

**CZ**

# **Bring on the money, don't ask for results**

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**Climate action in EU Cohesion Policy  
funding for the Czech Republic, 2014-2020**

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Despite the Partnership Agreement and Operational Programmes in the Czech Republic describing the shift to a low-carbon economy and offering record levels of energy efficiency, EU funding will not change the carbon-intensive pathway that the country is bound to. This is due to little coordination and inappropriate planning and monitoring. Support for fossil fuels, low levels of climate mainstreaming and negligible support for a limited number of renewables make the transition to the low-carbon economy from EU funds unattainable.

## KEY FINDINGS

- Energy consumption is planned to stagnate and the rate of renewables installations will drop, according to the National Energy Policy.
- The Partnership Agreement deals with climate change mitigation, but it is missing a coordinated strategy for low-carbon development, especially in the sectors of renewable energy and smart grids.
- Fossil fuel use is widespread, whether coal in the case of boilers in individual households or natural gas boilers in energy efficiency projects.
- Boiler exchanges replacing old coal boilers with newer coal boilers are allowed in all areas with increased air pollution in the country, which in practice means almost the entire country.
- The potential of the EU funds to catalyse a large-scale shift from the use of coal boilers in the country is underutilised.
- The Czech Republic will spend an unprecedented amount of money on energy efficiency, still its compliance with the EU energy savings target is at risk.
- Few and incomparable indicators and weak targets show a lack of accountability regarding the performance of EU funds in the low-carbon area.
- Allocation of funds to renewable energy is negligible and very selective in its support for renewables.
- At the same time, the ban on combining investment with operational support makes the renewable energy business model impossible.
- The biggest of the Operational Programmes, Transport, lacks any climate or energy related targets.
- Some measures have a potential to contribute to transport sector decarbonisation, but the Partnership Agreement and the Transport Operational Programme fail to address the mitigation potential and to identify necessary steps to include climate considerations in transport funding.
- Compliance with sustainable development is a condition in infrastructure projects, but criteria are vague and do not distinguish between good and bad projects.
- Innovations are not focused on low-carbon development.

## INTRODUCTION

Despite privatisation, liberalisation and the reforms brought by European legislation, energy generation and distribution are still strongly centralised in the Czech Republic, and the interests of the biggest players have a strong influence over policy making in these areas.

The trends spearheaded in Western countries and supported by EU energy policy have not yet quite made it to the Czech Republic. With binding climate and energy targets from the EU mandatory, the country has at least tried to soften the impacts on its powerful, export-oriented energy sector. These attempts brought in derogations from EU ETS auctioning, providing electricity generators with free allowances, implementing the Energy Efficiency Directive only through 'alternative' schemes or liberalising the distribution system which left the grid in 11 out of 14 regions in the hands of the major state-owned electricity generator ČEZ.

It is therefore no surprise that despite some wording about the importance of climate change mitigation in the Partnership Agreement, and in spite of high allocations for energy efficiency and the overall importance of EU funds among public investments in the country, funding from the European Structural and Investment Funds in the programming period 2014-2020 will do little to alter the high carbon pathway in the Czech Republic.

The most striking example is the recent government decision to open new areas of Northern Bohemia to lignite mining. This unprecedented step overturns the protection of the region from further devastation which was agreed shortly after the end of the communist regime in Czechoslovakia, where environmental protests against air pollution from mining and industry were one of the strong sources of dissent that led to the 1989 Velvet Revolution. The main reason for this decision was an alleged lack of lignite for district heating systems, despite all the investments in the energy efficiency of buildings, heat sources and distribution.

## HIGH INTENSITY, DIRTY MIX

About 50% of primary energy production is covered by domestic sources, primarily coal, which serves as a fuel for more than 60% of electricity generated. It also provides most of the heat both in district and individual heating. Nuclear sources cover about 33% of electricity generation.<sup>123</sup>

Natural gas is important in heating, covering 27% of households using individual heating and 10% of district heating systems. Consumption of gas has declined by 20% in the last ten years despite 800,000 new connections to the grid, and this is due to improved energy efficiency, the reduction of gas consumption in industrial production and the increasing gas price.

