

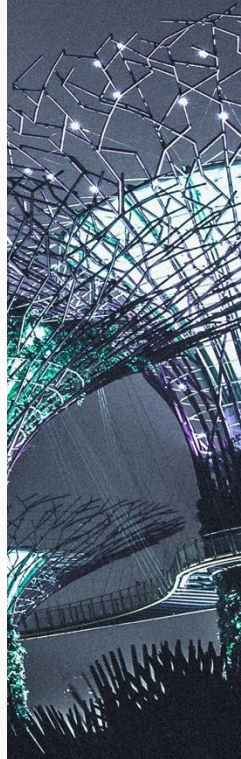
Carbon revenues for a renovation revolution

Renovate Europe Day, 8th October 2019

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RENOVATE EUROPE
REDay
2019



€200bn

Projected 2021-2030

Goal: Save carbon

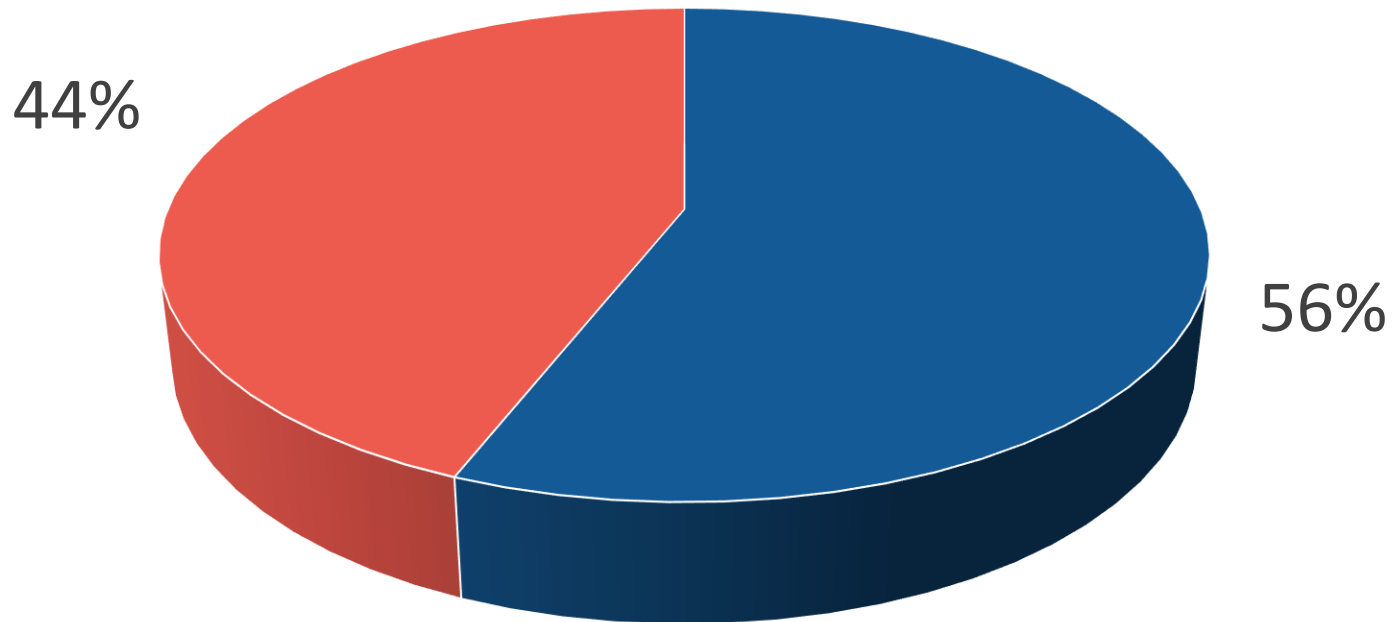
Ecologic Institute and WWF (2016)

