



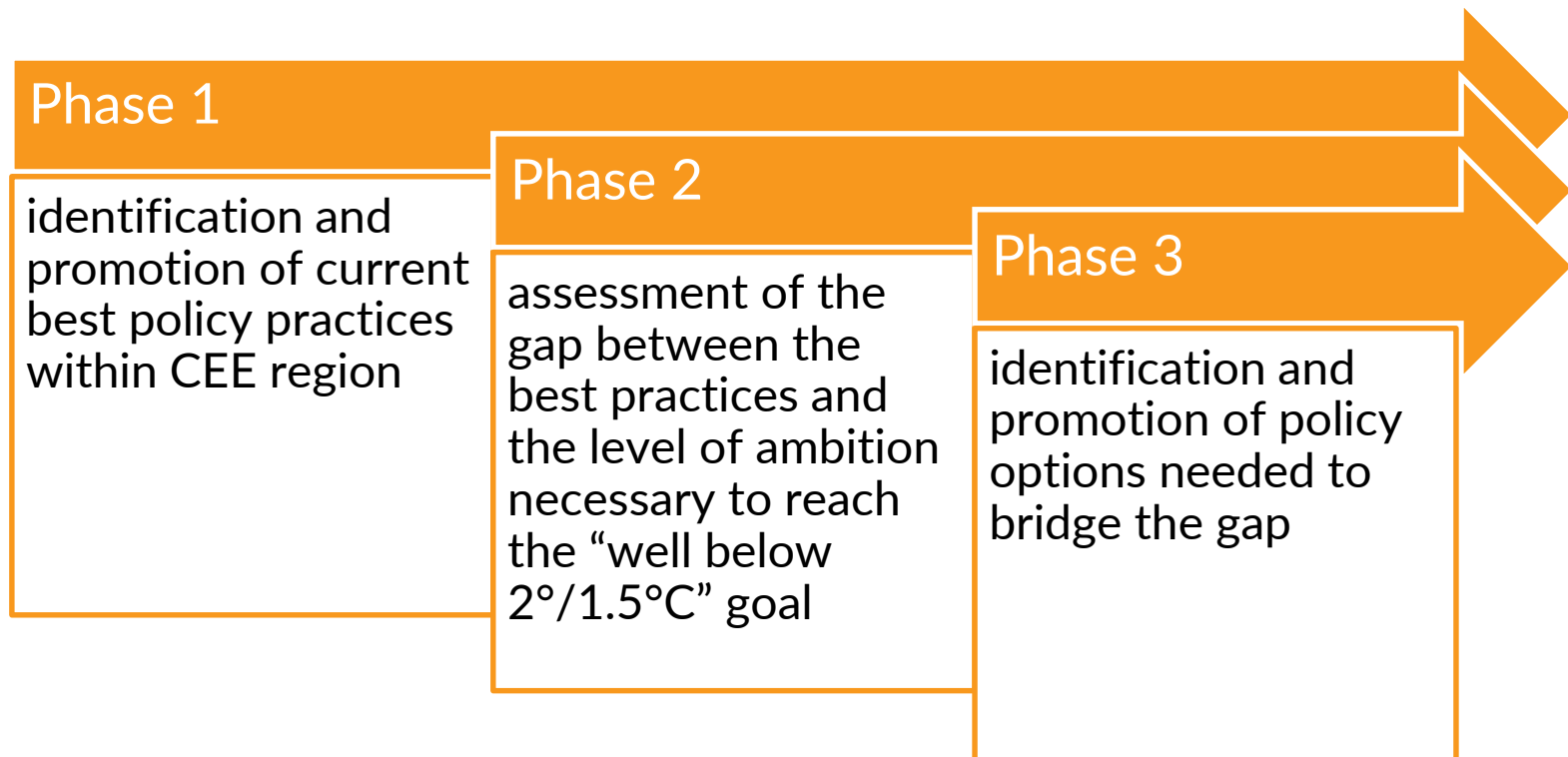
CEE CLIMATE POLICY FRONTIER

Overview of current state and good practices
in climate action in transport and building sectors
in the CEE region

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WiseEuropa

ABOUT THE PROJECT

CEE Climate Policy Frontier – focus on 1) **regional good practices** and knowledge exchange; 2) developing **regional community** of policymakers, experts and stakeholders working on **concrete policy solutions**



PROJECT PARTNERS



WiseEuropa

Project coordinator, working on Visegrad group cluster, leading assessment of the current policy frontier



Working on Romania + Bulgaria cluster, supporting assessment of current policy frontier



Leading assessment of the policy option beyond the frontier, supporting stakeholder engagement across the region



