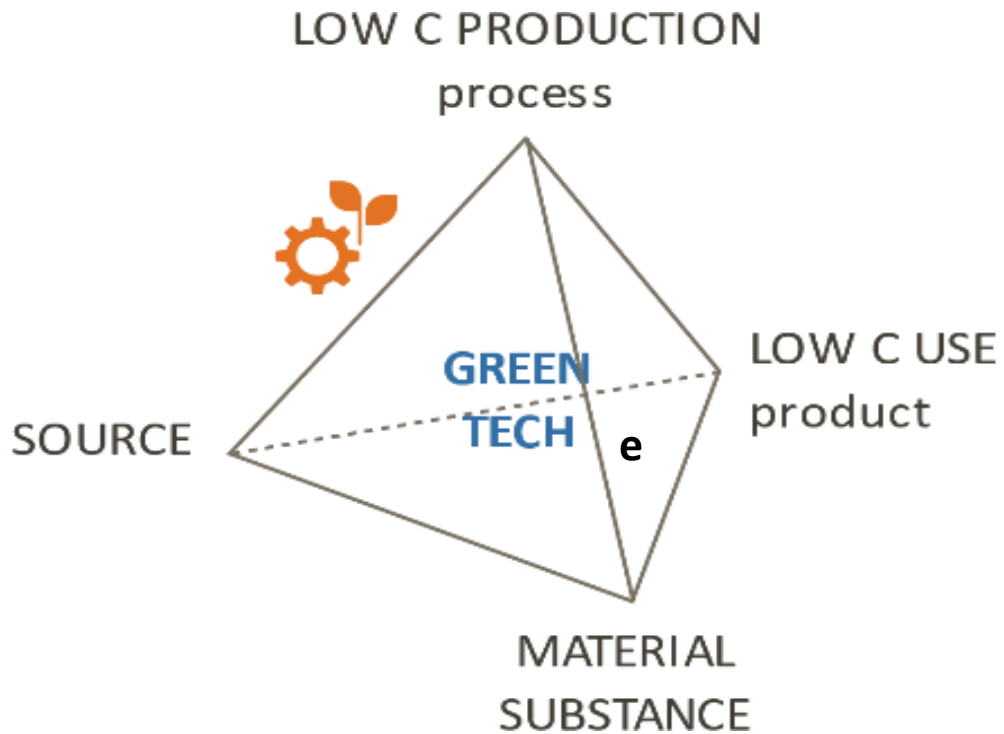


Defossilization of the construction sector in Wallonia

Fabian SCUVIE
Senior Industry Specialist – Greentech
AWEX



The 4 ways of the Greentech



- 1) Through the sourcing of the raw materials : circularity, biobased, local,...
- 2) Through processes & logistics
- 3) Through the use of the product/service (ex: insulation, digital optimisation,...)
- 4) Through the characteristic of the product and the end of life management (biodegradable, non-toxic, circular,...)



