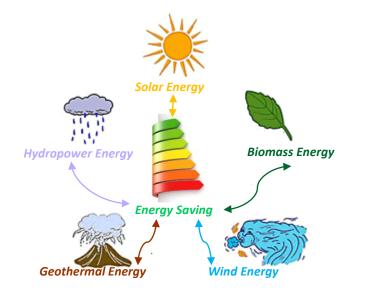


# Clean Energy for All Europeans package Do the Commission's Impact Assessments Assign the Right Role to Energy Efficiency?



www.openexp.eu

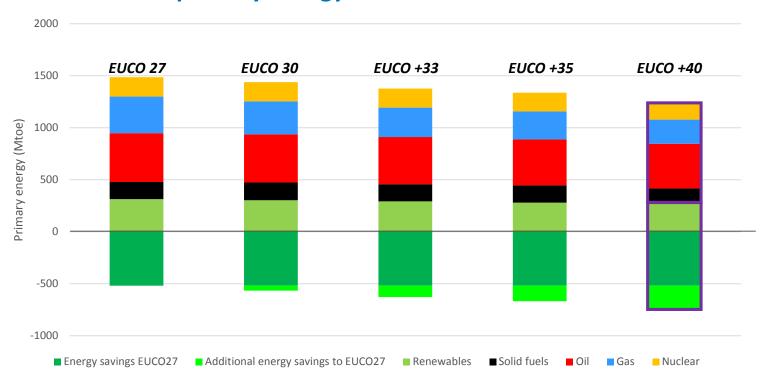
Dr Yamina SAHEB Yamina.saheb@openexp.eu

Making the Negawatt dream a global reality



Energy savings are projected to be the "First Fuel" of Europe in 2030 in each of the EUCO scenarios

#### **EU 2030** primary energy mix in the Commission's scenarios

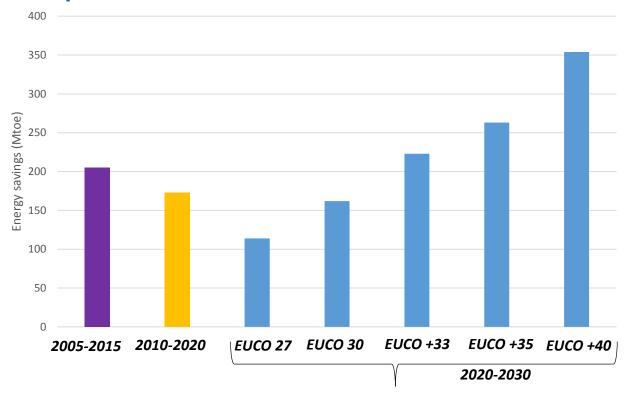


In the EUCO+40 scenario, the sum of RE and energy savings is projected to overtake the sum of fossil fuels and nuclear

Source: PRIMES 2016 @OpenexpEnergy

## Energy savings' ambition for the next decade in EUCO27 and EUCO30 is lower than the one of the current decade

Energy savings in the period 2020-2030 (EUCO scenarios), the period 2010-2020 and between 2005-2015

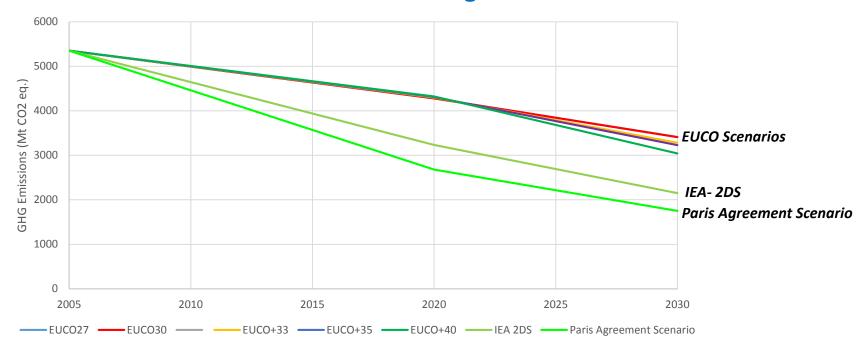


Energy savings in the EUCO+40 scenario are more than double of those in the EUCO27