Assessment of the gap between the current frontier and Paris Agreement goals

AGENDA

Overview of assessment results –
current CEE Frontier

Electromobility

Energy Efficiency in
Buildings

Parallel
sessions

Sustainable Transport
Modes

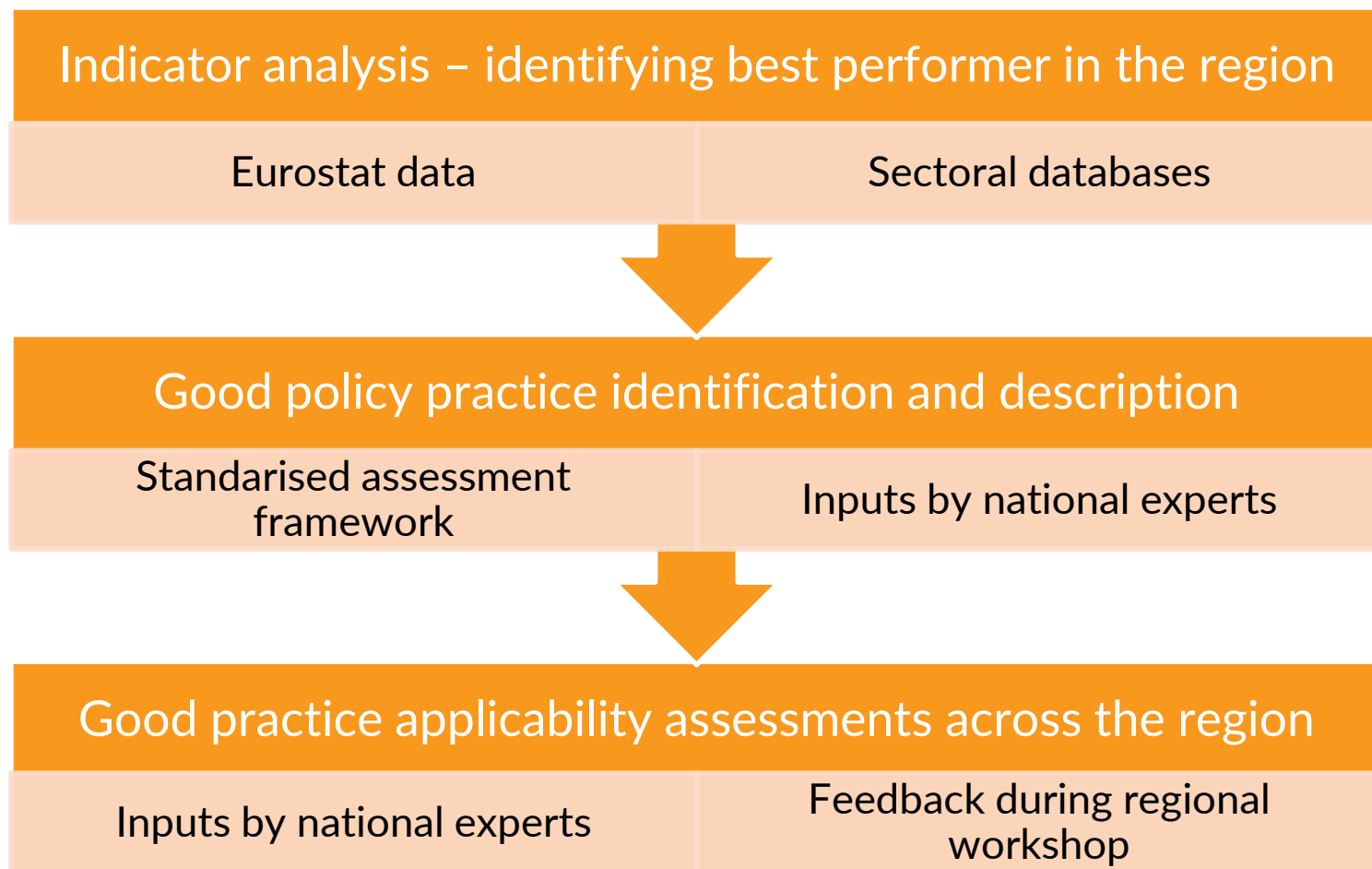
Clean Heating
Sources in Buildings

Summary of the working groups discussions

First results of the Paris Agreement compatibility
assessment and outlook to the next steps

Current CEE Frontier – methodological approach

Sectors: passenger transport and residential buildings
Countries: Poland, Czechia, Slovakia, Hungary, Romania and Bulgaria



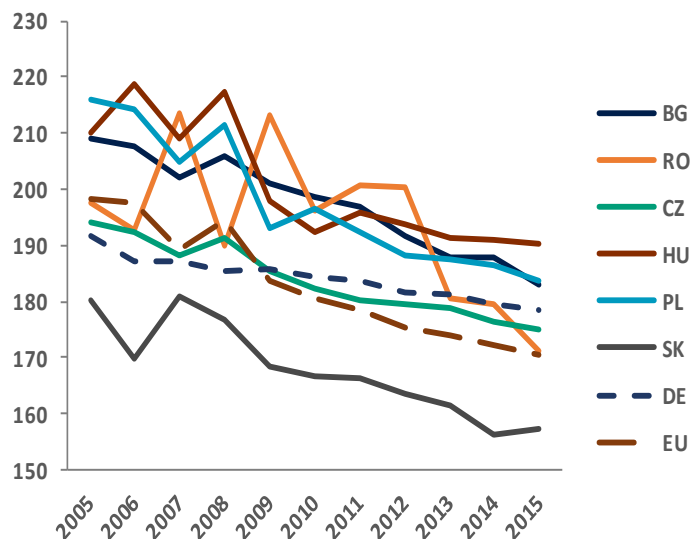
Transport policy frontier by indicator

Emissions intensity of passenger cars

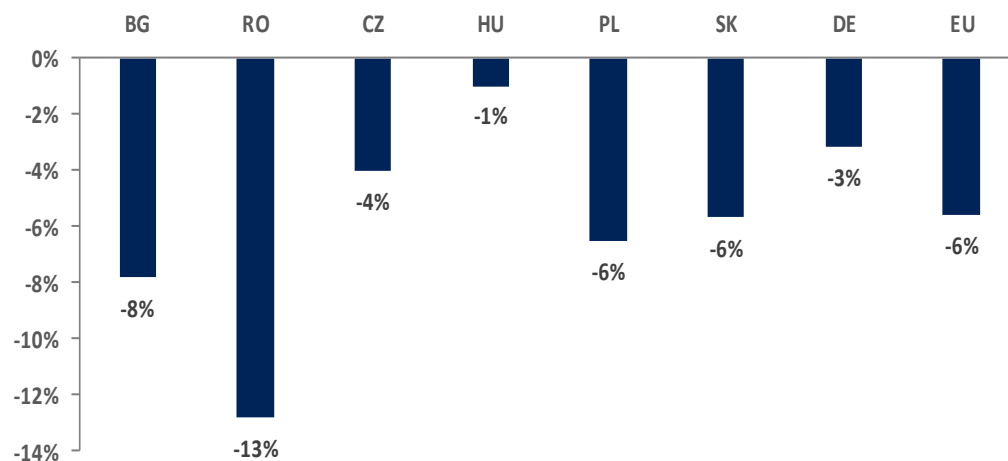
DECLINE IN EMISSION INTENSITY OF PASSENGER CARS (G OF CO₂/KM) SINCE 2010

- Czech Republic has performed quite similarly to the EU average in terms of this indicator, while Slovakia has **outperformed** all countries considered in terms of absolute value of passenger cars' emissions intensity in each year between 2005 and 2015.
- Taking the 5-years relative decline indicator of **13%** into account, Romania is **the best performer** in terms of emissions intensity of passenger cars.

Emissions intensity of passenger cars (gCO₂/km), 2005-2015



Relative decrease in emissions intensity of passenger cars in 2015, compared to the 2010 level



ROMANIA: “RABLA” PROGRAM (CAR SCRAPPAGE SCHEME)



Name of the regulation: “Rabla” program (car scrappage scheme)

Category: Subsidy

Timeframe: ongoing

- The objective of the program is to **encourage the removal of the oldest and highest polluting vehicles** from the fleet, and the purchase of new, less polluting models.
- In total, the budget for the “Rabla program” between 2005-2019 amounts to almost **3.5 billion RON (750 million EUR)**. The program is financed through **earmarked environment taxes and transfers from the state budget**, and its total budget is administered by the **Environment Fund Agency AFM**.
- Program beneficiaries consist of **individual car purchasers** (since 2005) and **companies** (since 2010).



ROMANIA: “RABLA” PROGRAM (CAR SCRAPPAGE SCHEME)

RESULTS AND IMPACTS

“Rabla” program has helped scrap almost **600,000** ageing and high-polluting vehicles and subsidized the purchase of around **357,000** more efficient vehicles

The program “peaked” in 2010, with almost **190,000** cars scrapped, and has since fallen to much lower levels (**20-30,000 yearly**), though it is expected to pick up again in 2019.

The sales of electric vehicles reached **3%** of the sales of new cars.

The Rabla Plus program has stimulated the acceleration of electric vehicles sales in 2018, where consumers bought 370 pure electric cars and 97 plug-in hybrid cars under the scheme.

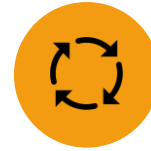


ROMANIA: "RABLA" PROGRAM (CAR SCRAPPAGE SCHEME)

SUCCESS FACTORS



Relative
predictability



Process approach to
implementation

CHALLENGES



Uncertainties about funds
and the number of tickets
related with annual
approval of the budget



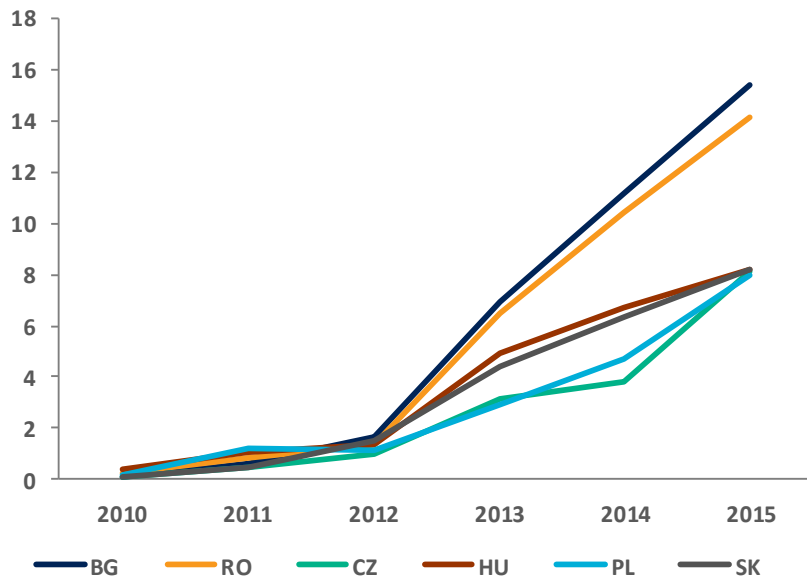
Correlation with
existing strategies
and action plans