In 2013, renewable energy provided 12.4% of final energy consumption, close to the country's 2020 target of 13%. After the rapid development of solar sources in recent years, the current rate of renewable installations is low in the country.

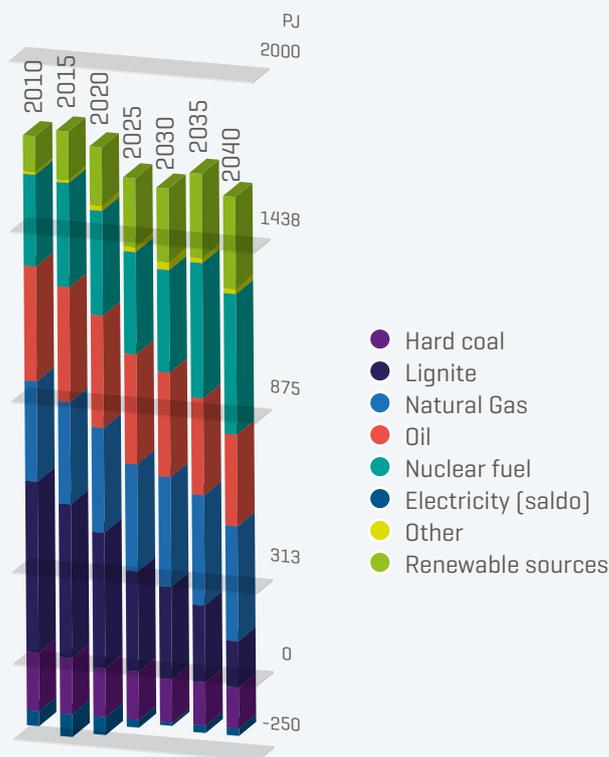
The transmission grid is strongly interconnected with those of neighbouring countries, the ratio of transmission capacity to maximum load is 35% for exports and 30% for imports.

The economy of the Czech Republic is very energy intensive: at 0.354 toe/1,000 Euro GDP<sup>124</sup>, it is the third most energy intensive country in the EU according to 2013 Eurostat data [see Graph 6 Energy intensity of the economy].

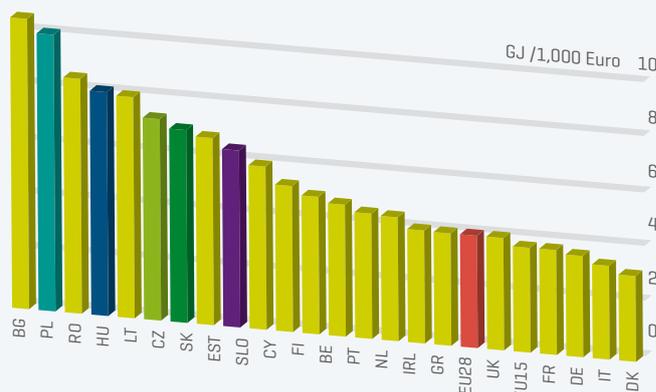
In terms of greenhouse gas emissions, the situation is similarly bleak: at 10.6 tCO<sub>2</sub> per capita annually, the country is again the third worst in the EU.

One can argue that the high share of industry in the sectoral division of Czech GDP (the highest in the EU) is the reason, but even when this sectoral division is normalised over the EU-28, the Czech Republic scores the sixth worst.

**GRAPH 43: Energy mix of the Czech Republic. Source: National Energy Policy**



**GRAPH 44: Energy intensity of EU-28 with constant sectoral division in 2011. GJ /1,000 Euro. <sup>125</sup>**



Note: Sectoral division is not available in all countries, therefore they are not included in the graph

<sup>123</sup> National Energy Policy 2015. <http://download.mpo.cz/get/52841/60959/636207/priloha006.pdf>

<sup>124</sup> Source: Eurostat. <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&plugin=1&language=en&pcode=tsdec360>