The Walloon Ecosystem

Sustainable
building



Environment
& Energy



Construction sector in Wallonia – some figures

Turnover :
16,9 billion €

Added value :
4,5 milliards €

**Part of the sector in
walloon GDP :**
+/- 6 %

62.384 jobs
+ 5.033 jobs between 2015 et
T1/2023

35.000 companies ,
of wich +/- 24.000
indépendants

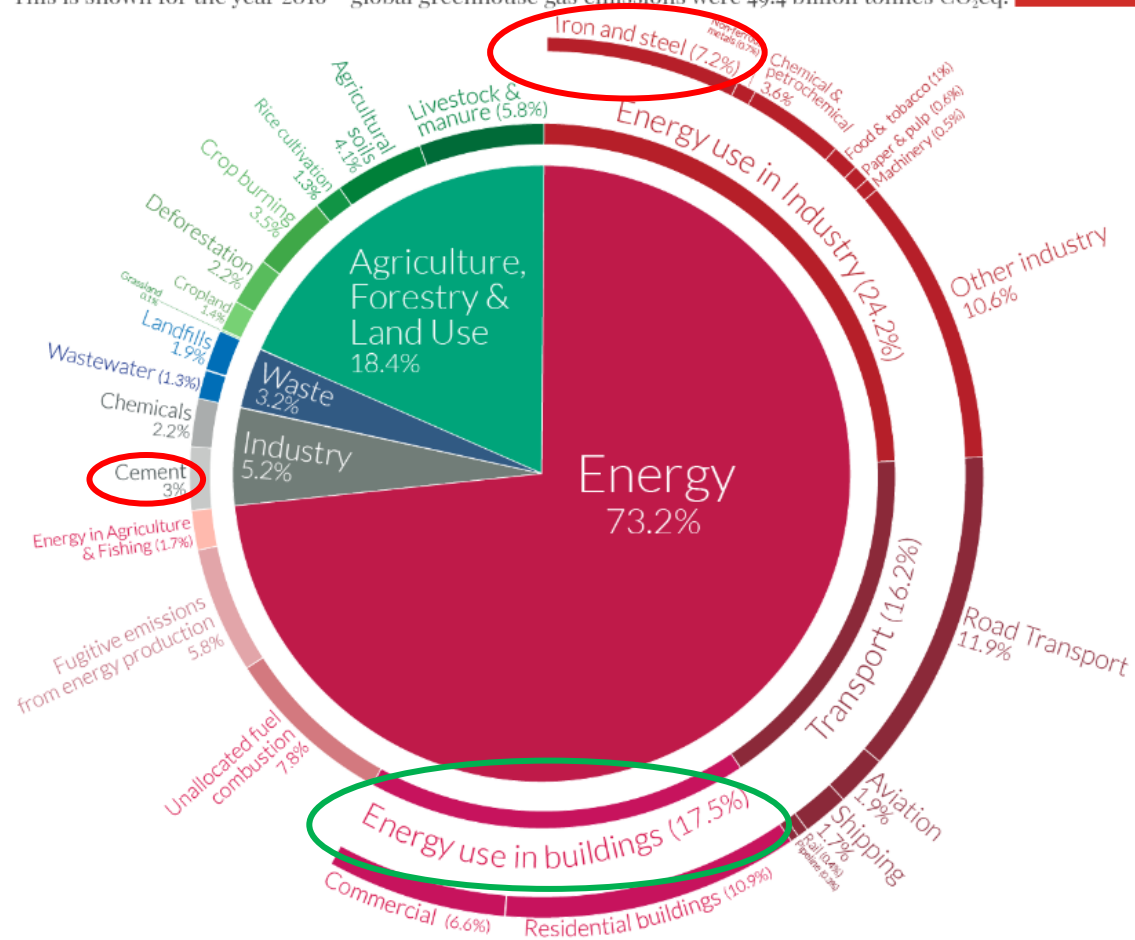
96,3 % = companies of
less 10 workers

1 million € invested in
Wallonia= 9,8 jobs en
Wallonia (4,7 directs
et 5,1 indirects)

CO₂ & Building

Global greenhouse gas emissions by sector

This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO₂eq.



Energy consumption & CO₂ emission by sector - Wallonia

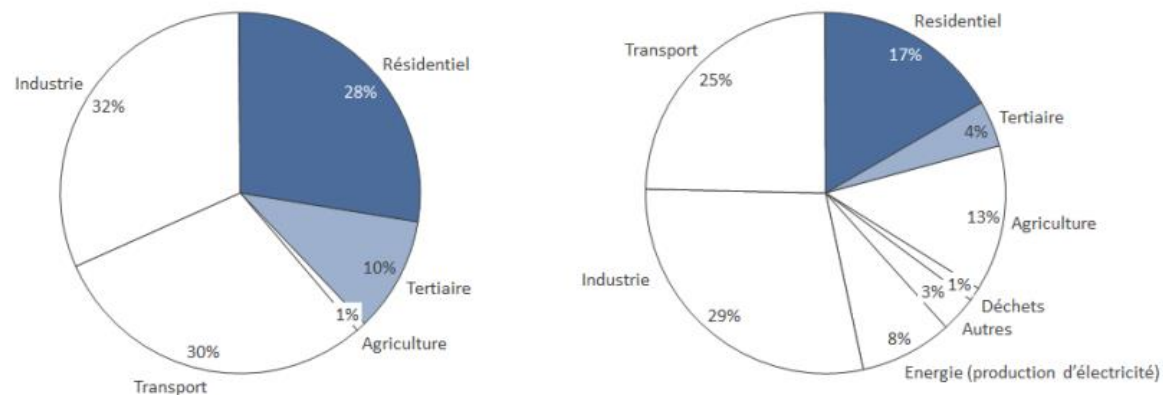


Figure 4. Répartition sectorielle des consommations d'énergie finale (gauche – SPW) et des émissions de GES (droite – AwAC) en Wallonie en 2017

OurWorldinData.org – Research and data to make progress against the world's largest problems.