Share of efficient vehicles in sales

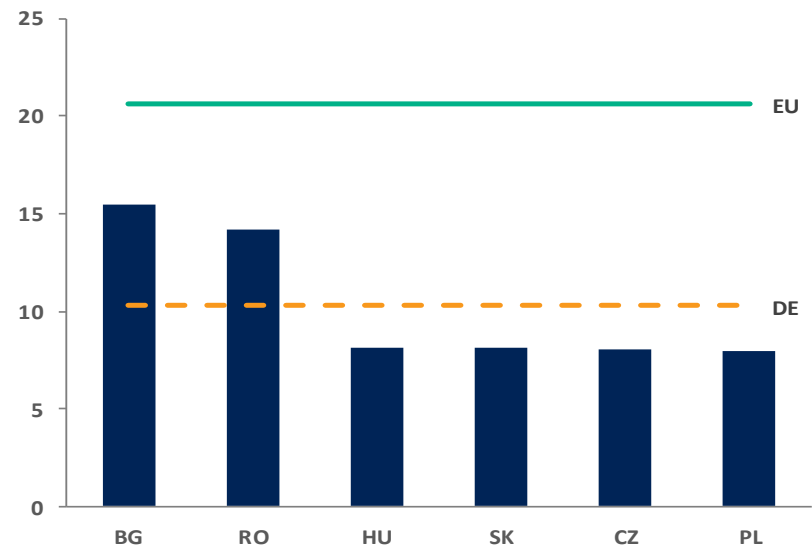
SHARE OF EFFICIENT CARS IN TOTAL SALES IN 2015

- The share of efficient cars in yearly sales started **growing rapidly** after 2012 in all six considered countries. Despite this, all scores in 2015 were **significantly lower** than the EU average (which amounted to almost **21%**).
- The best percentage in the region, at over **15%**, was recorded in **Bulgaria**, followed by Romania with slightly over **14%**. The share of efficient cars in total sales in each of the remaining four countries was around **8%**.

Annual sales of efficient vehicles (<100g CO2) as a percentage of the total, 2010-2015



Annual sales of efficient vehicles (<100g CO2) as a percentage of the total, 2015





BULGARIA: REVISION OF TAXATION ON VEHICLES



Name of the regulation: Revision of Taxation on Vehicles

Category: Regulatory and Financial

Timeframe: ongoing

- The gradual introduction of tax incentives changing the previous reverse tax structure would probably create the biggest impact in the **five years**. This means that the more expensive the car, the higher the tax. Such tax code has resulted in disincentives for purchasing more efficient cars. The tax reforms are still relatively new, so they cannot fully justify this positive trend.
- The Vehicle Tax is formed from **three main components** including: power-based tax rate, eco-standards and nationally-set age.
- The change in behaviour resulting in more efficient vehicles on the street has been mostly driven by **socio-economic and technical** factors rather than policies. However, the recent tax changes could potentially change the consumption patterns of drivers in the next couple of years if municipal authorities implement the new tax rates consistently and are bold enough not to create new loopholes for drivers using old cars.



BULGARIA: REVISION OF TAXATION ON VEHICLES

SUCCESS FACTORS



Determining the amount of tax by municipal councils

CHALLENGES



Negative effect on municipal tax revenue



Inconsistencies within Vehicle Tax system



Lack of enough technical equipment for emissions measurement



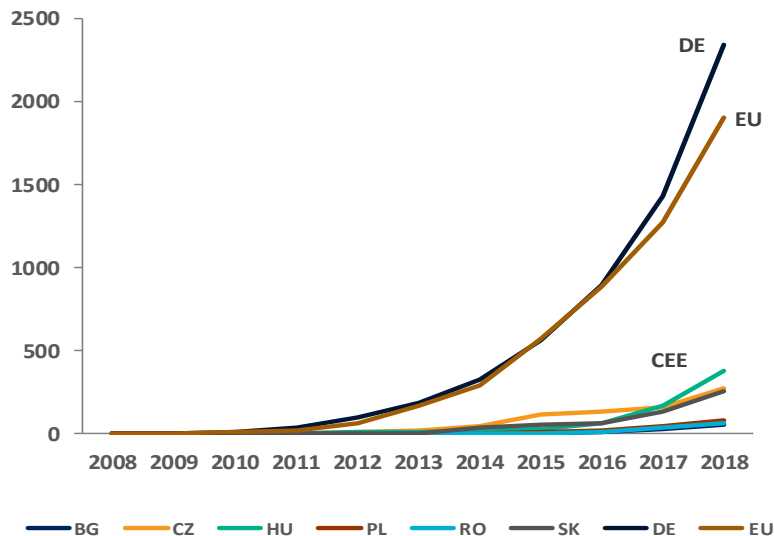
Enforcement gaps and outright corruption practices

Electric vehicles fleet

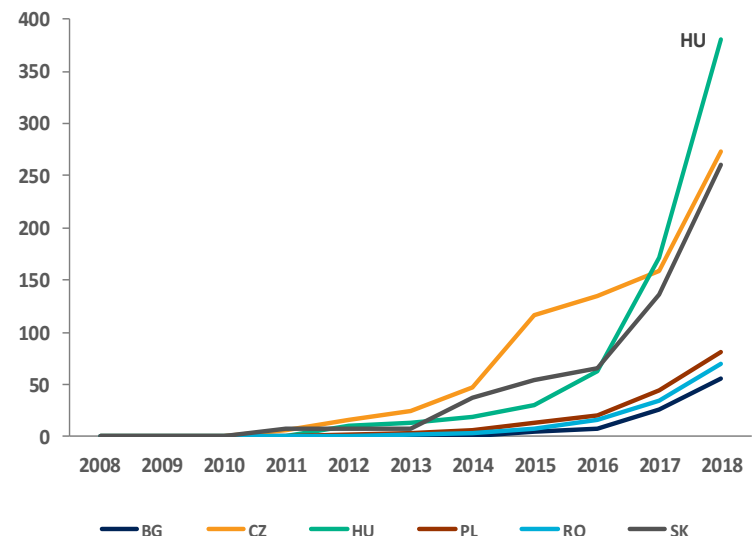
SHARE OF ELECTRIC CARS IN TOTAL SALES IN 2018

- In the CEE region, the country with the most active electric passenger vehicles market is **Hungary**. Its share of e-cars in new registrations in 2018 was 1.4%, which is undoubtedly the best score in the region – the second best performer is Bulgaria with half of that share (at 0.7%).
- The electric passenger cars market in the CEE region is **less developed than it is in the EU in general**. When taking the number of operating electric cars into consideration, the best score in the region – Hungary’s 381 vehicles per million people – is still **5 times lower** than EU average.

