Generating CO₂ savings and social benefits together: Recommendations from SHAPE EU

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In a nutshell: why looking beyond buildings?

From Maarten de Groote (VITO)

Why to focus on neighbourhood community level? Decarbonisation scenarios Watermolen neighbourhood, Sint Niklaas (BE)



Thriving Regions, Stronger Europe

| Model variant | Current situation | BAU (1%) | A-label min. TAC | -60% CO ₂ min. TAC per building | -60% CO ₂ min. TAC neighbourhood renovation | District heating + max PV |
|--|----------------------|---------------------------|---------------------------|--|--|---------------------------------|
| Net energy consumption [MWh/y] | 31 080 | 27 450 (-12%) | 14 950 (-52%) | 7300 (-76%) | 13 930 (-55%) | 14 800 (-52%) |
| CO ₂ [ton/y] | 7 017 | 5 920 → <mark>-16%</mark> | 3 800 → <mark>-53%</mark> | 1704 → -/7% | ∠ 60% -60% | 3 200 → <mark>-55%</mark> |
| CAPEX [M€] | 0 | 18.4 | 57.5 | 59.7 | 38.9 | 39.0 |
| Energy <u>cost</u> [<i>M€/jaar</i>] | 0.53 | 0.44 | 0.34 | 0.25 | 0.27 | 0.18 |
| TAC [M€] | 10.3 | 27.0 | 64.2 | 64.6 | 44.2 | 42.5 |













A building-only approach is not always cost effective

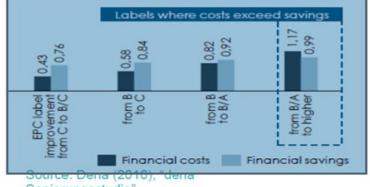
Micro economics of NZEBs: Declining energy returns

Copenhagen Economics study: https://www.housingeurope.eu/res ource-1648/does-one-size-fit-allimpact-of-minimum-energyperformance-standards-in-therevision-of-the-energyperformance-building-directive

- Energy renovations have declining returns to the point where they do not pay for themselves anymore
- > For high EPC labels, the emission reduction per Euro investment is lower than for low EPC labels
- Hence, there is overall a strong case for supporting policy measures that reduce barriers to investment that can lift energy performance standards, but not for enforcing the highest EPC labels."



Note: 25 years investment horizon at a 6% discount rate Source: Economisch Instituut voor de Bouw (2018), "Klimaatbeleid en de gebouwde omgeving"

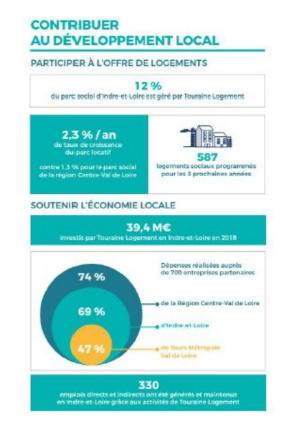






Turning co-benefits into core benefits

https://www.delphis-asso.org/articles/2022/05/acterr-mesurez-et-valorisez-votre-contribution-aux-territoires



S'ENGAGER DANS UNE OFFRE DE OUALITÉ RÉPONDRE À LA DIVERSITÉ DES BESOINS 4 nouveaux locataires sur 10 obtiennent un logement après un héborgement itamétal ou amicall ou une décohabitation 3 ménages sur 10 4 ménages sur 10 sont des personnes seules 2.5 locataires sur 10 1 locataire sur 10 ont plus de 60 ans est un jeune de moins de 30 ans 6 locataires sur 10 2 locataires sur 10 ont un emplai sont sans emploi-Le revenu médian des locataires de Touraine Logement est de 14 812 €/an contre 24 288 €/an pour un ménage locataire en Indre-et-Loire (en 2015) AMÉLIORER LA PERFORMANCE ÉNERGÉTIQUE du parc de Touraine Logement est de consommation énergétique classé en étiquettes énergétiques par rapport au parc locatif A. B ou C d'Indre-et-Loire. contre 24 % du parc locatif soit l'équivalent d'une commune d'Indre-et-Loire de plus de 5 000 habita d'économie de facture énergétique par rapport à un logement locatif privé en Indre-et-Loire. Soit l'équivalent d' 1.4 mois de loyer pour un locataire de Touraine Logement

PROPOSER UN LOCEMENT ABORDABLE CONTRIBUER À L'AMÉLIORATION DU POUVOIR D'ACHAT ET DES CONDITIONS DE VIE 660 €/mois 305 €/mois de loyer dans le parc locatif privé de loyer dans le parc Touraine Logement Pour un an de location, cela représente plus de 3 mois de revenu pour un ménage locataire de Touraine Logement (revenu médian de 14 812 €/an) POUR UN LOYER DE 305 C/MOIS П +37 m2 68 m² 31 m de surface dans le de surface dans le parc parc locatif privé Touraine Logement Une famille devrait avoir des revenus 2 fois plus élevés pour se loger dans les mêmes conditions dans le parc locatif privé (surface, loyer, taux d'effort de 30 %) FACILITER LE PARCOURS RÉSIDENTIEL ACCESSION À LA PROPRIÉTÉ 614 familles ont été accompagnées au cours des 10 dernières années dans leur parcours résidentiel (VEFA, location accession, vente à l'occupant) avec un accompagnement et des garanties spécifiques (rachat/relogement).