EU ETS allowance price 2017-2019



Source: Sandbag Carbon Price Viewer, accessed 30 September 2019

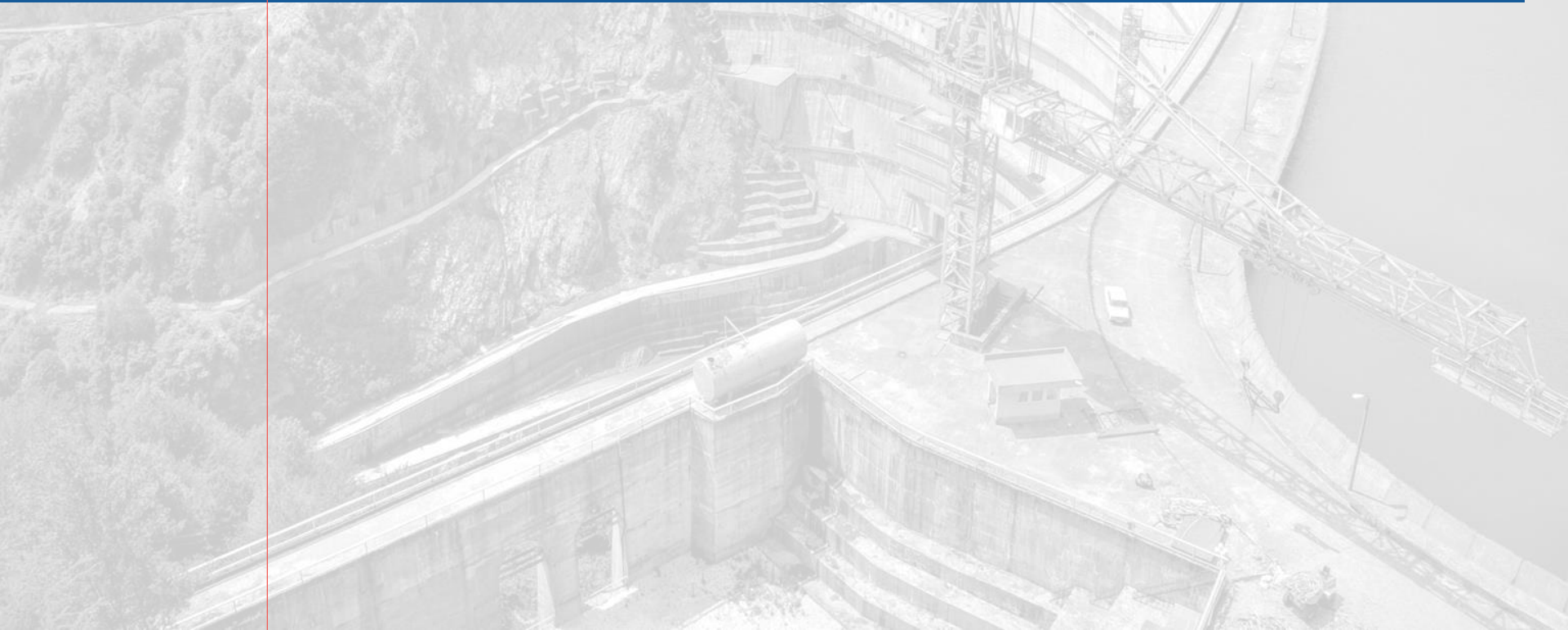
How is it spent?



- Strategically invested for climate-related purposes (€2.87bn)
- Not strategically invested (€2.22bn)

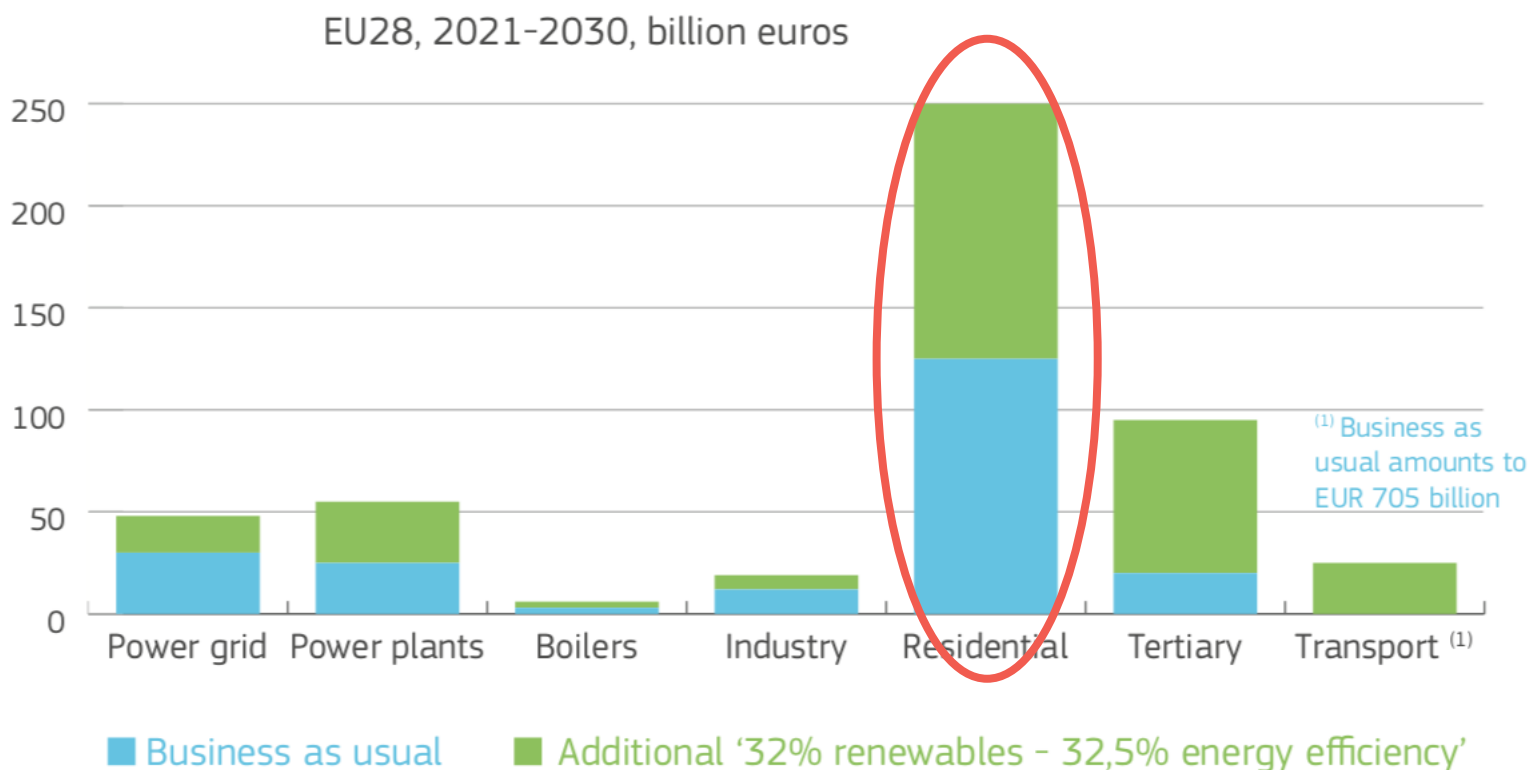
Source: Wiese et al. (2019) Auction revenues to foster energy efficiency, presented at eceee Summer Study 3-7 June 2019