Electric cars stock per million people in the CEE region, Germany and the EU, 2008-18



Electric cars per million people in the CEE region, 2008-18





HUNGARY: JEDLIK ÁNYOS ACTION PLAN OF 2015 (JÁT)



Name of the regulation: Jedlik Ányos Action Plan of 2015 (JÁT)

Category: legislative/informative, legislative/normative, fiscal, infrastructure

Timeframe: ongoing

- Both **individuals and businesses** may apply for the EV-purchase subsidy grant and by virtue of receiving the green number plate, they are all automatically eligible in the other tax benefits and fee waivers.
- The government used EU ETS auction revenues for funding up to **500 charging points with a total of c.a. 4 million EUR.**
- The grants of 20% to purchase a new BEV (up to a maximum of 4700 EUR) amounts to an **additional circa 15 million EUR.**
- In 2015, the government supported the purchase of **20 EV buses by the city of Budapest with 12.2 million EUR.**



HUNGARY: JEDLIK ÁNYOS ACTION PLAN OF 2015 (JÁT)

RESULTS AND IMPACTS

As the JÁT itself is not available to the public, it is not possible to evaluate whether the programme has met its objectives.

According to press reports it appears that since 2016, cca EUR 16.5 M has been made available for vehicle subsidies and the purchase of about 1200 cars.

Resolution No. 1487/2015 contributed to the development of charging network: 7 EVs per charging stations – better result than the overall EU rate of 8 cars per charging points.

However, the most visible outcome of the Jedlik Plan is the **spreading of green number plates for electric vehicles.**

As a result of resolution No. 1487/2015 8500 EVs and hybrids (among them 3700 BEVs) were eligible for a green number plate in 2018.



HUNGARY: JEDLIK ÁNYOS ACTION PLAN OF 2015 (JÁT)

SUCCESS FACTORS



Generous subsidies



Active and positive communication by the government about programme



Additional benefits such as free parking and charging at public charging stations

CHALLENGES



Implementation challenges



Limited subsidies in the long-term perspective



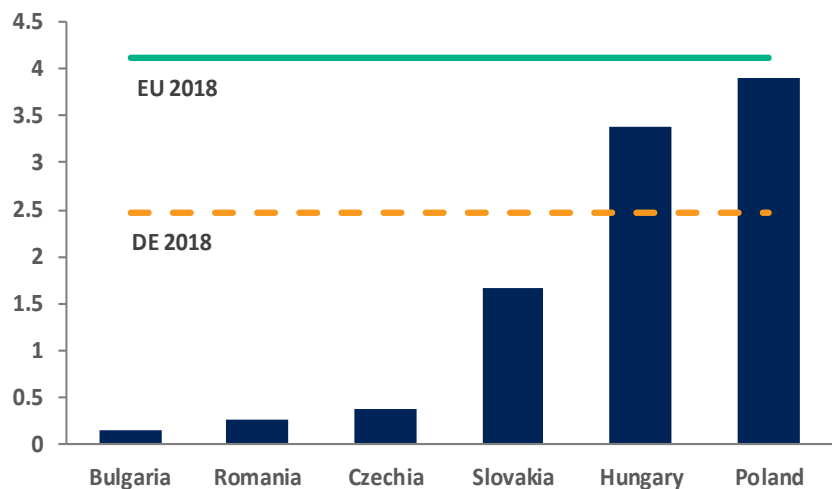
Necessity to adapt the green number plate regulation to the capabilities of all social groups

Electric bus fleet

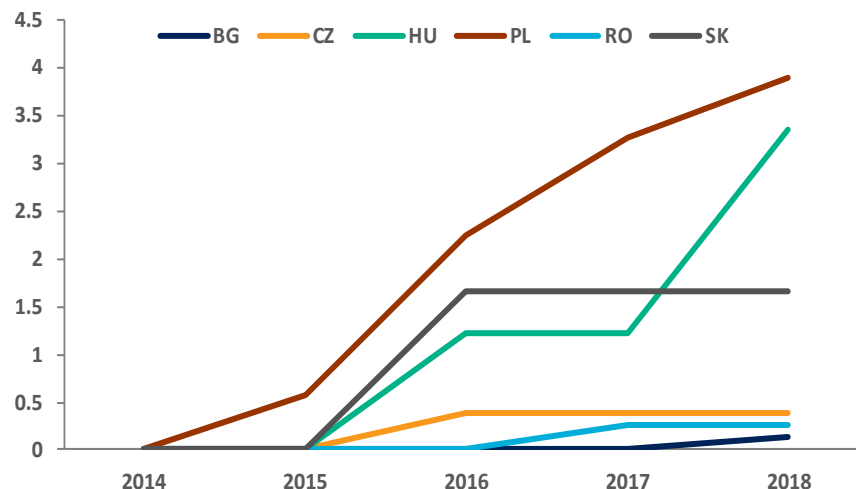
ELECTRIC BUS FLEET PER CAPITA IN 2018

- The first electric buses in operation were introduced in the CEE region in 2015 in Poland. Since then, **Poland has the biggest fleet** both in absolute terms and adjusted for population.
- At the current rate of developing the e-bus fleet, **Poland is likely to reach or surpass the EU average** in the upcoming years.
- Compared to the EU average though, the **entire CEE region is lagging behind** – the number of electric buses in operation in Bulgaria in 2018 was **29 times lower** than in EU and in Romania, Czechia and Slovakia respectively **16, 11 and 2.5 times lower**.
- Hungary with a **3.4 e-buses per million inhabitants** is the second best performer in the CEE region. Slovakia, with **1.7 e-buses per million inhabitants** in 2018, has less than a half of the number in Hungary or Poland, but at the same time performs substantially better than Czech Republic, Romania and Bulgaria.

Number of electric buses in operation per million capita, 2018



Number of electric buses adjusted for population (per million inhabitants), 2014-2018





POLAND: ROLLOUT OF ELECTRIC PUBLIC TRANSPORTATION BUS FLEETS



Name of the regulation: Rollout of electric public transportation bus fleets

Category: financial

Timeframe: ongoing

- E-mobility is regarded by the Polish government as **one of the key focus areas** of economic development in the country.
- The objective set in the “Act for Electromobility” requires for all communities over 50 000 inhabitants to have **at least 30%** of their public transport bus fleets emissions-free by 2028.
- The policy is addressed to city halls and local public transport providers.
- Budget: **2 704 921 948 EUR** until 2023 funded by the Infrastructure and Environment Programme within the European Cohesion Fund for projects concerning development of low-emissions public transport in municipalities in Poland. The EU funds can cover **up to 85%** of the eligible costs of an investment.
- On the national level, the National Fund for Environmental Protection and Water Management has introduced the GEPARD programme in the year 2017, which has a budget of **200 000 000 PLN** over 3 years (until 2020).
- The aim of the GEPARD programme is to **develop e-mobility in smaller towns**, as the big projects in cities such as Warsaw or Cracow have been rather successful in obtaining funding on the European level.



POLAND: ROLLOUT OF ELECTRIC PUBLIC TRANSPORTATION BUS FLEETS

RESULTS AND IMPACTS

Deployments of electric bus fleets in numerous Polish municipalities. Currently the biggest bus fleet is in **Warsaw** (30 buses), followed by **Cracow** (26 buses).

In 2014, Poland did not have any electric buses in operation – in 2018 however, the number is already **148**.

Increase in the number of public orders - for example, Warsaw already ordered additional **130** electric 18-metre long Solaris buses and Zielona Gora ordered **47** Ursus electric buses.

Further examples include Szczecin, Gdynia and Poznan, all of whom signed subsidies contracts with the GEPARD programme to obtain **6** new electric buses each.

As the manufacturers are gaining market scale thanks to big public orders, the subsequent **price reduction** in the upcoming years is very likely.