Source: PRIMES 2016 @OpenexpEnergy

## EUCO scenarios are not aligned with the EU obligations under the Paris Climate Agreement

### **EU 2030 GHG emissions in EUCO scenarios, IEA 2DS and under the Paris Agreement**

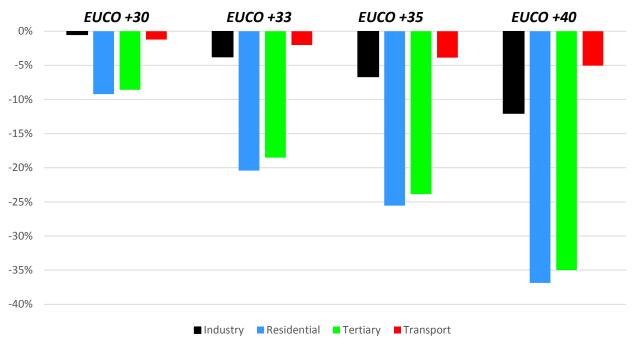


40% Energy Savings target, combined with ambitious RE target, should be the baseline scenario for 2030

Source: PRIMES 2016 for EUCO, ETP 2017 for IEA 2DS and Own estimates for Paris scenario OPENEXP

### EUCO scenarios project buildings to lead the decarbonisation of the demand side

Changes in final energy demand per sector in EUCO scenarios compared to EUCO27



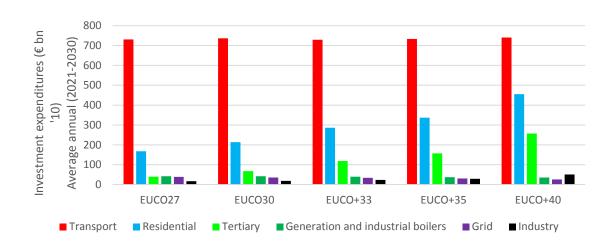
But renovation rates used for EPBD modelling (BEAM<sup>2</sup>) are much lower than those
resulting from EED modelling (PRIMES)

@OpenexpEnergy

Source: PRIMES 2016

# The cost-effectiveness argument used against higher EE ambition is not backed-up with the modelling results as direct EE investment costs are unknown

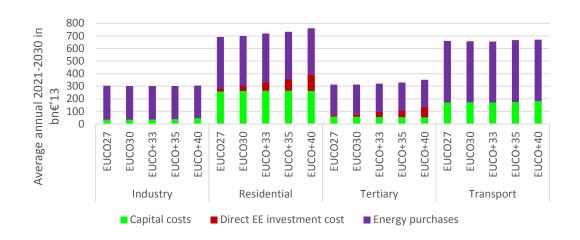
#### **Investment expenditures in EUCO scenarios**



Transport sector hinders efficiency ambition with high investment expenditures and low contribution to GHG emissions reduction

Source: PRIMES 2016

#### **Energy system costs in EUCO scenarios**



Direct EE investment costs are based on private discount rate and provided only for insulation of buildings

@OpenexpEnergy

OPENEXP

# GHG emissions reduction will be driven by the increased ambition of energy savings and the increased share of renewables and not by ETS carbon price

	EUCO27	EUCO30	EUCO+33	EUCO+35	EUCO+40
ETS carbon price (€/t of CO <sub>2</sub> eq.)	42	27	27	20	14
Total GHG emissions reduction					
compared to 1990	-40,7%	-40,8%	-43,0%	-43,9%	-47,2%
Share of RE in gross final energy					
consumption	27%	27%	28%	28%	28%
<b>Energy savings target</b>	27%	30%	33%	35%	40%
Ratio of energy related costs					
(inclusive of auction payments					
ETS) to value added for energy					
intensive industries	40.8%	40.1%	40.0%	39.8%	40.6%
Total energy related costs in					
industry (annual average €bn					
<b>'13</b> )	212.4	208.8	208.4	207.2	211.4

Ambitious energy savings scenarios are not expected to adversely impact EU competitiveness

Source: PRIMES 2016 @OpenexpEnergy

### **Concluding remarks**

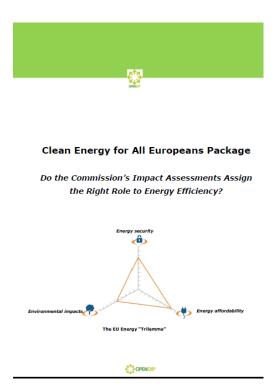


- The baseline scenario should be based on 40% EE target combined with high RE target to align Europe's GHG domestic targets with its obligations under the Paris Climate Agreement.
- Coherence between sectoral modelling and EED modelling is needed.
- Investment expenditures and energy system costs per sector should be consistent with the contribution of each sector to Europe's GHG emissions reduction targets.
- EE investments costs and their underlying data should be disclosed for all sectors.
- A societal approach to discount rate and the effects of the EU guarantee on lowering EE investment costs should be reflected in the modelling exercise.





### For more information, download from <a href="https://www.openexp.eu">www.openexp.eu</a>



### Thank you for your attention

