

Postgraduate ENERGY EFFICIENCY SERVICES: a catalyst in the quadruple helix

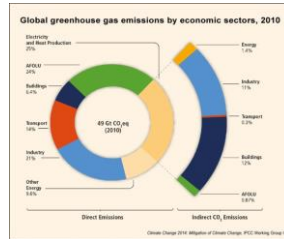
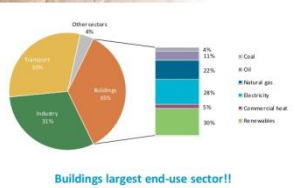
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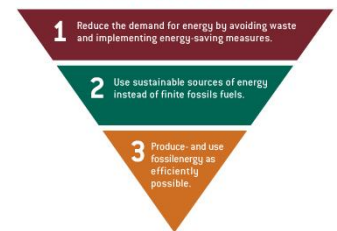
** PXL, Central Administration, Building A, Elfde Liniestraat 25, B-3500 Hasselt, Belgium

European commission has decided within the 2030 Framework for Climate and Energy to increase the goals in comparison to 2020 targets namely: -40 % GHG emissions (20%), 27 renewable energy (20 %), 27 % Energy Efficiency (20) and, 15 % interconnection (10%).

Final Energy Consumption by Sector and Buildings Energy Mix, 2010



The Trias Energetica concept: the most sustainable energy is saved energy.



Higher education institutions (HEI), a key player in the promotion of sustainable development (SD) are making advancements in SD implementation (e.g. in terms of campus greening, curriculum renewal and research orientations).

The University college PXL is a centre of expertise for innovation, creativity and entrepreneurship. She organizes her activities always starting from the quadruple helix model (interaction between government, knowledge institutes, industry and society).

Activity

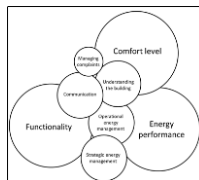
- 1) The University College PXL started a postgraduate Energy Efficiency Services (EES).
- 2) As a result of this curriculum renewal the PXL performs Energy Quick Scans for all their buildings. (For both project a steering committee with several in- and external stakeholders was installed)
- 3) This multidisciplinary project is an example of preach what you teach: teaching, research and service come together in a socially relevant project comprising economic, communicative, legal and technological pillars.

Outcome

- 1) As a result of the first graduates we organised for the first time ESCO-speed dating in Flanders (more than 140 participants (private, industrial and public sector) and 40 knowledge centres.
- 2) As a consequence of these internal and external actions we are preparing the first GRI report for PXL-Tech.
- 3) The Flemish network is extended towards new international partners TU Lisbon, NTNU Norway, Technical University of Denmark, TU Delft and Avans Hogeschool,

Impact (global)

- 1) Good practices of principle of quadruple helix: knowledge centre in collaboration with industry, government and society.
- 2) Dissemination of knowledge concerning Energy Efficiency Services (techniques and developing new business models)
- 3) Research has been started to eliminate ESCO-barriers for SME and public authorities. These barrier can be mental, organizational and institutional.
- 4) During the ESCO-Speed dating (legal and financial) barrier were discussed and will be introduced in policy discussions for local and Flemish government
- 5) Involvement and behavior of future generations 'decision-makers'



EEA, 2014, Trends and projections in Europe 2014: Tracking progress towards Europe's climate and energy targets until 2020, EEA Report no 6/2014 (<http://www.eea.europa.eu/publications/trends-and-projections-in-europe-2014>)

Dirk V.H.K. Franco *Post Graduate Energy Efficiency Services: an example of good practices in Sustainability in Energy and Buildings: Research Advances*, in press 2015, ISSN 2054-3743

Dirk V.H.K. Franco, *Can Energy Efficiency Services in buildings be seen as a Cleantechology?* ISBN 978-92-79-59779-4, Cat LD-NA-27-993-EN-N

Dirk V.H.K. Franco, Rogier De Langhe (UGent) and Joost Venken (Hasselt) *Energy Efficiency Services in Buildings: a tool for energy transition* Central Europe towards Sustainable Building 2016 Prague conference, 2016, pg 215, ISBN 978-80-271-024-8