POLAND: ROLLOUT OF ELECTRIC PUBLIC TRANSPORTATION BUS FLEETS

SUCCESS FACTORS



Generous international and national funding



Proactive involvement of the strong local manufacturing base combined with the pressure to improve air quality in urban areas

CHALLENGES



Difficulties in estimating the battery lifetime in the buses



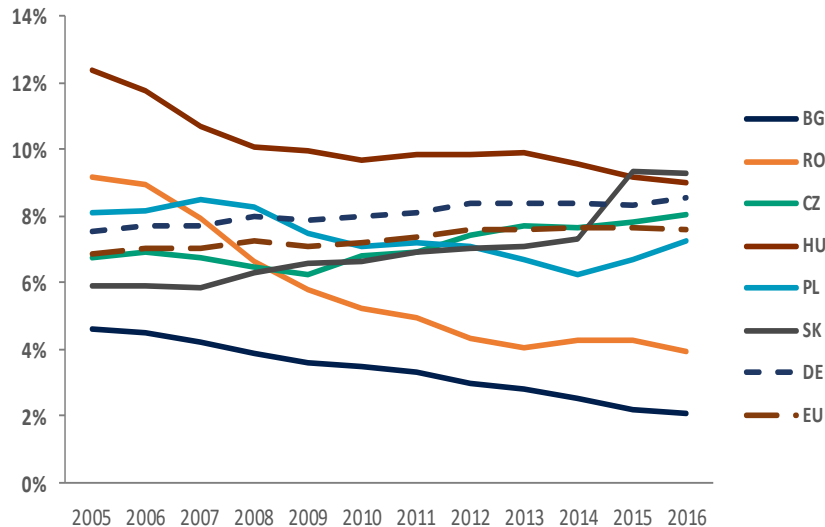
Uncertainty of future electricity prices makes

Share of rail transport in passenger transportation

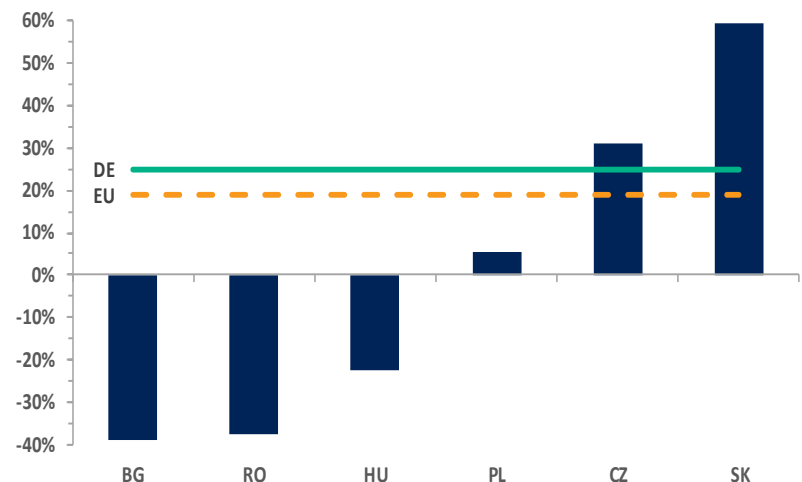
INCREASE IN RAIL TRANSPORT SHARE IN PASSENGER TRANSPORT SINCE 2005

- All CEE countries except for Slovakia and Czech Republic have **decreased** their shares of rail transportation between 2005-2016.
- The indicator value in terms of EU average and for Germany itself **increased**, reflecting the different tendency in this regard Slovakia is indicated as **the best performer** in terms of rail transport share in passenger transport in the years 2005 – 2016. The total volume of rail transport increased **60%** between 2005-2016, and the distance travelled by railways yearly per citizen rose from 406.1 km in 2005 to 629.2 km in 2016 (**58%** increase).

Share of rail transport in passenger transport



Total rail transport volume change, 2015/2005



SLOVAKIA: MODERNIZATION OF THE RAILWAY SYSTEM



Name of the regulation: Modernization of the railway system

Category: infrastructure

Timeframe: ongoing

- Slovakia has modernised more than **121 km** of rails since the accession to the EU.
- The main impact on the increase of passengers had three policy measures: **modernisation of the railway system, strengthening regional connectivity and the introduction of zero-fare transport service for children, students and pensioners.**
- The policies are addressed to Railways of the Slovak Republic (ŽSR) and Railway Company Slovakia (ZSSK).
- Budget: **1 020 599 283 €** funded by Operational Programme Transportation for the modernization of infrastructure and rail fleet were allocated for ŽSR and **88 510 567 €** for ZSSK between 2007-2013; For the period 2014-2020 **1 185 966 346 €** has been allocated for further modernisation of railway infrastructure and rolling stock upgrading for this transport.
- The regional transport to Bratislava was in 2012 opened for **private company** RegioJet due to demand for increase the comfort of the passengers.

SLOVAKIA: MODERNIZATION OF THE RAILWAY SYSTEM

RESULTS AND IMPACTS

Modernization of infrastructure and replacement of the old trains and wagons which operate mainly in Bratislava and Košice region during rush hours.

Comfortable service for the passengers due to the opening of the market to the new railway operator.

Increase in the number of passengers due to the extension of new regional lines and better integration of rail transport with public transport in Bratislava.

Increase in safety of the infrastructure and speed increase.

SLOVAKIA: MODERNIZATION OF THE RAILWAY SYSTEM

SUCCESS FACTORS



EU funds for modernisation of the railway infrastructure



The increase of frequency of regional trains during rush hours and the integration with other kinds of urban public transport



Modernisation of platforms

CHALLENGES



Harmonization of public transport timetables between trains and city public transport



Increase of electricity in total final consumption of energy sources in transport



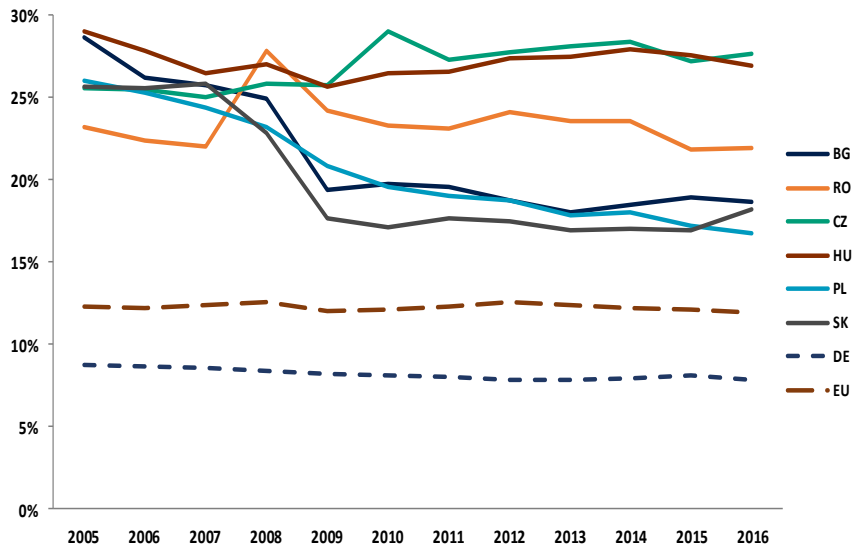
Improvement of insufficient capacities of some lines and inadequate equipment of trains and stations

