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Institut de Recherche et de Communication sur l'Europe
Le Think et Do Tank des dynamiques européennes



*« Solidarité, autonomie, interdépendance,
sécurisation, segmentation et optimisation
énergétique européenne »*

16 mai 2019

Energies Renouvelables

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A sharp expertise at the service of the entire sector since 2008

Positioning at the heart of the eco-system

Corporates, industrials
(energy, water, recycling, transport, industry)

Investors
(Venture capitalists, private equity)




Community platform association dedicated to the promotion of Cleantech in France and in the world since 2008

Advisory company and investment bank provides strategic and financial advice since 2010

State authorities
(local authorities, guardianships, etc.)


Growing companies
(start-ups, companies at the development stage)

Sectors of activity

- France Cleantech covers a complete range of sectors related to the reduction of energy consumption, and of primary resources :

Renewable energies 

Energy efficiency / Smart grids 

Eco-technologies / Water / Waste 

Eco-mobility 

Ressource efficiency / Green Chemistry 



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VERTSUN (2017): simpler, cheaper and closer solar

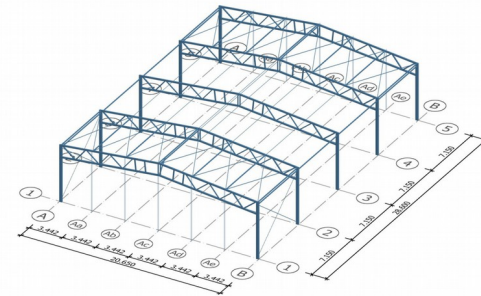
For individuals who want to produce their electricity and be autonomous: self-consumption a social tendency of substance



1 household out of 1000 is equipped in France today

RTE forecasts 1 household out of 10 in 2028 (4 million customers)

For farmers: an optimized warehouse designed with the world leader Vallourec tube: Cost, Animal welfare, Landscape integration



15,000 sheds in France, more than 300,000 farmers remain to be equipped



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3 issues to be discussed

- **Decentralize or concentrate**
- **Innovate or Scale-Up**
- **One market or 28 markets**



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Decentralize or concentrate

Renewable energies

=> Solar: PV, Thermal, Concentration (CSP)

=> Wind: big, small

=> Biomass Energy and microalgae

=> Energy of water and sea (7 marine processes)

=> Soil energy (geothermal surface and deep)

=> CO2 Capture and Storage - CCS

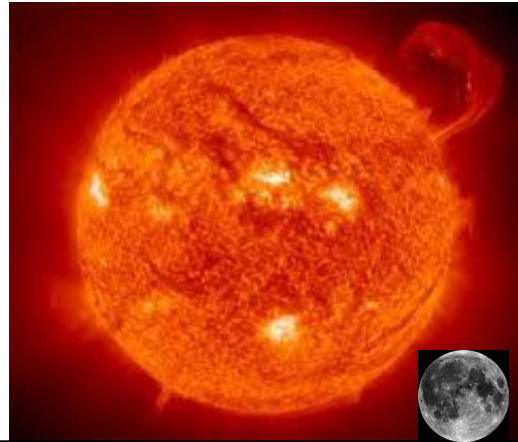


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clean
tuesday

1 Source



Conversion
process
(a few seconds to
a few years)

Solar PV ou
thermal

Hydro

Ground
energy

Biomass

Combustibles
fossiles

Wind

Energy
Océan

Waste to
energy

Deep geothermal

Solar energy is diffuse so renewable energies are diffuse

The ressource for renewable energies is the open space



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Decentralize or concentrate

Consequence for Europe

=> Little very large « unused » open space is available

=> Deconcentration could be the best way : rooftops, roads, fields etc...



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Innovate or scale up

Between the beginning of the 2000's and 2010, the main resources were dedicated to innovation, « Cleantech » : billions of \$ invested in « new » solar, wind, ocean energy etc

Since then, the main resources are dedicated to the deployment of renewable production (and storage) plants