<sup>125</sup> The Government office, 2014: Energy Efficiency Measures and their Impacts on the Czech Economy. [http://www.vlada.cz/assets/evropske-zalezitosti/analyzy-EU/SEZUV-2014-3\\_Opatreni\\_na\\_zyseni\\_energeticke\\_ucinnosti\\_a\\_jejich\\_dopady\\_na\\_ceskou\\_ekonomiku.pdf](http://www.vlada.cz/assets/evropske-zalezitosti/analyzy-EU/SEZUV-2014-3_Opatreni_na_zyseni_energeticke_ucinnosti_a_jejich_dopady_na_ceskou_ekonomiku.pdf)

## ENERGY SECTOR DEVELOPMENT: FREE RIDING THE LOW-CARBON WAVE

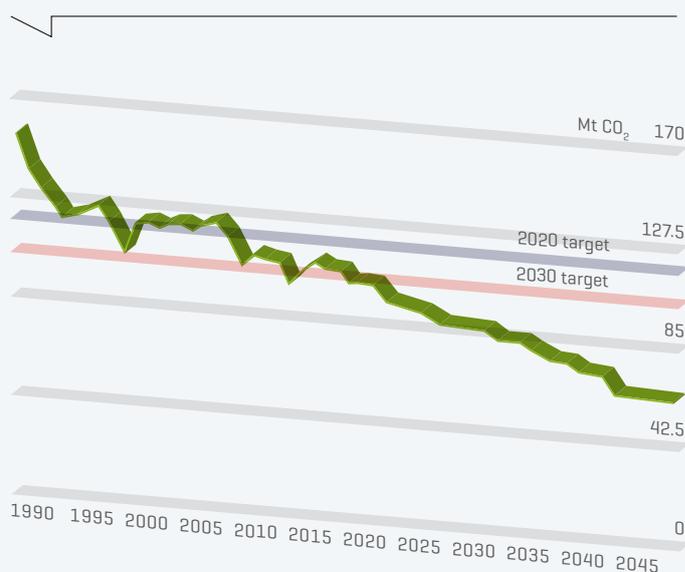
Initiated in 2009, the National Energy Policy (NEP) was finally approved in 2015, setting the direction of the sector until 2040. The policy fails to properly address energy efficiency and renewable potentials and is heavily skewed by the fact that stakeholders from these sectors have been left out of the preparation process. The policy strays far from what would correspond to the Czech fair share of greenhouse gas emissions reductions, taking into account GDP and high historical and current emissions of the country. In 2040, CO<sub>2</sub> emissions should only decrease by 35% compared to 2015, or 51% compared to 1990.

Although the policy names several instruments to increase energy efficiency and save energy in various sectors and despite planned investments into energy efficiency, final energy consumption will be mostly stable from 2015 to 2040. Surprisingly, this is good news and something new to energy planning in the country – so far, similar strategies have always been based on increases in energy consumption.

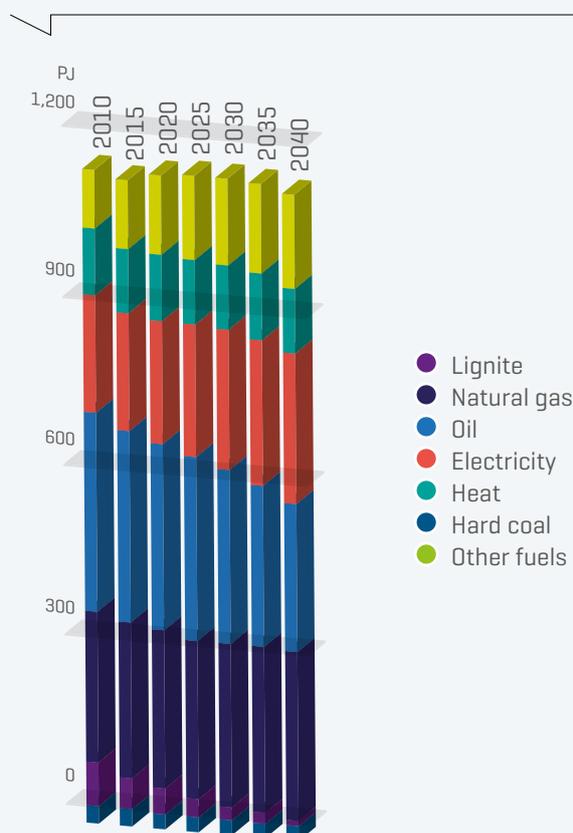
While the share of lignite in primary energy production will decrease (still 8.5% of the energy mix in 2040), the role of nuclear fuel will sharply increase. Gas will be more important as well. Renewables and secondary fuel (mostly waste) will account for 17% of the energy mix in 2040. Biomass (including biodegradable waste burned in waste incinerators) will make up for 67% of renewable energy sources. The installed capacity of electricity generation will slightly increase with nuclear, renewables and gas replacing lignite and hard coal. According to the policy, the country will continue to export electricity and increase its installed power. Energy efficiency, despite important gains, will be undercut by increases in energy consumption in the transport and production sectors. Centralised sources, especially nuclear energy, remain the main electricity generation capacities in the country.