How should it be spent?



Where investment is most needed

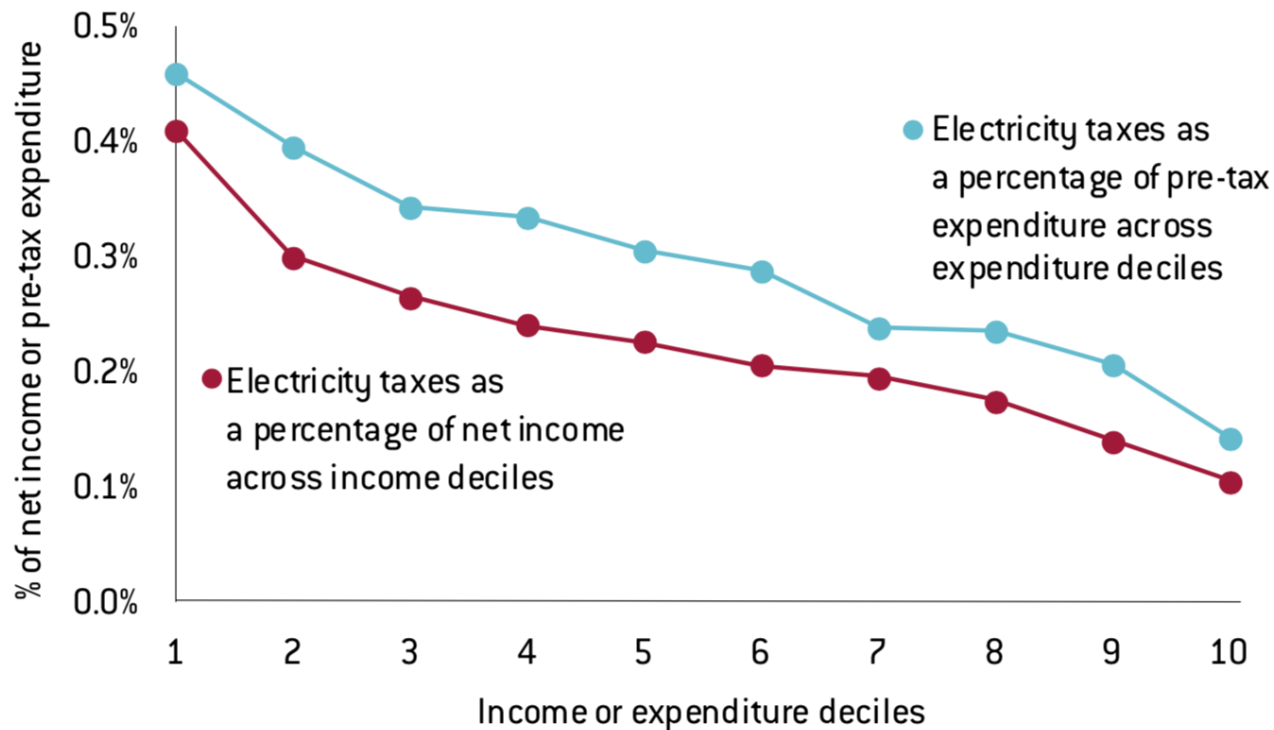
Average annual investment needs 2021-2030



Source: European Commission (June 2019) National Climate and Energy Plans: bringing principles to action.

To offset regressive impact on low-income consumers

Figure 7: Average electricity taxes (21 OECD countries) as a percentage of net income or pre-tax expenditure



Source: Flues and Thomas (2015) referenced in Bruegel 2019.