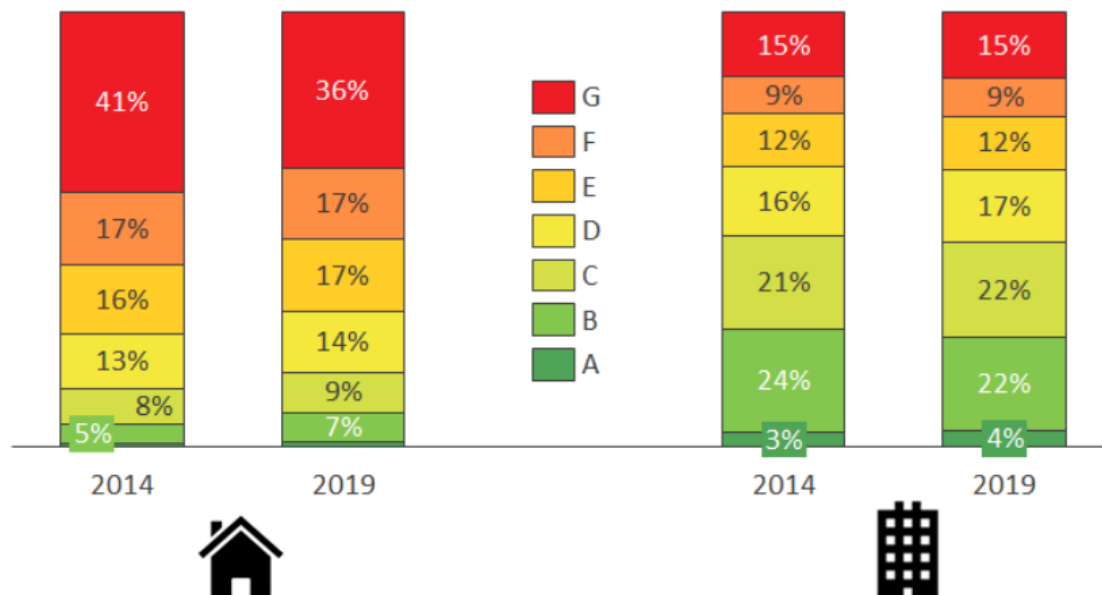
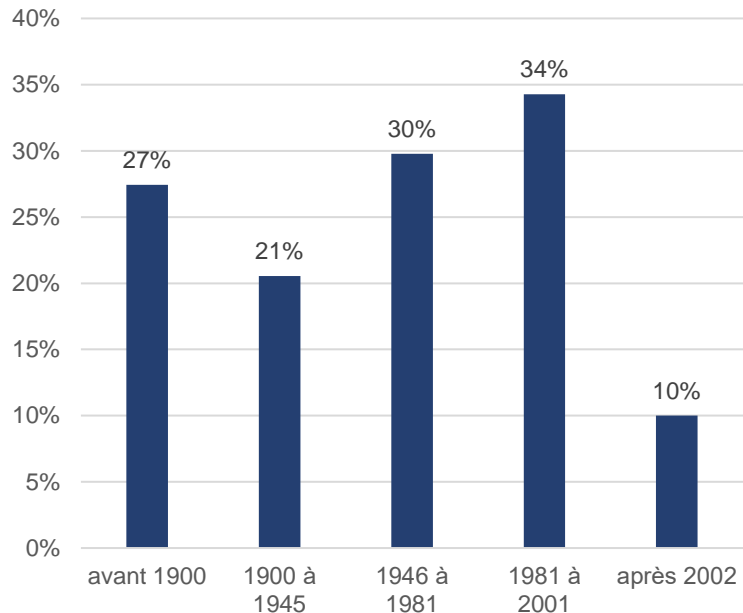
Source: Climate Watch, the World Resources Institute (2020).

Licensed under CC-BY by the author Hannah Ritchie (2020).

In the world



CO₂ & Building : a lot of work to do



In Belgium :

- 1%/year of medium energetic renovation
- 0,2%/year of strong energetic renovation

There's a country for old houses...