Share of public transportation in passenger land transport

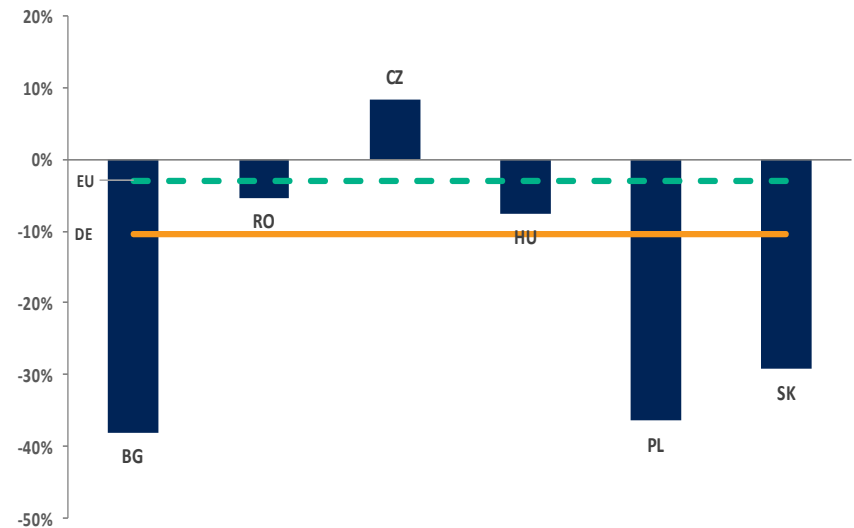
INCREASE IN SHARE OF BUSES, COACHES, TRAM AND METRO IN PASSENGER LAND TRANSPORT SINCE 2005

- Almost all countries considered saw a **decrease** in the share of public transport in land passenger transportation between 2005 and 2016. The sole exception is **Czech Republic** which increased it by **8%**. The biggest reductions – **38%** and **36%** respectively – were recorded in **Bulgaria** and **Poland**.
- The country leading the region in terms of distance travelled by public transport per capita in 2016 is **Czech Republic** with a register value over **2500 km**.

Share of public transportation in passenger land transport, 2005-2016



Public transport share change between 2005 and 2016





CZECH REPUBLIC: LAW ON THE PUBLIC SERVICES IN PUBLIC TRANSPORT



Name of the regulation: Zákon o veřejných službách v přepravě cestujících a o změně dalších zákonů

(Law on the public services in public transport)

Category: financial/fiscal/legislative

Timeframe: Ongoing

- The goal of the regulation is to provide public transport connections to all more than **6 200 settlements** in Czechia via delegated authority to the 14 regional administrations, offices, and in certain cases coordinators of the integrated public transport.
- The main beneficiaries are **residents of the Czech Republic** - around 10,5 million people, as well as **tourist**. Children, students, seniors and people with health disabilities are provided with **discharge** for the long-term tickets.
- To make the market economically viable, the state guarantees so called **retroactive compensations** of proven business losses of individual transportation companies procured via open and transparent tenders.
- The nominal amount of the overall compensations in all 14 regions has increased quite significantly in the last eight years from **4.9 billion Czech crowns** in 2009 to **6.8** in 2017.



CZECH REPUBLIC: LAW ON THE PUBLIC SERVICES IN PUBLIC TRANSPORT

RESULTS AND IMPACTS

The overall number of passengers in regional bus transport has remained more or less the same since 2005 in spite of the growing number of purchased and owned individual cars.

The regional public transport systems all around the country have remained significant actors in the national transport.

Thanks to the modernisation of vehicle fleet and remaining subsidies the regional public transport is still able to compete with the individual car transport.

SUCCESS FACTORS



Historical background - the presence of public transport since 1989



Modernisation of the majority of vehicles



Establishing regional administrations and in some cases regional transport coordinators



Geography of the Czech Republic



Partial privatisation but at the same existence of attractive regulated fares

CZECH REPUBLIC: LAW ON THE PUBLIC SERVICES IN PUBLIC TRANSPORT



CHALLENGES



Growing number of cars
and individual car
transport



Dependence on the
public (regional) budgets



Insufficient number of
first class roads and
highways

CASE STUDY



- The regional administration together with the municipality of the city of Olomouc established a **coordinator of the Olomouc Regional Integrated public transportation system**. The coordinator is responsible for network defining, timetable solution, common fare and transportation directives, controlling, revenues division and marketing.
- Transport accessibility of the Olomouc region is provided by **3582 km** of roads, of which only **12.3%** are first class roads. There is **601 km** of railways in the region. Important rail junctions are in Olomouc and Přerov. The railway network is spread equally all over the Region's territory.
- Civil fares and **discounted fares** are provided for student and 65+ senior fares, children younger than 2 years travel for free. The relative prices of the tickets are generally several times (2-4x) **less expensive** than the individual car transport.
- **Dense network** of the city public transport ensures convenient travel throughout the city of Olomouc. Besides that Olomouc is one of the nation railway station nodes, the regional railway transport as well as the regional bus transport is **fully integrated** with the city public transport. The public transport provider (DPMO) is fully owned and run by the city itself.

Households sector policy frontier by indicator

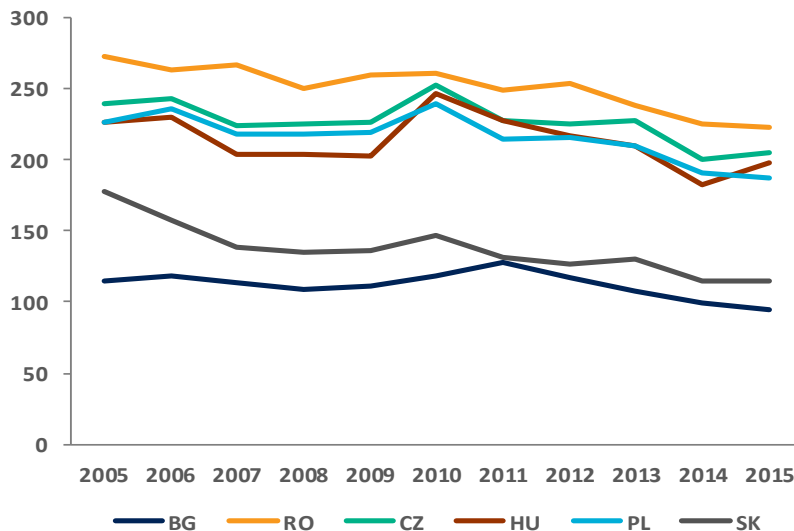
Energy efficiency gains in households

Energy consumption for thermal uses

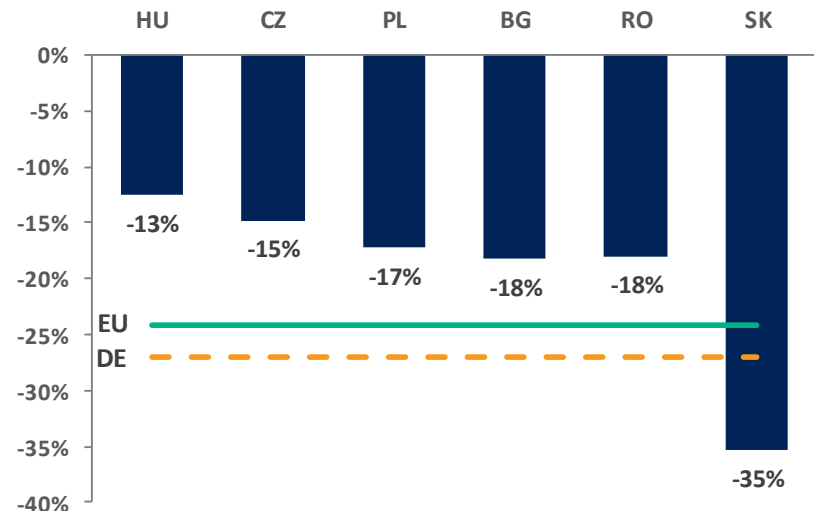
DECLINE IN ENERGY CONSUMPTION FOR THERMAL USES PER SURFACE AREA SINCE 2005 (KWH/SQM)

- While Bulgaria showed the lowest value of the indicator in each year between 2005 and 2015, **Slovakia improved** the most over the 10 years period, going from **195 to 115 kWh** per square meter (**35%** reduction) thus it **exceeded** the German (-27%) and EU (-24%) reduction rates.
- Except for Bulgaria and Slovakia, which both recorded lower levels of energy consumption for thermal uses per surface area than Germany and the EU average, all other CEE countries showed levels **substantially higher**.