Deliver more carbon for consumer investment

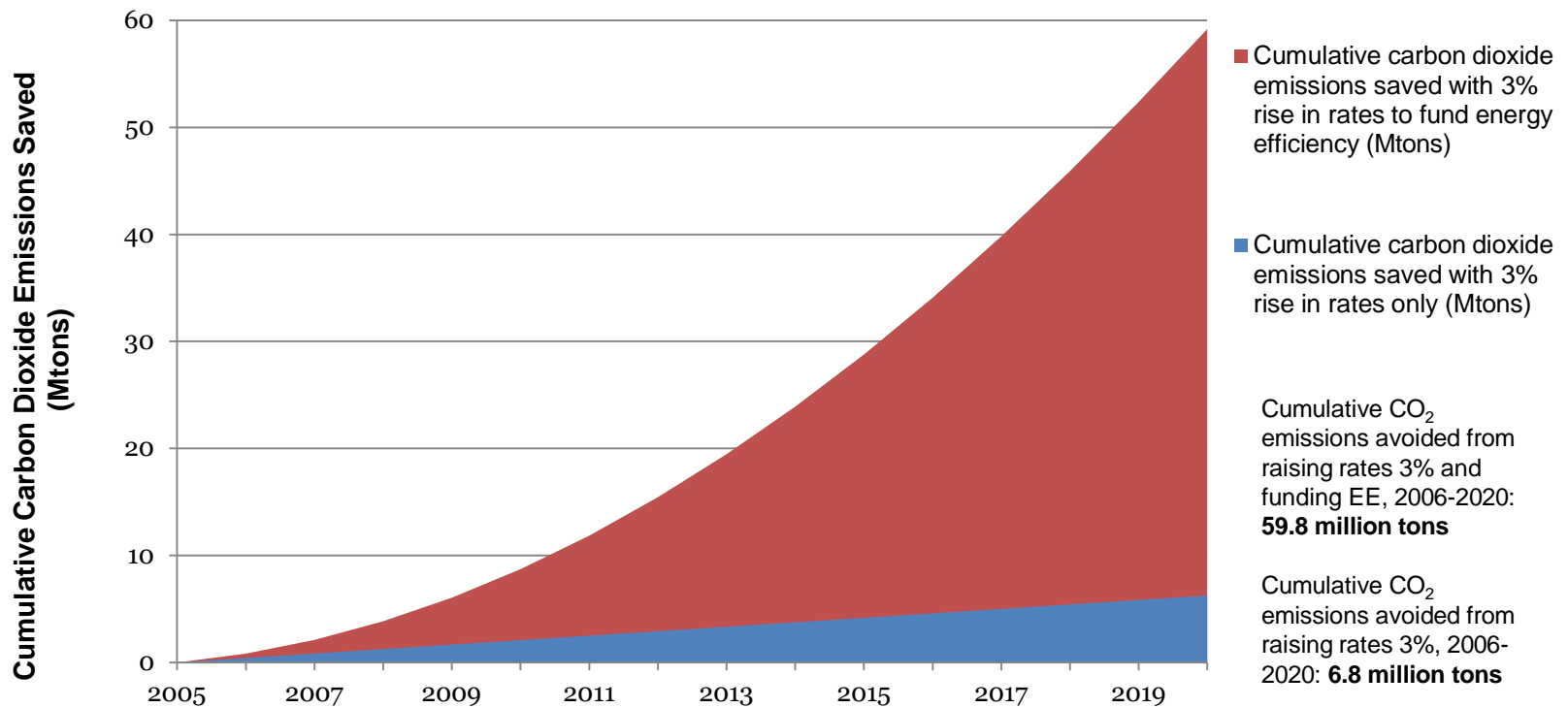
Carbon pricing alone is an
expensive
way to save carbon.