The main driving forces in the energy sector – electricity and gas prices, the unpredictability of policy developments, a lack of feed-in tariffs for most renewables, new nuclear capacities, decisions about the volumes of coal to be mined and land use for biomass and agrofuels are outside the area of influence of the ESIF.

**GRAPH 45: Projected CO<sub>2</sub> emissions from combustion sources. Source: National Energy Policy.**



**GRAPH 46: Development and structure of energy end use. Source: National Energy Policy.**



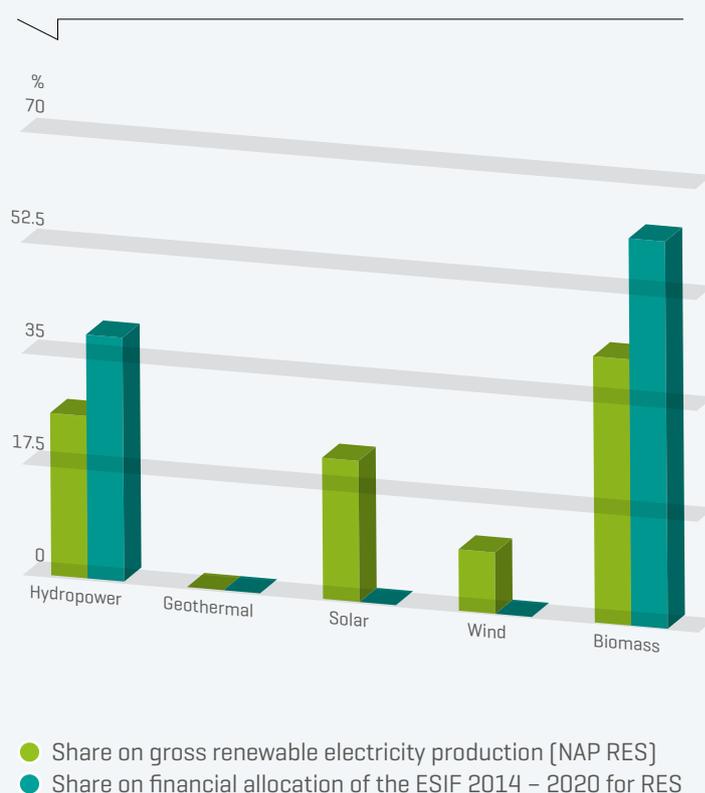
Regarding the Europe 2020 emissions reduction target in the non-ETS sector, which is mostly the focus of the EU funds, the Czech Republic is allowed to increase emissions in sectors not covered by the ETS by 9% by 2020 compared to 2005 levels. However, between 2005 and 2012, emissions were reduced by almost 1%,<sup>126</sup> and the target will most probably be reached without additional measures. While compliance with this target could be achieved without particular targeted emissions reduction efforts, the country continues to oppose EU climate policies.