Energy consumption per surface area (kWh per sqm), 2005-2015



Decline in energy consumption for thermal uses per surface area, 2015 (relative to 2005)



SLOVAKIA: INSULATION/RETROFIT



Name of the regulation: Insulation/retrofit

Category: financial

Timeframe: ongoing

- **Slovak State Fund for Housing Development** has been created to support not only **retrofits** of ageing buildings, but also their **insulation** and **improvement** of their energy efficiency.
- Policy aimed at refurbishing in particular by thermal insulation of buildings and system faults removal has been implemented **since 1992**.
- The Fund's main tool is an offer of long-term low-interest **loans** for special purposes of dwellings refurbishment and/or insulation. These loans have often **0%** interest – in 2017 **69,9%** of all Fund's loans had 0% interest. The loan can be used to **insulate the facade, refurbishment and insulation of the roof and refurbishment of windows and doors**.
- The main beneficiaries are **households** and **flat owners** represented by building management companies who can benefit from low-interest loans for refurbishment and insulation of their building.
- Between 1996 and 2016, the Fund provided **803 million Euro** in loans for both refurbishment and insulation. Financing of the Fund is done with own funds, state budget and EU funds. The overall revenues in 2017 were **394 million Euro** and total costs of **195 million Euros**.

SLOVAKIA: INSULATION/RETROFIT

RESULTS AND IMPACTS

It is estimated that more than half of residential buildings (apartment buildings, **58,3%**) and more than one third of family houses (**37,5%**) underwent refurbishment by the end of 2016.

Increase in the number of insulated and refurbished blocks of flats during the 1996-2016 contributed to **decrease of energy consumption** in housing sector and increase of energy efficiency in the whole sector.

The State Housing Policy expects an annual increase of **29 thousand** units in residential buildings and **22 thousand** family houses to be refurbished in the upcoming years

The buildings sector was the main contributor of energy savings in Slovakia in period 2014-2016 when it altogether contributed to the overall goal of energy consumption decrease with **5 016TJ** (out of 9 617 TJ).

SLOVAKIA: INSULATION/RETROFIT

SUCCESS FACTORS



Generous subsidies
and preferential
loans



Large number of
programmes focused
on improvement of
thermal efficiency of
buildings

CHALLENGES



Dependence on
behaviour of owners of
flats



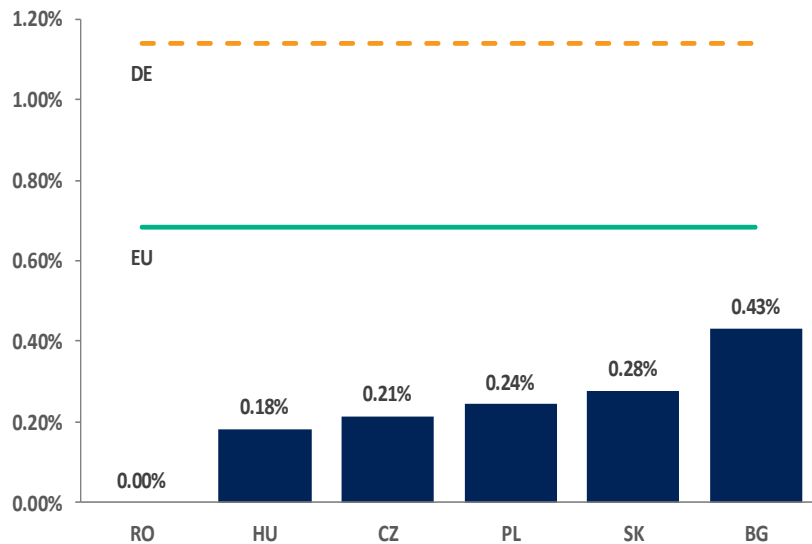
Large number of
old, inefficient
buildings

Increase in share of solar water heating in final energy consumption

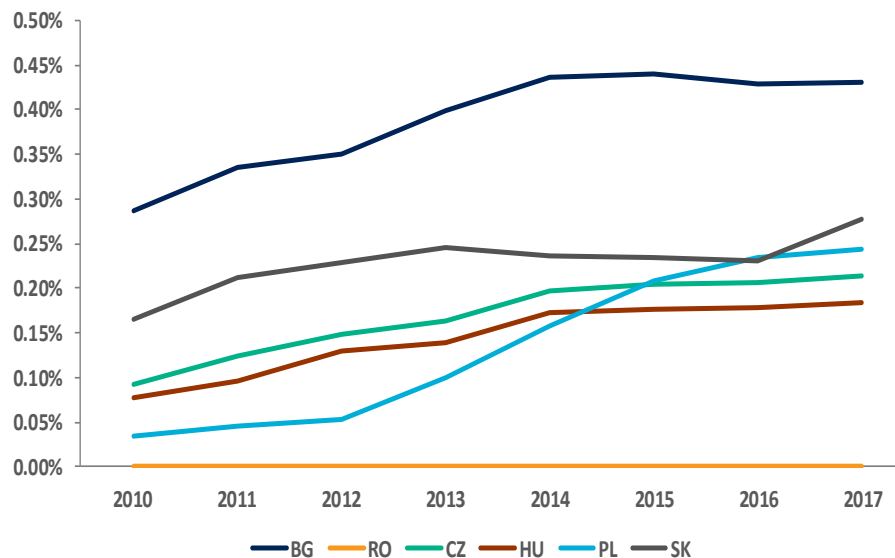
INCREASE IN SHARE OF SOLAR WATER HEATING IN FINAL ENERGY CONSUMPTION (EXCL. ELECTRICITY) SINCE 2010

- In terms of the share of solar water heating in final energy consumption in each year between 2010 and 2017, Bulgaria is the best performer in the region. However, when taking into consideration the share's relative increase in this period, **Poland** is the leader with over **600%** increase.
- At the beginning of the period considered, Poland had the smallest share of solar water heating in FEC, and Bulgaria had the biggest share (0.29%). Until 2017, Poland surpassed Hungary and Czech Republic, reaching the third spot in the CEE region with a value of **0.24%**– after Bulgaria and Slovakia.

Share of solar water heating in FEC, 2017



Share of solar water heating in CEE countries, 2010-2017



Source: WiseEuropa based on JRC Ideas data



POLAND: PROMOTION OF SOLAR COLLECTORS IN HOUSEHOLDS SECTOR



Name of the regulation: Promotion of solar collectors in households sector

Category: financial

Timeframe: completed

- National Fund for Environmental Protection and Water Management (NFOŚiGW) launched program payments to bank loans for **purchase and installation of solar collectors**. The main problem, addressed by the subsidy program, is the high carbon footprint of households.
- Financial support was granted for the **purchasing and assembling of solar collectors** for heating of service water and for an additional energy supply for other heat receivers in buildings used for residential purposes.
- The policy has been addressed to **natural persons** who had the right to take decisions about the residential building, or the right to take decisions about a residential building under construction and to housing communities installing solar collectors on their own multi-family buildings.
- The budget included **104 million EUR** to pay grants in the form of loan agreements concluded in the years 2010-2014.