PEB label in Wallonia : a slow evolution



1.678.000 buildings



1.510.000 buildings to renovate



58.085/year



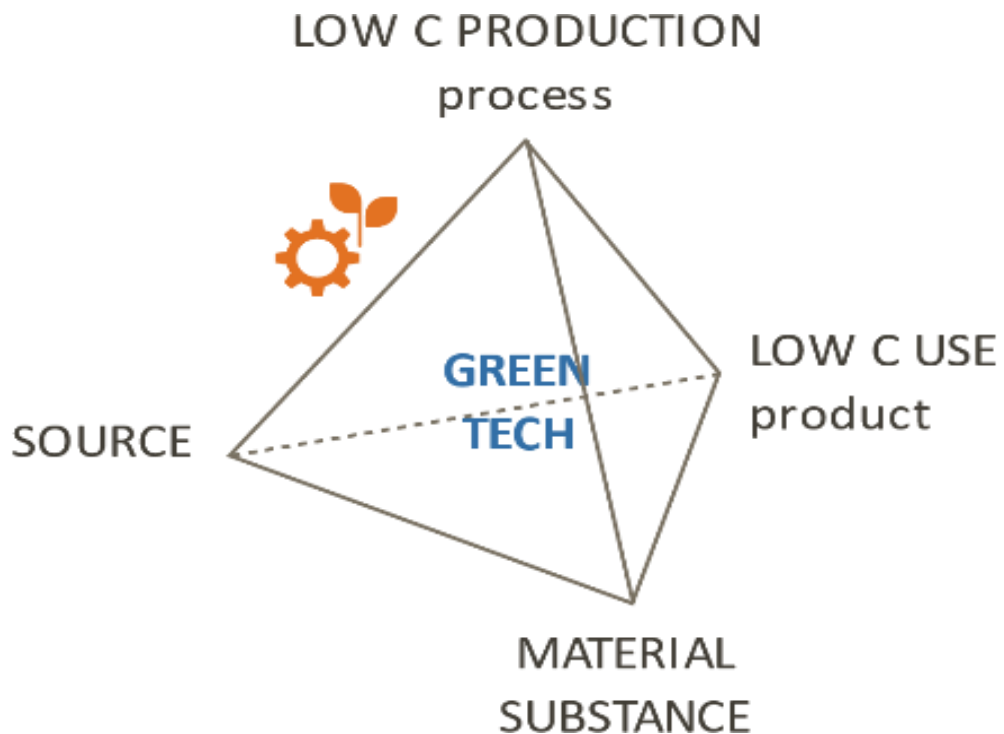
159/day



20/hour



How to « Greenify » buildings



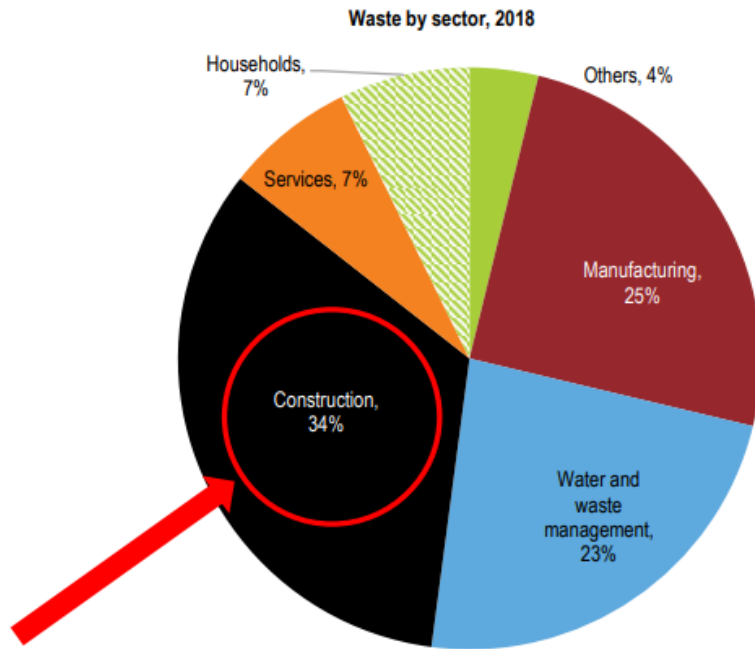
- 1) Raw material circularity (reuse, repair, recycle, re-engineering), biobased materials (wood, insulation,...), green energy
- 2) CCU – CCS (cement), industrialization
- 3) **!!! Renovation !!!**
- 4) Better materials

+ Sobriety : build less, smaller,...