## RENEWABLE ENERGY TARGET: SO FAR AND SO CLOSE

The renewable target for 2020 is 13% of final energy consumption, which is likely to be fulfilled. The rates of installation of new renewables, however, show strong irregularities. Until 2011, feed-in tariffs were generally used to provide support for all kinds of renewable sources. However, the drop in price of photovoltaic technology was not countered with an appropriate feed-in tariff modification, leading to the situation known as a ‘solar boom,’ where guaranteed support had a big impact on the public budget. To appease critics, the government opted for a strong counter-reaction which not only stopped the feed-in tariff for solar but resulted in the cancelling of or severe limitations on almost all forms of support for renewables.

The National Renewable Energy Action Plan<sup>127</sup> includes an estimation of installed capacity expected from each renewable energy technology in the Czech Republic to meet the binding 2020 target. According to this estimation, installed capacity of wind energy, for example, should steadily increase from 493 MW in 2015 to 743 MW in 2020. In reality, only 278.1 MW<sup>128</sup> was installed in 2014, and low operating support, no investments planned from the ESIF and administrative barriers suggest that the country will stay very far from the planned values. Values for solar photovoltaics have already been exceeded by far, with planned 1,695 MW of installed capacity in 2020, while in reality 2,068 MW has already been online in 2014. The sharp

**GRAPH 47: Share of renewables in the 2020 target versus the share of financial allocations for renewables**



increase in capacities was led by massive fields of solar panels often installed on greenfield sites: in 2013, there were 610 photovoltaic plants with installed power of 1 MWp<sup>129</sup> or more, providing 72% of total installed capacity for photovoltaics.

The potential of small installations on rooftops remains underutilised. After years when support was not available, the situation is starting to change. In 2015, the new Green for Savings programme opened its first call for projects where photovoltaics on rooftops of family houses will be supported. Three operational programmes will enable energy efficiency in buildings to be accompanied by photovoltaic installations.

<sup>126</sup> Eurostat: Europe 2020 Headline indicators. <http://ec.europa.eu/eurostat/web/europe-2020-indicators/europe-2020-strategy/headline-indicators-scoreboard>

<sup>127</sup> Ministry of Industry and Trade: National Renewable Energy Action Plan. 2012. [https://ec.europa.eu/energy/sites/ener/files/documents/dir\\_2009\\_0028\\_action\\_plan\\_czechrepublic.zip](https://ec.europa.eu/energy/sites/ener/files/documents/dir_2009_0028_action_plan_czechrepublic.zip)

<sup>128</sup> Energy Regulation Authority: Annual Report on the Electricity System of the Czech Republic. 2014. [http://www.eru.cz/documents/10540/462820/Rocni\\_zprava\\_provoz\\_ES\\_2014.pdf/933fc41a-ad79-4282-8d0f-01eb25a63812](http://www.eru.cz/documents/10540/462820/Rocni_zprava_provoz_ES_2014.pdf/933fc41a-ad79-4282-8d0f-01eb25a63812)

<sup>129</sup> Photovoltaic plant with 1 MWp capacity occupies roughly 1 hectare of land

Biomass and hydropower already have the highest share (Graph 48) of renewable electricity production. Their further exploitation has limits: in the case of hydropower, the vast majority of its potential has already been used and, in the case of biomass, natural limits of sustainable sourcing of biomass need to be taken into consideration. Though these are the renewable sources that do receive EU funds' support, this puts the sustainability of the overall RES development strategy into question.

## ENERGY EFFICIENCY TARGET: A LOT IS NOT ENOUGH

Indicative national energy efficiency target amounts to 47.78 PJ of total new savings on final energy consumption to 2020. With this target in mind, energy saving measures are intended to bring new savings amounting to 6.83 PJ each year, bringing cumulated new savings of 191.10 PJ at the end. The Czech Republic opted for the so called 'alternative measures' within the framework of the Energy Efficiency Directive to comply with this target, consisting above all of financial support for energy efficiency measures through the Operational Programmes of the ESIF and through the New Green for Savings program financed by EU ETS revenues.

Despite the unprecedented allocation of EU funds towards energy efficiency in buildings and industry, the slow adoption of the Operational Programmes and late disbursement of funds has led to a situation where the target will not be

reached. Graph 50 from a recent presentation of the Ministry of Industry shows the development towards the target.