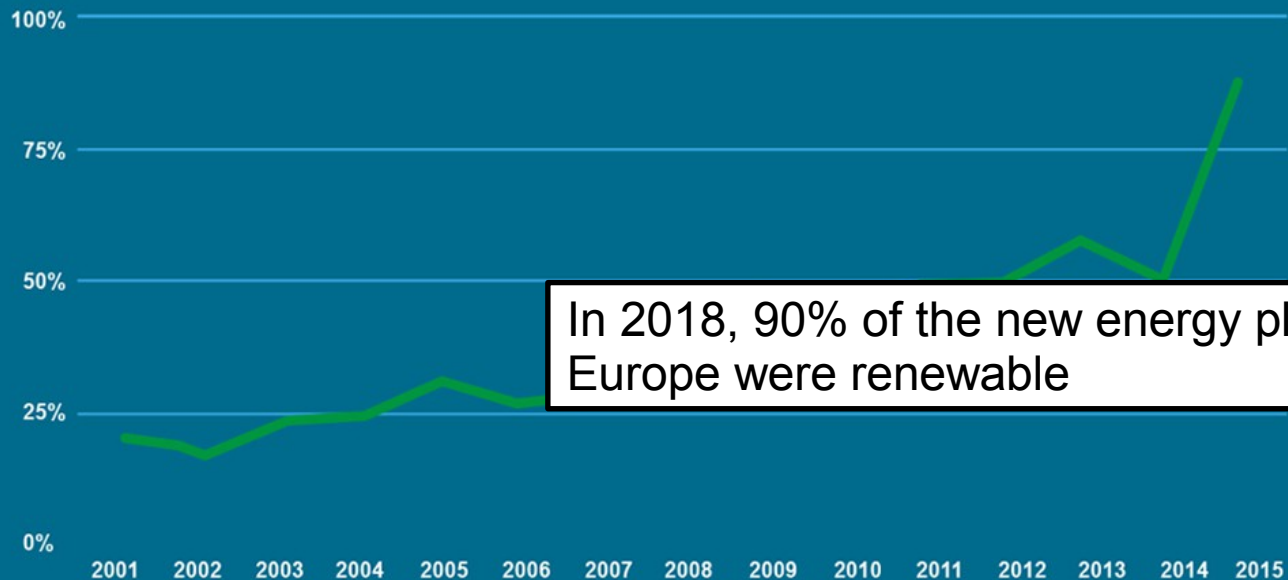


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CROISSANCE ANNUELLE DE LA PART DES ÉNERGIES RENOUVELABLES DANS LA NOUVELLE GÉNÉRATION D'ÉLECTRICITÉ



In 2018, 90% of the new energy plants in Europe were renewable

#TRANSITIONFACTS



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Innovate or scale up

Shall we consider that today's technologies (mostly Silicon Solar Panels, LiH batteries, 3 blades Wind Turbines) are the « right tools » to mitigate the climate change

Or shall we spent 10 more years to developp new technologies (perovskites, new batteries, ocean energy devices..), not speaking of nuclear

The issue of Europe : it's not a key player on either side...



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One market or 28 markets

In Europe, we got the same sun, we got the same wind, we got the same biomass, we got the same (chinese) solar panels, we got the same (danish) wind turbines

But we got 28 regulations



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One market or 28 markets

Would it be impossible to have just one market, in each category (individuals to utility scale) :

- **Same Feed In tariffs (or tenders process) ?**
- **Same permitting process ?**
- **Same administrative process ?**

All Europe 28 renewable markets are 50% of the size of the unique chinese market, same size as indian, american market. That's up to us...



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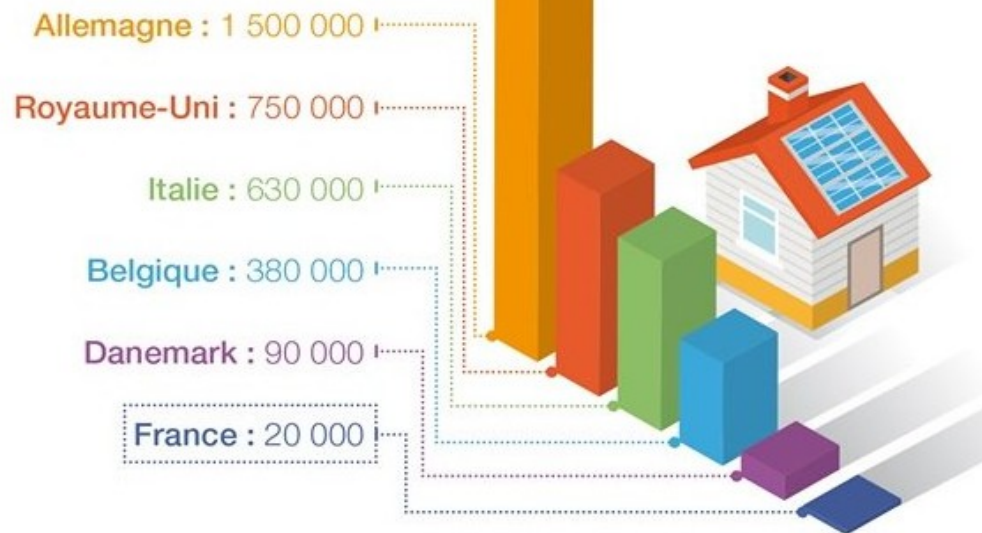
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One market or 28 markets

And this is the result

LES AUTOCONSOMMATEURS EUROPEËNS





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