European Affordable Housing Consortium: Sustainable Housing for Social Impact

SHAPE-EU



SHAPE-EU Partners









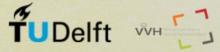


Affiliated Partners













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Integrated district renovations?

A tentative definition:

- Balancing multiple considerations involved (business model, residents, supply of housing, non residential)
- Addressing the fundamental challenges of retrofit (time, performance gap)



SHAPE_EU support

what are the available ressources?

How

- Assimilate knowledge of lighthouse districts from different regions
- Develop material & training s to share key insights of how to do integrated district renovation
- Offer 1 1 support for project promoters from a pool of experts (Reno-Helpdesk)

Key outputs

- Best practice handbook, barriers & opportunities report
- Webinars on key features
- Access to funding guidebook, blueprints, Project, Social, Technical, Renovation Helpdesk
- Series of events (final, 21 Feb 2024 Committee of the Regions)
- Policy recommendations



SHAPE EU is about building upon local strengths

For instance, in Austria, priority on changing heating systems...

only about 4% of the building units of GBV housing associations built before 1980 has not yet undergone any renovation or thermal insulation

Heat supply

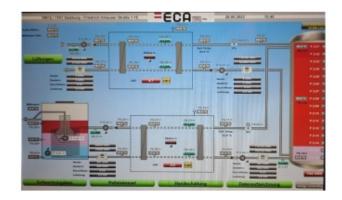
Photovoltaik

About 20% of total electricity need is coming from the PV-Anlage (ca. 85 kWp)

Energy supply

Heat pump: 45% energy from waste water

30% from waste air 25% biomass Pellets







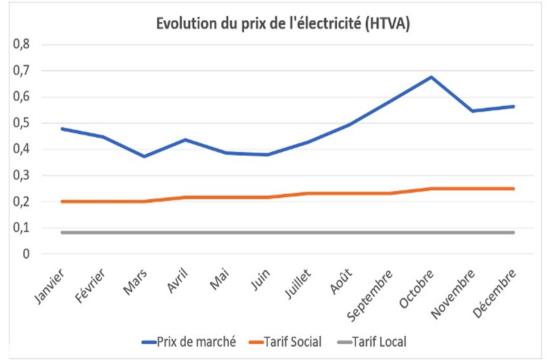
SHAPE EU is about combining measures

In Southern Europe (and Brussels), energy communities are taking shape...

Les chiffres de l'année









SHAPE_EU is about improving living conditions

Kortrijk or Reggio-Emilia







SHAPE_EU: Common features of integrated district renovations

https://shape-affordablehousing.eu/

- Densification
- Modification of the road system to reduce the use of cars and increase the use of public transport and soft mobility
- Creation and enhancement of green spaces: green spaces play a central role in the life of a neighbourhood
- Interaction with neighbouring districts, creation and enhancement of urban meeting places
- Treatment of urban heat islands and creation of cooling islands
- Preservation and enhancement of local heritage (historical monument or just small heritage) and developing the sense of local ownership for inhabitants
- Promote a zero-carbon renovation of the district
- Developing social link and sustainable development of the district through associations
- Preservation and development of local biodiversity in the district
- Developing and promoting local shops and businesses in the district



SHAPE_EU: preliminary recommendations

To be discussed with stakeholders

#1 Improve and innovate EU financial tools for social and affordable housing renovation to foster a fair energy transition lighthouse districts.

#2 Advancing procurement strategies to benefit SMEs, fostering innovation and partnerships within the social housing sector, and promoting a market dialogue that supports vulnerable profiles.

#3 Facilitate and promote meaningful dialogue and the exchange of information among various stakeholders engaged in energy renovation. Emphasize inclusive governance and decision-making, encouraging co-creation and active participation of both occupants and citizens to ensure a just and decentralized transition.

#4 Use timplementation of the EU building-related Directives (EPBD, EED and RED) to promote energy rehabilitation of affordable and social housing and to promote its scalability at the district level.

#5 Advocate for a cohesive and adaptable urban policy framework, spanning from individual buildings to district levels, promoting cooperative and participatory development taking into account gender equity and energy poverty (Urban Agenda, New Bauhaus).



Merci!

Let's keep connected!
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