POLAND: PROMOTION OF SOLAR COLLECTORS IN HOUSEHOLDS SECTOR

RESULTS AND IMPACTS

The results of the program overachieved the assumed target. Over **67 thousand** installations were completed, which contributed to reduce approximately **75.1 kt CO2 emission** per year for 2010-2014.

According to NFOŚiGW statistics from 2014, within the project **61.4%** hard coal, **11.2%** electricity, **18.8%** natural gas and **8.6%** other energy carriers have been replaced by solar energy.

Grants from NFOŚiGW contributed to **35%** of all installations of solar collectors in Poland.

Significant increase in collector sales - in this terms, Poland was promoted from **9th place** in 2009 to **3rd** in 2012 among European countries.

Accelerated industry development and emergence of new companies on the market, which contributed to the employment growth in the solar collectors industry.



POLAND: PROMOTION OF SOLAR COLLECTORS IN HOUSEHOLDS SECTOR

SUCCESS FACTORS



Natural persons as recipients of the program



Effective cooperation with the banking sector



Possibility of simultaneous co-financing from other sources



Comprehensive program preparation

CHALLENGES



Improve the competitiveness of domestic companies



Expectation of short-term profits



Lack of coordination and stable regulation



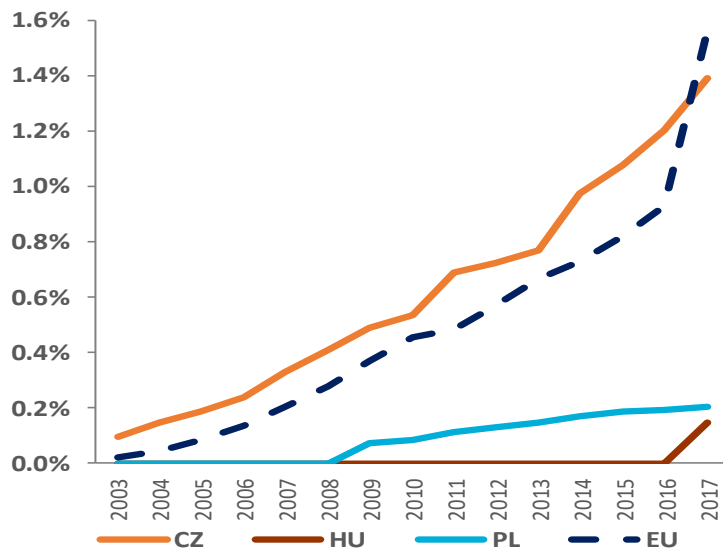
Installation costs

Share of heat pumps in final energy consumption

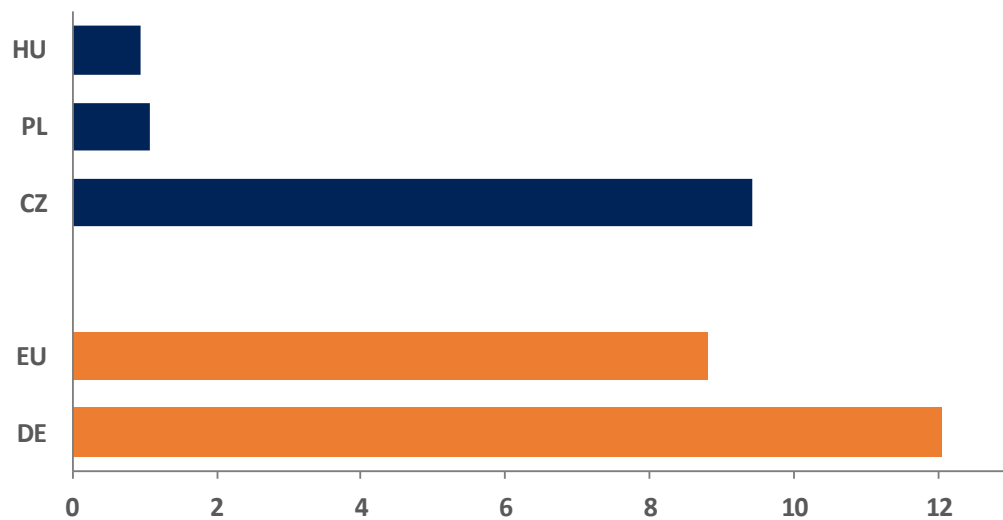
INCREASE IN SHARE OF HEAT PUMPS IN FINAL ENERGY CONSUMPTION (EXCL. ELECTRICITY) SINCE 2005

- In terms of the share of heat pumps, the clear leader in the CEE region is **Czech Republic**. Out of the six analyzed countries, in three the recorded share in 2017 was **0%**, while in Hungary and Poland it amounted to, respectively, **0.1%** and **0.2%**.
- Czech Republic was the only country following a similar path to the EU average in introducing heat pumps since 2003. Compared to Germany, Czech Republic performs **slightly worse (1.4% share compared to Germany's 1.8%)**.

Share of heat pumps in FEC, 2003-2017



Ambient heat (from heat pumps) per thousand inhabitants (toe), 2017



CZECH REPUBLIC: NEW GREEN SAVINGS AND KOTLÍKOVÉ DOTACE



Name of the regulation: Zelená úsporám/Nová zelená úsporám 2013/Nová zelená úsporám (New Green Savings) and Kotlíková dotace

Category: funds/fiscal/financial

Timeframe: ongoing

- **New Green Savings programme** supports energy savings in single-family houses and apartment blocks, installation of low -emission biomass-fired heat sources, **efficient heat pumps** and solar collectors as well as the construction according to passive energy standards.
- The main aim of **Kotlíková dotace** is to **promote the replacement of existing hand-filled solid fuel boilers** for new, low-emission automatic coal, biomass or coal-and-biomass fired boilers or heat pumps, focused in the “coal” region.
- The main beneficiaries of New Green Savings are **owners and builders** of family and multiple-dwelling houses, while beneficiaries of Kotlíková dotace are primarily family and apartment houses owners and **inhabitants of regions with heavy air pollution**.
- Budget: New Green Savings – up to **CZ 25 billion** obtained through selling „Emission Credits”; Kotlíková dotace – **EUR 350 million** received from the EU funds.
- The final provider of subsidies in both programs are **regional administrations and regional contact centers of SFŽP (the State Environmental Fund of the Czech Republic)**.

CZECH REPUBLIC: GREEN SAVINGS AND KOTLÍKOVÉ DOTACE



RESULTS AND IMPACTS

New Green Savings: **3.36** PJ energy savings and **384 000** t of annual CO₂ savings every year.

The program did cause certain **incremental increase** in the heat pump installations in 2010 and the growing trend remained more or less the same.

Overall, between 2010-2017, **15 094** heat pumps were supported by either the first, or the second dotation program.

In 2010-2017, a total of **7869** heat pumps were subsidised from New Green Savings programme.

Between 2010-2017, **7225** heat pumps were supported from the **Kotlíková dotace** and **43 396** old polluting solid fuel heating boiler were replaced by new ones (**30%** heat pumps). Moreover, it contributed to **388 162** t/year CO₂ savings and **1 813 439** GJ/year energy savings.

CZECH REPUBLIC: GREEN SAVINGS AND KOTLÍKOVÉ DOTACE



SUCCESS FACTORS



Solidarity among the individual participating state actors



Engagement of the regional contacting centers

CHALLENGES



Ineffective and complicated approval process



Low public knowledge about heat pumps

THANK YOU FOR YOUR ATTENTION

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