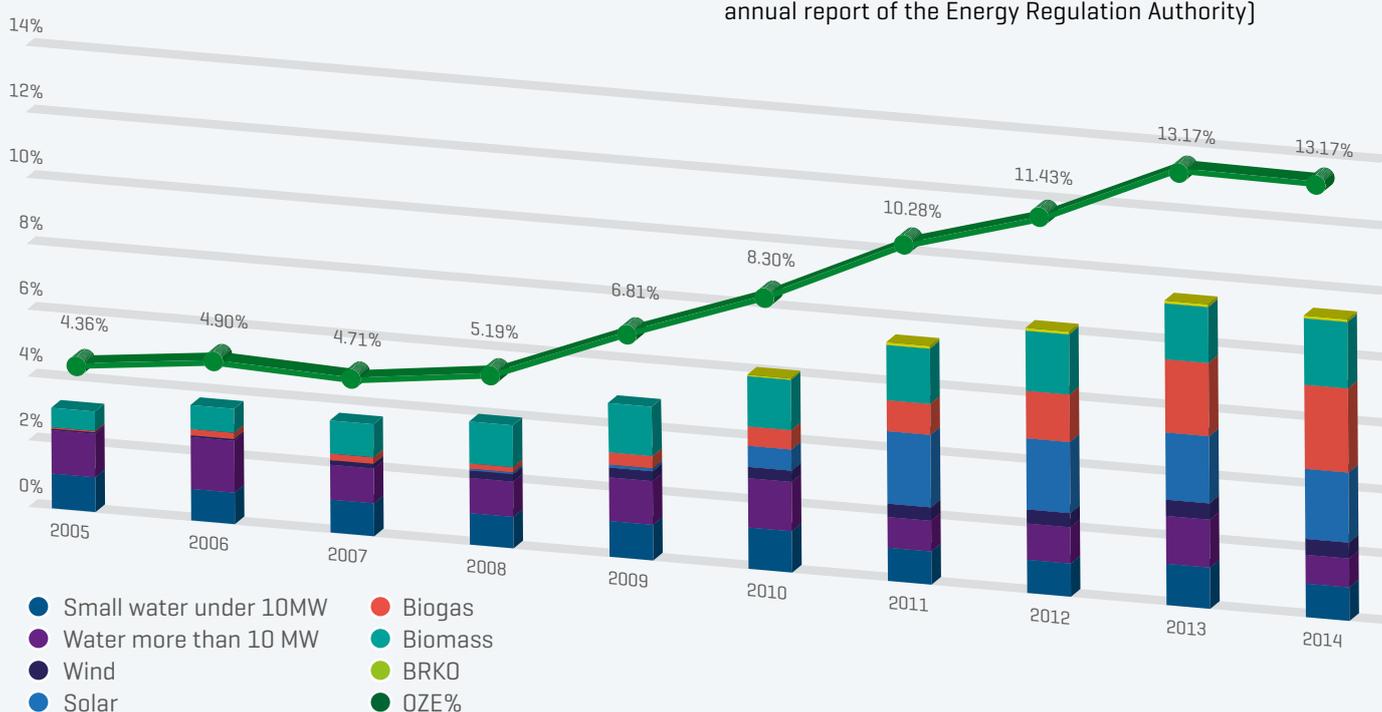
## 2030 TARGETS: PATHWAY LOST

With the legislative changes in the Czech Republic related to the EU's 2030 climate and energy package unclear, it is impossible to judge what will be the country's contribution to meet them. However, expected developments can compare with the ambition in the 2030 framework.

The only binding target that will be distributed among the Member States is the 40% cut in greenhouse gas emissions compared to 1990 levels. Regardless of the division of efforts among Member States, the Czech Republic once again will not face problems, given the chosen baseline year and the history of economic transformation. Comparing the efforts needed for compliance with the target, it can be concluded that for the Czech Republic, the target is not ambitious and no special effort will be needed to reach it. The emissions reduction potential thus remains underutilised.