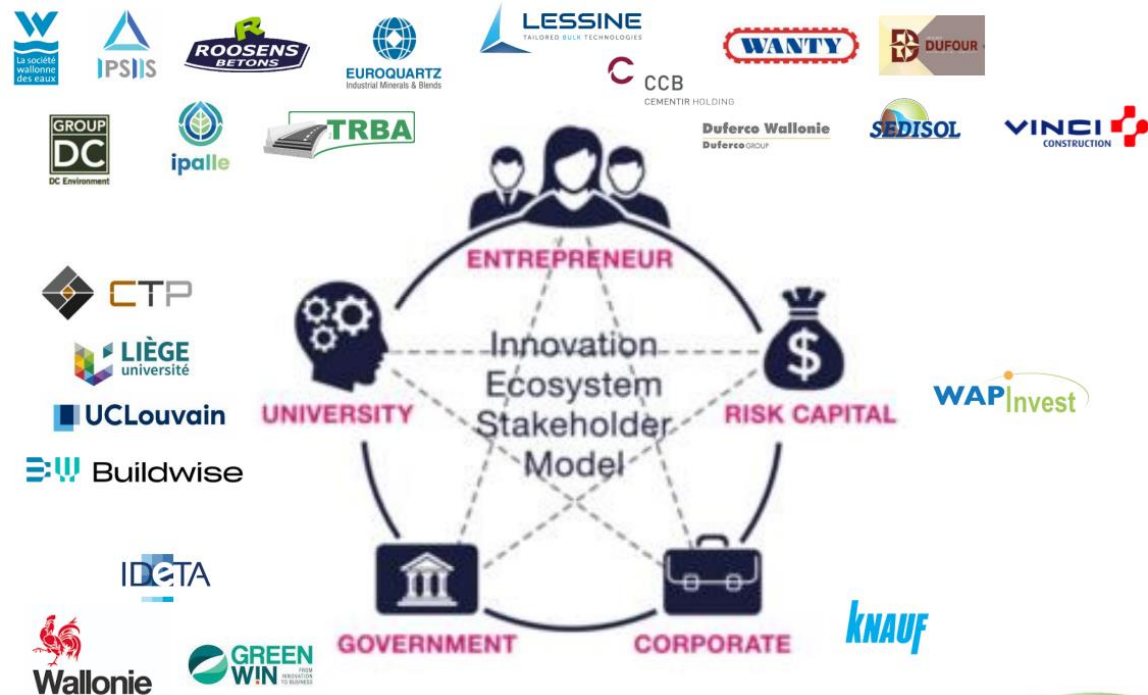
1. Circularity in raw materials

Remind innovation platform



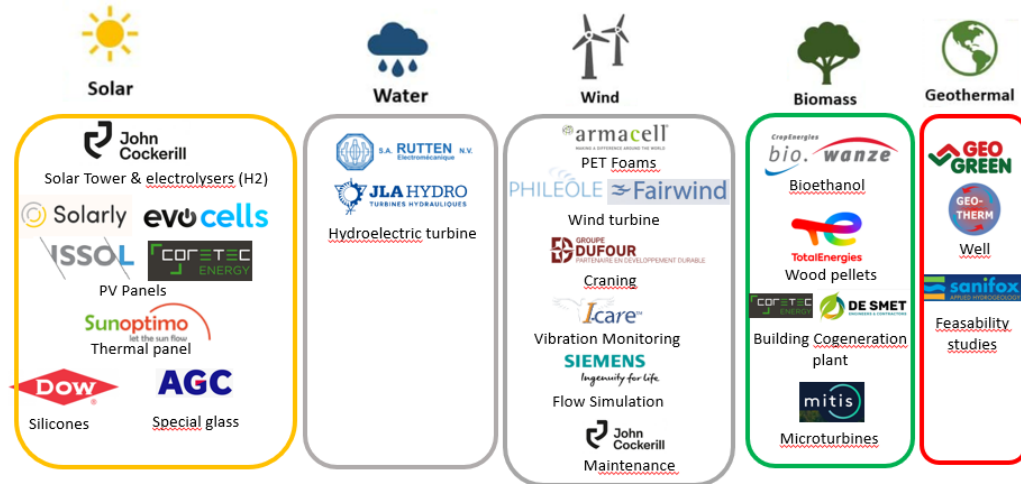
OCDE- Belgium 2021

THE « FIVE STAKEHOLDER » MODEL OF INNOVATION / MIT



1.1 Self producing energy buildings

Ecosystème wallon Energy generation



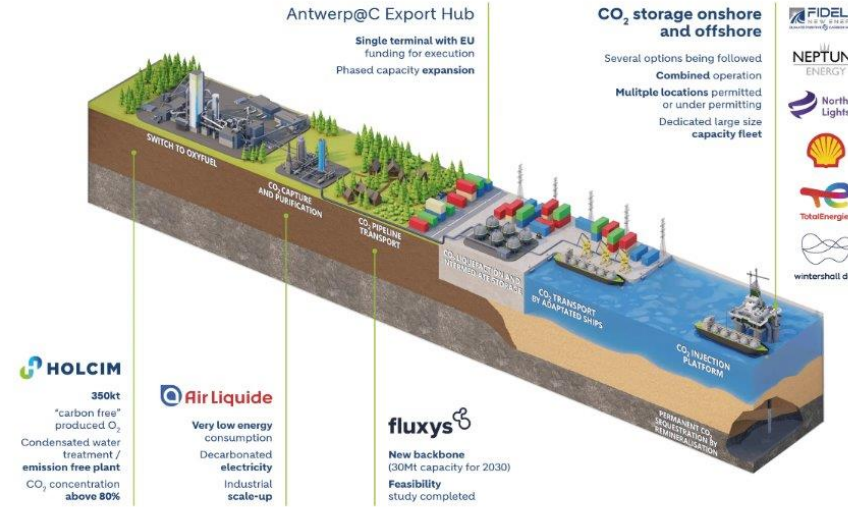
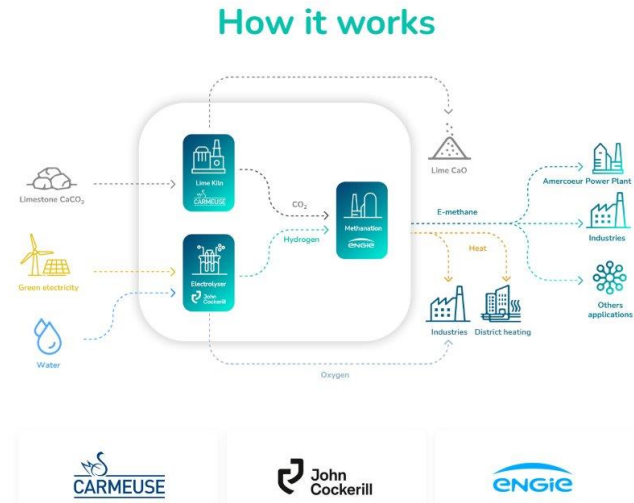
PV on roof : no more direct incentive since 1 january 2024

Lessines : l'entreprise Takeda a débuté ses forages pour exploiter des puits de géothermie



Energy communities

2 CCU – CCS for raw material production



Heidelberg Materials to build one-of-a-kind hybrid carbon capture unit at its Belgian Antwerp cement plant

Colombus project : from CO₂ (limestone coproduct) to e-methane using green hydrogen

Go4Zero - Holcim : Cryocapturing CO₂ from cement industry for future storage

PREFER, FLUXYS BELGIUM, LHOIST AND ORBIX ARE SELECTED BY THE INNOVATION FUND FOR THEIR INNOVATIVE JOINT PROJECT TO CAPTURE, TRANSPORT AND REUSE CO₂ IN HERMALLE (CO₂NCREAT)

Key facts

- An innovative process selected for a European grant
- Annual production of more than 100,000 tons of eco-friendly masonry blocks
- 12,000 tons of CO₂ captured, transported over 2km and reused each year in the blocks
- 8,000 tons of CO₂ avoided each year through the use of recycled raw materials

2.1 Industrialization (new + renovation via massification)



Industrialization in wood building
Albert II institute for Cancer – Bxl

Bonuses :

- Efficiency in raw materials
- Better quality (ex: insulation)
- Well-being of workers (building inside a factory)
- Need less workforce (lack of skilled people in technical works)

