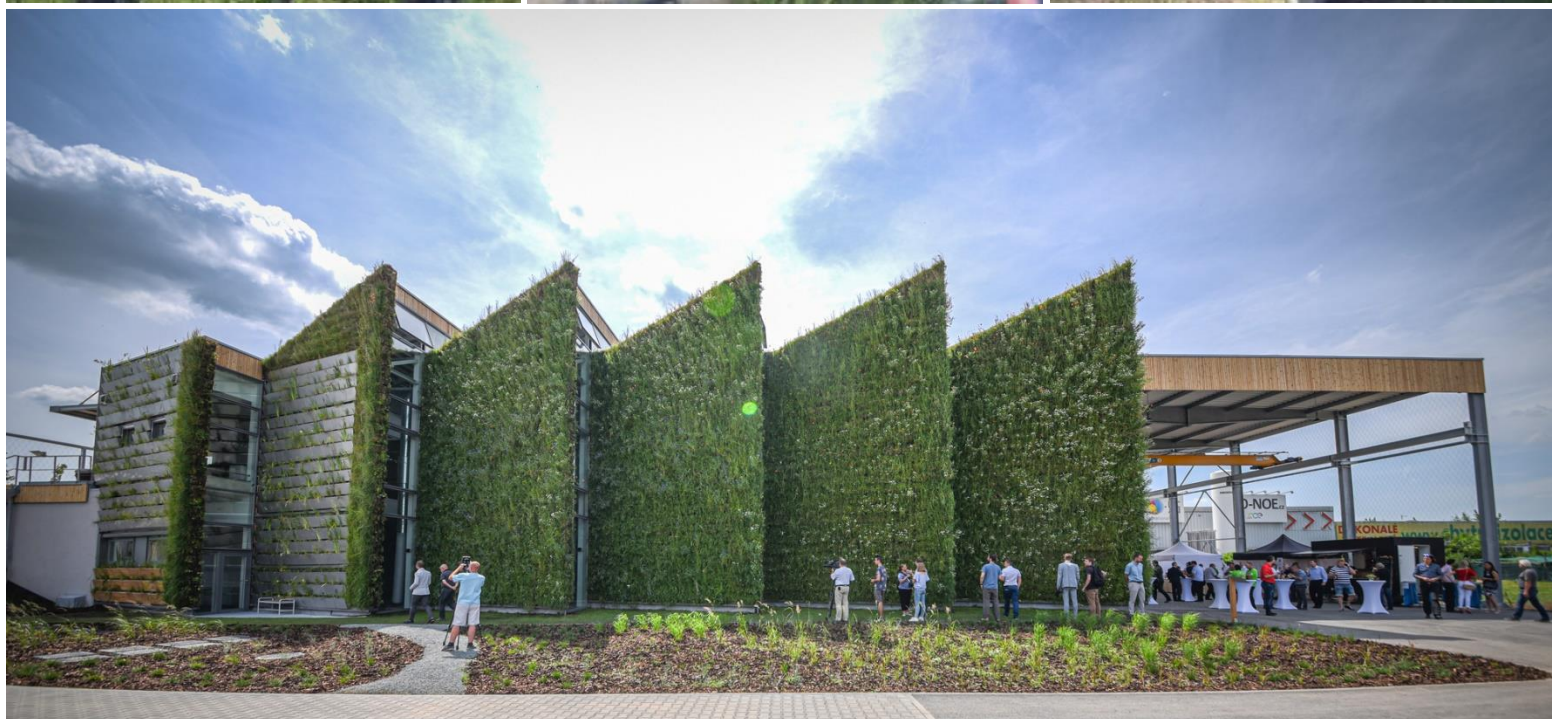
# FIGHT FOR WATER AND UHI

**100 HECTARS ARABLE LAND BUILT PER DAY !  
= 1 MILLION SQ METRES PER DAY**





# FIGHT FOR WATER AND UHI



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# WHAT DO WE NEED FOR SOCIAL CHANGE?

- **More data, more evidence?**
- **More examples?**
- **Leadership? (Zero C business by 2050?)**
- **Stricter laws, policies?**
- **Big crises or catastrophe? War for resources?**
- **Exodus of nations?**
- **Revolution?**
- **Back on trees?**
- **Start action on individual level!**



# Thank you for attention



**Nadace Partnerství – people and nature**