The European Council set an EU-wide target of 27% share of renewable energy consumed by 2030. The Czech National Energy Policy outlines that renewable sources will comprise only 14% of primary energy sources in 2030. In 2020, the 13% target of final energy covered by renewables corresponds to an 11% share of renewables in primary energy sources. While the EU wants to increase

**GRAPH 48: Development of gross electricity generation from renewables and share on total brutto consumption.**

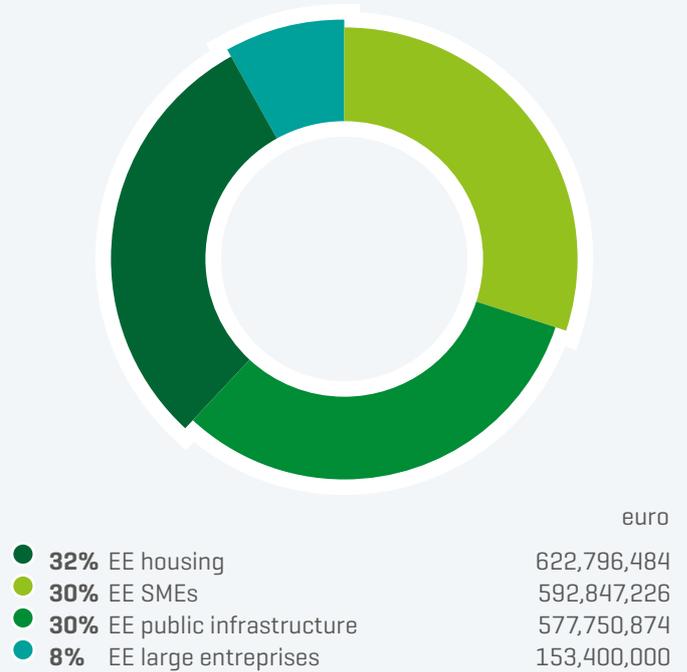


the renewables share to 35%, the Czech Republic will only increase to 18%.

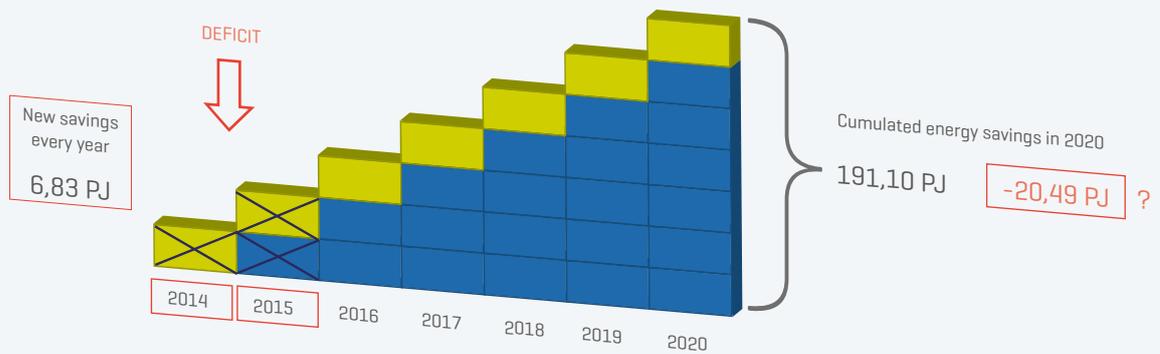
What is more striking is the curve of development of new renewables towards 2030: even though between 2010 and 2015, renewable energy production increased by 42.3 PJ, this amount gradually decreases and between 2025 and 2030, renewable production should increase only by 24.3 PJ. The policy supposes that the rate of installation of new renewable capacities will decrease over time. For a sector going through sharp technology development and price decreases, this is a surprising assumption.