At a carbon price of €20,
each power sector tonne
costs consumers up to

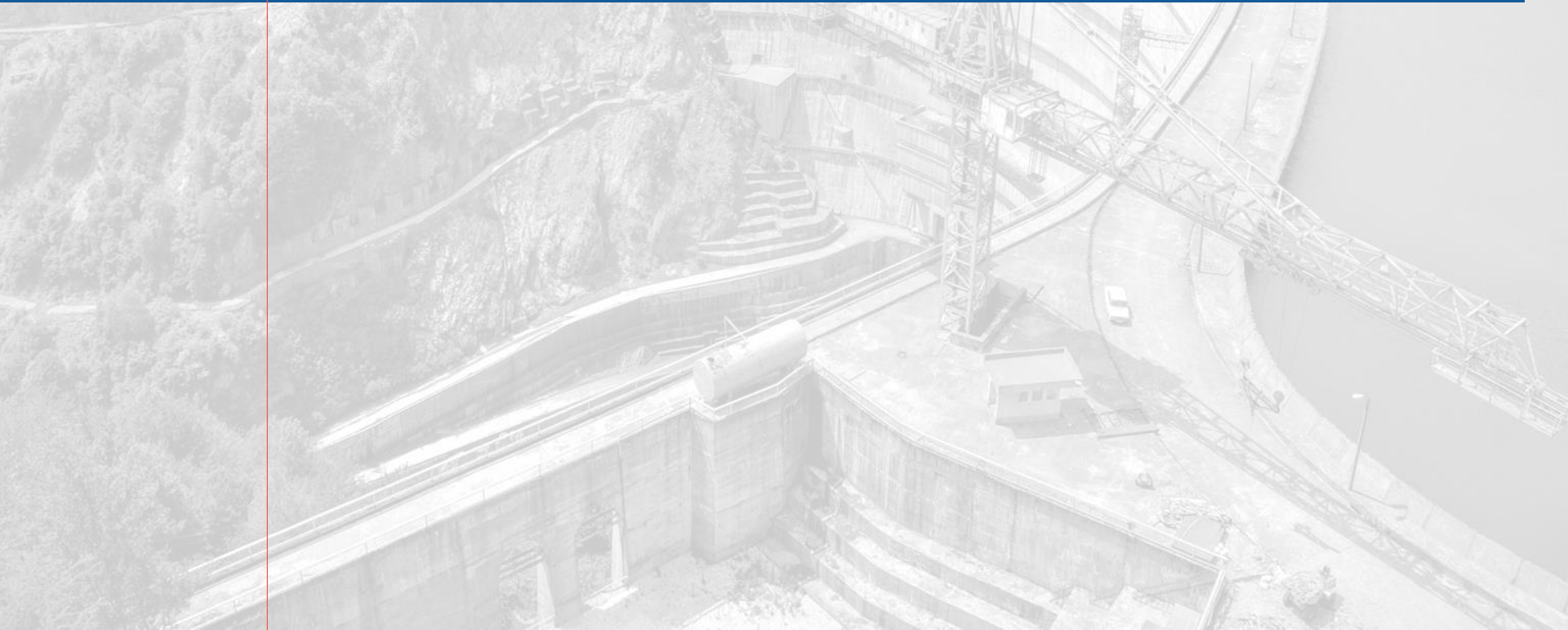
€248

Source: RAP, 2015 based on modelling by ECN, 2008

Efficiency delivers more carbon for consumer investment



ETS revenues invested for renovation





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Czech Republic New Green Savings Programme

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Oblast podpory A

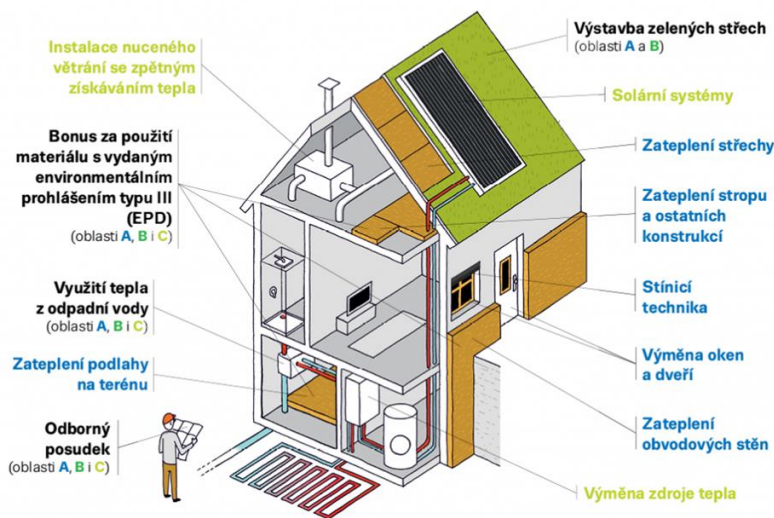
Zateplení rodinných domů...

Oblast podpory B

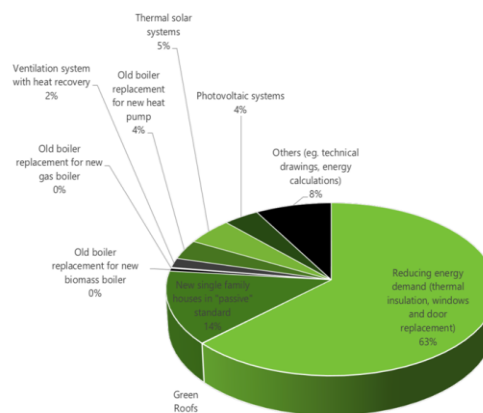
Výstavba v pasivním standardu...

Oblast podpory C

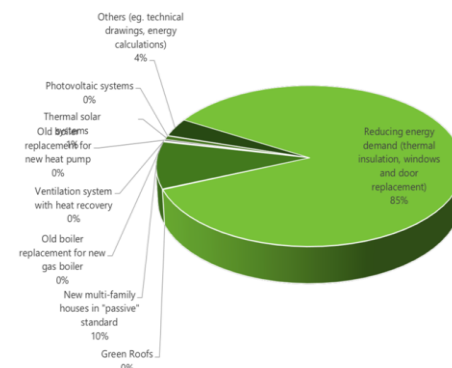
Obnovitelné zdroje energie...



Single-family houses: Measure structure (subsidy demand)



Multi-family houses: Measure structure (subsidy demand)



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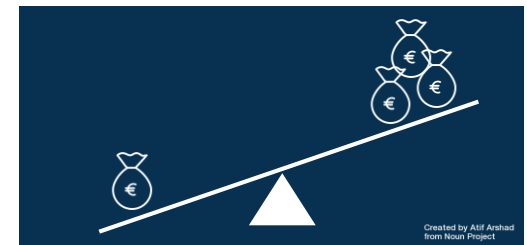
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Evaluation

- ✚ amongst the most cost-effective energy saving programmes across all sectors
- ✚ largest energy saving of any programme 2014 - 2018
- ✚ investment fully returned to Treasury in tax and benefit; creates GDP growth