Marchin: la construction du cirque en bois de "Latitude 50" se termine



Circus School in Marchin



3 Renovation : carrot & stick motivation

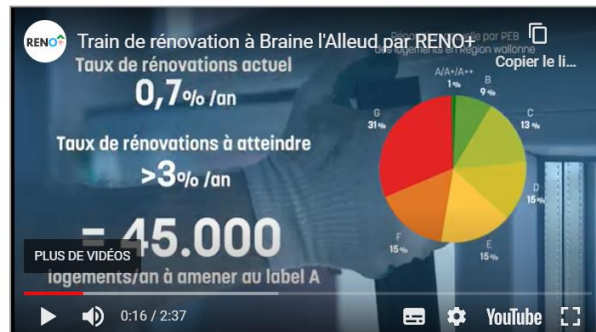


- Subsidy for renovation
- Zero interest loans (including PV)
- Reduction of the energy bill
- Massification (cheaper)
- Third party investor

- Total ban of Coal & Mazout (2026) - ban gas in 2050 ?
- Energetic renovation will be mandatory when you buy a new good
- Energetic mandatory for a first rent/new rent

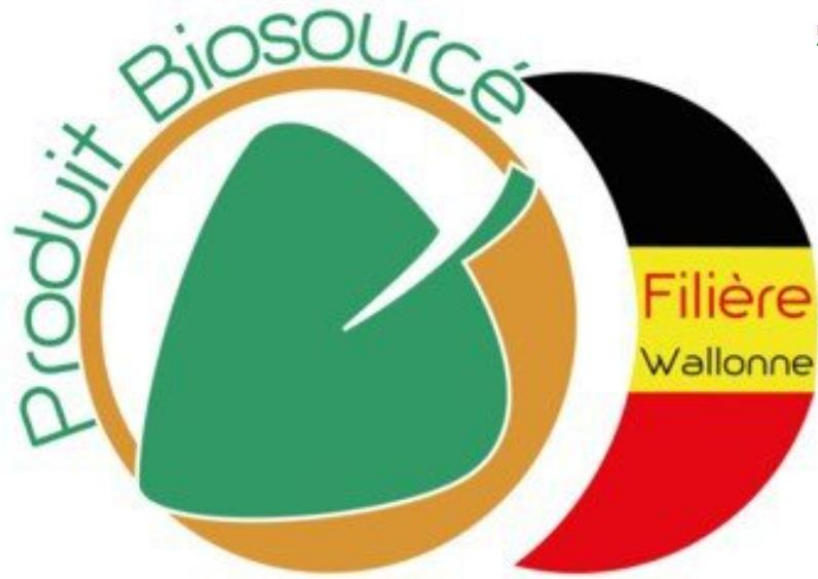
Primes Habitation 2023 (à partir du 1er juillet 2023) - Site énergie du Service public de Wallonie

Label minimum	1ère mise en location	Changement de locataire	Changement de propriétaire	Propriétaire occupant
F	1/1/2025	1/1/2027	-	1/7/2031
E	1/10/2028	1/1/2030	-	1/7/2036
D	1/10/2031	1/1/2033	1/7/2031	1/7/2041
C	1/10/2034	1/1/2036	1/7/2036	1/7/2046
B	-	-	1/7/2041	1/7/2050
A	-	-	1/7/2046	



**Massification :
 30 roofs in
 one call in
 Braine l'Alleud
 by RENO+**

4 Better materials (Labels, Innovation...)



Label : Biobased materials
Cluster eco-construction



#InnovationForPositiveImpacts
Depuis 2011

2^{ÈME} ÉDITION

HANDBOOK
2011-2023

Handbook of innovative project :
[file:///C:/Users/fsc/Downloads/Green
Win HandBook 2024 FR web.pdf](file:///C:/Users/fsc/Downloads/Green%20Win%20HandBook%202024%20FR%20web.pdf)

Conclusions

- Construction is one of the most impacting sector but the one of the hardest to abate (huge inertia)
- You must have a good understanding of your ecosystem (buildings : Where ? Quality ? Who owns ? Who will/wants to pay ? Who will do the job ? ...)
- There is no « one size fits all » solution
 - 4 ways to be green, multiple solutions in each way
 - It is important to have the stakeholders (public sector, industry, craftsmen, research...) with you
- Sobriety will be key

Thank you for your attention



Zeleni plan za Hrvatsku

**Kreće li se
dekarbonizacija
nekretnina?**

21.3.2024. | Hotel Westin

FABIAN SCUVIE

HVALA!