€350 million
2014-2018

€96 million
2018

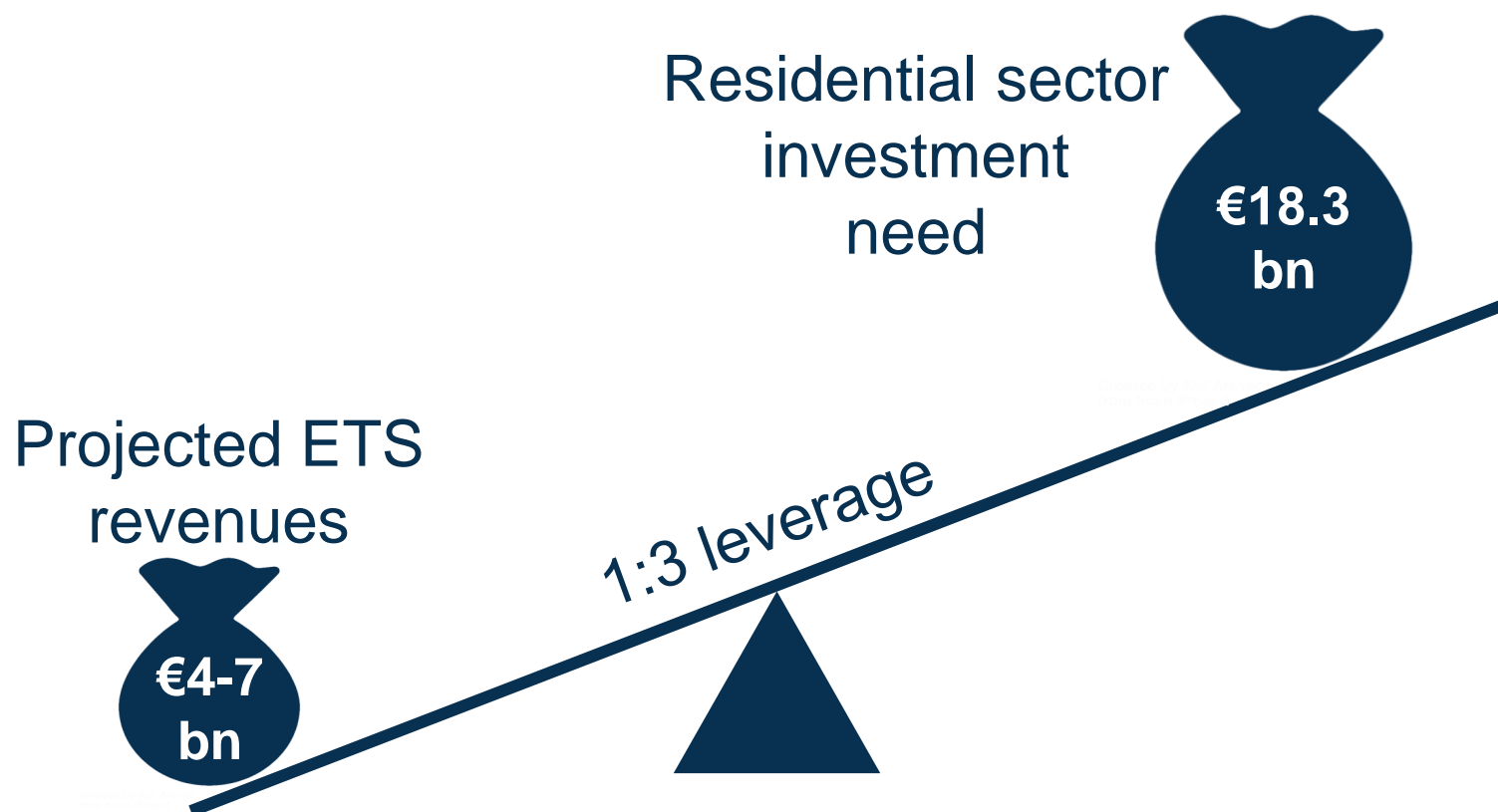


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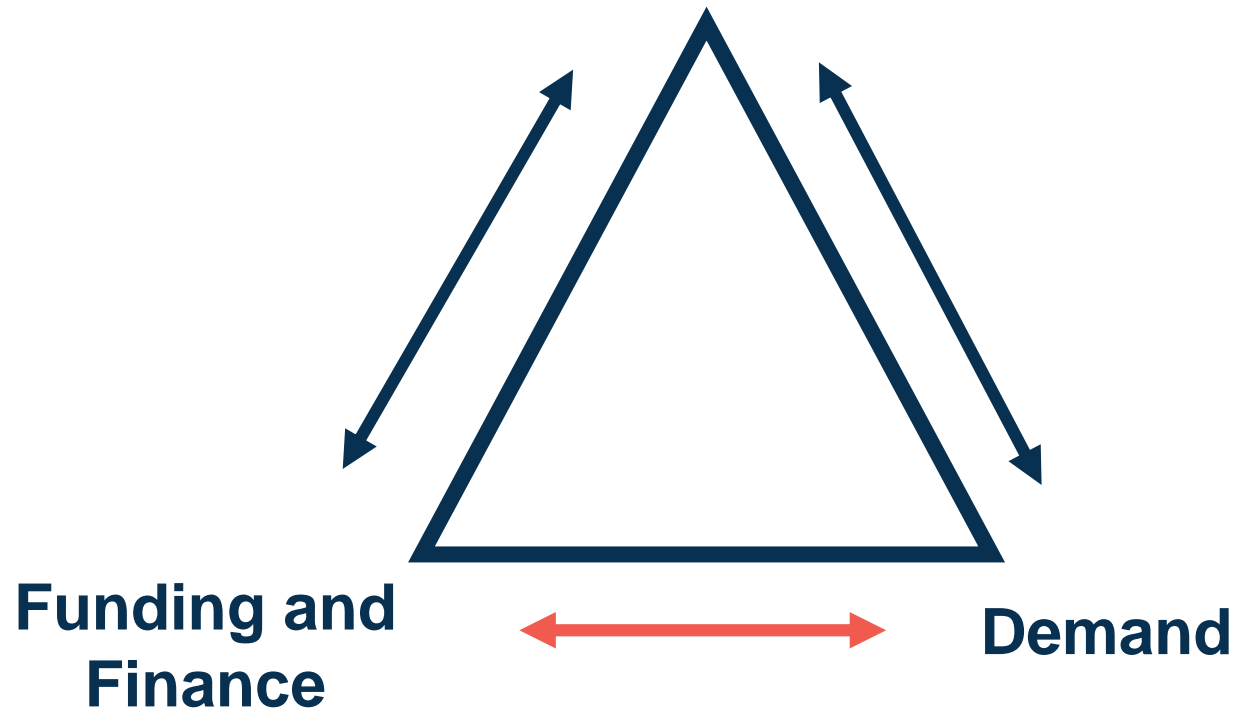
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Potential of ETS revenues 2021-2030



Source: Czech Ministry of Industry and Trade. (2017). Update of the National Energy Efficiency Action Plan of the Czech Republic.

Effective renovation programmes



About RAP

The Regulatory Assistance Project (RAP)® is an independent, non-partisan, non-governmental organization dedicated to accelerating the transition to a clean, reliable, and efficient energy future.

Learn more about our work at raponline.org

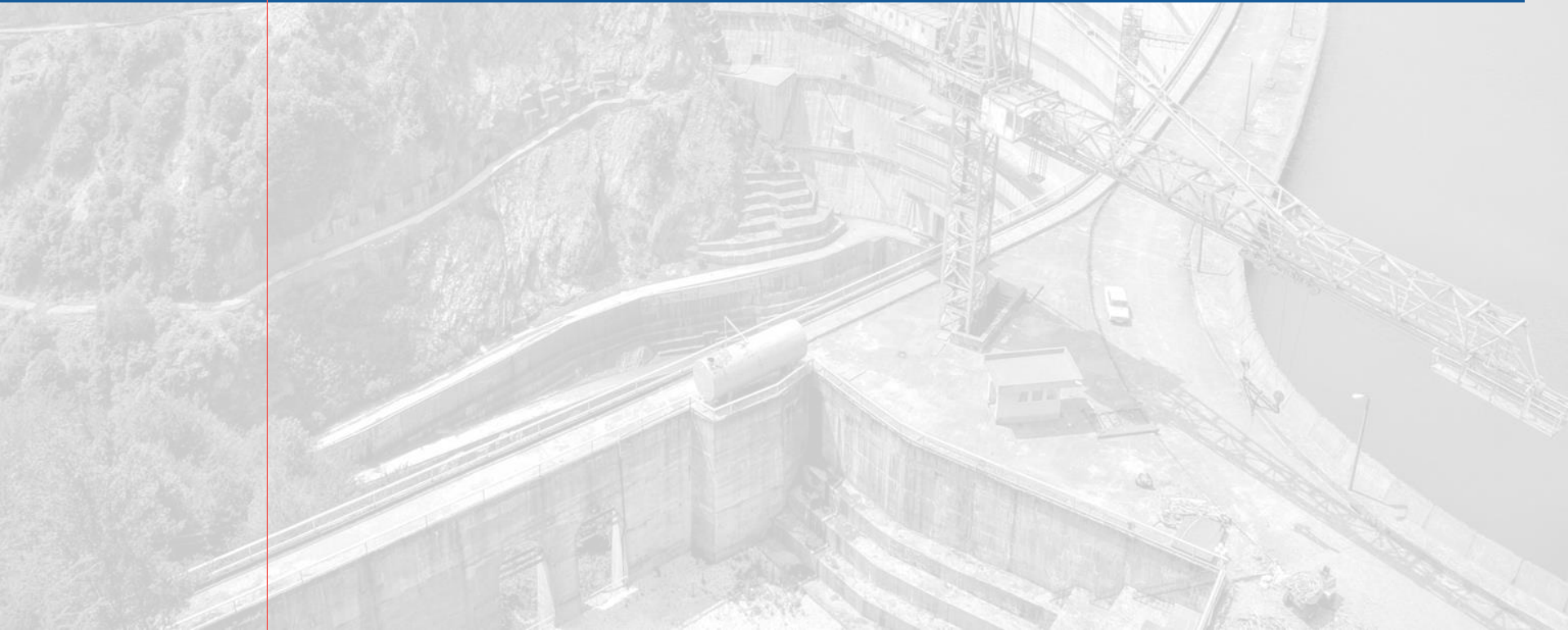


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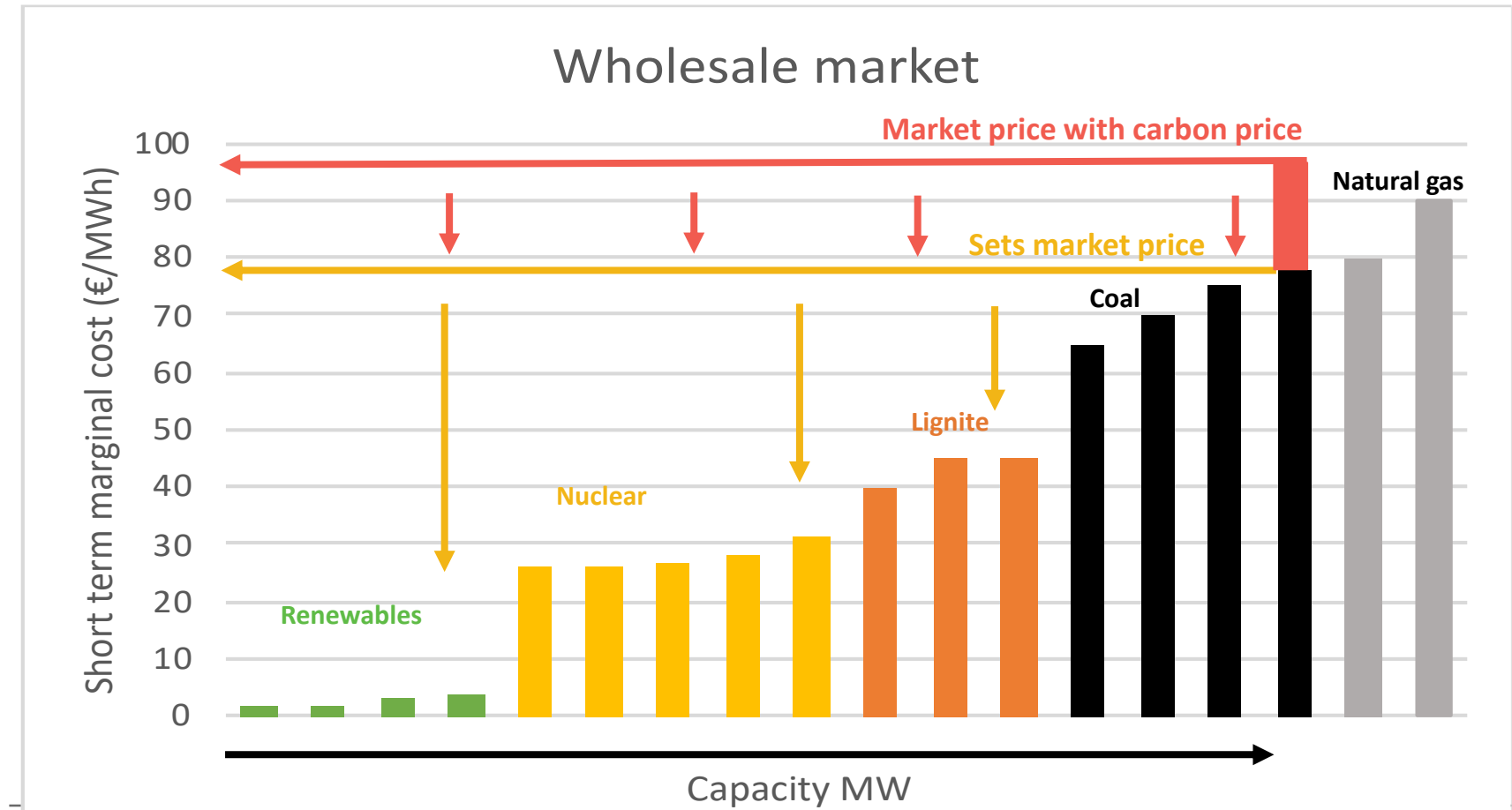
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Extra slides



High cost of abatement in power market



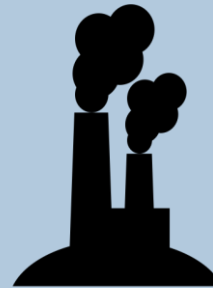
Low abatement at current prices

Demand response

Elasticity of demand
 $1:-0.2$



Dispatch



Created by Verry
from Noun Project



Created by Smalllike
from Noun Project

Cost of abatement in power market

Scenario	Carbon price 20 Euros	Carbon price 40 Euros
Event/Result	No demand response	Price-elasticity -.2
(a) Power price increase	€ 10.9 /MWh	€ 23.2 /MHz
(b) Total sales	3016 TWh	2881 TWh
(c) Total Cost increase	€ 33 Billion	€ 66.8 Billion
(d) Emission reduction	133 Mt (all due to redispatch)	363 Mt (165 Mt from dispatch, 198 Mt from demand response)
(e) Consumer cost per tonne reduced	€ 248 per tonne	€ 184 per tonne

Source: Sijm, et al, The Impact of the EU ETS on Electricity Prices, Final Report to DG Environment, December 2008 (ECN-E-08-007)
[Row (e) is a RAP calculation based on Tables in the report, as shown.]