The 2030 climate and energy framework also sets a target of 27% for improving energy efficiency compared to a business-as-usual scenario. Again, in the Czech National Energy Policy, this is an ambitious figure. The policy counts a final energy consumption increase of 1.5% between 2015 and 2030, despite the energy efficiency measures included in it. Looking further ahead, the Commission’s Energy Roadmap 2050 provides guidance on how the EU should fulfill its commitment to keeping the global temperature rise below 2° C. Emissions reductions of 80% below 1990 levels will be necessary for this in 2050, with a 2040 milestone of 60% reduction. In the Czech Republic, this reduction will be about 54% in 2040. The National Energy Policy does not cover 2050, but looking at the projected CO<sub>2</sub> emissions from combustion sources [Graph 45], the country will not be able to take a

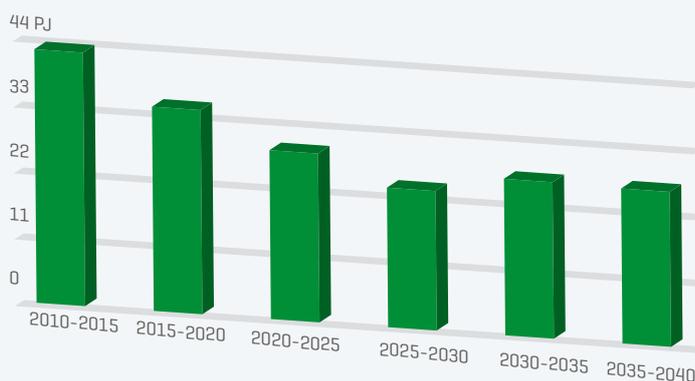
**GRAPH 49: Energy efficiency allocations by type of beneficiary.** Source: our own calculations based on approved Operational Programmes according to categories of intervention



**GRAPH 50: Calculation of annual savings contributing to the overall target and the deficit of savings due to late start of the OPs.** Source: Ministry of Industry and Trade. 2015



**GRAPH 51: Increase of primary energy production from renewables over five-year interval [in PJ].**



sharp turn and cut its emissions by another 43%<sup>130</sup> in just 10 years.

## ALTERNATIVE ENERGY SCENARIOS ARE POSSIBLE

We can also compare the level of the low-carbon ambition of the National Energy Policy with other energy scenarios. In 2012, the Wuppertal Institute elaborated a realistic scenario for the decarbonisation of the economy based on well-documented estimations of efficiency and renewables potentials. The resulting study, called Smart Energy, concludes: in the Smart and Consistent scenario, renewable energy sources would provide 455 PJ of energy annually in 2050, covering 68% of final energy consumption. CO<sub>2</sub> emissions would be cut by 80% already in 2040, while in 2050, they would represent only 9% of 1990 emissions. Most importantly, final energy consumption would decrease in 2020 by 12% from current levels, by 27% in 2030, by 47% in 2040 and by 71% in 2050. This sharp decrease in energy

consumption is a precondition for the other two, the share of renewables and greenhouse gases reduction.

## FUNDING EMISSIONS AS USUAL: CLIMATE MAINSTREAMING IN EU FUNDS IN THE CZECH REPUBLIC

The outline of the energy sector in the previous chapter highlights an energy-intensive economy with centralised generating installations, a slow uptake of modern technologies and a low use of efficiency and renewables potentials.

Despite the role that EU funds have in the Czech economy, representing 55% of total public investments, the presumed focus on the low-carbon economy and even record levels of funding for energy efficiency, the results of the 2014–2020 funding period will do little to improve the Czech energy trajectory. The reason for this stems from a lack

**TABLES 8, 9, 10:** Comparison of the National Energy Policy scenarios with the Smart Energy scenarios

CO <sub>2</sub> emissions in MtCO <sub>2</sub>	Baseline 1990	2020	2030	2040	2050
EU target applied to the CZ baseline	160	128	96	64	32
National Energy Policy	160	108	97	74	
Smart Energy (CO <sub>2</sub> emissions only)		76.9	52.5	31.4	14.6

Renewable energy primary production in PJ	2020	2030	2040	2050
National Energy Policy	195.6	247.5	299.8	
Smart Energy	256	329	389	455

Final energy consumption in PJ	2020	2030	2040	2050
National Energy Policy	1,043.1	1,050.9	299.8	1,033.3
Smart Energy	1,018.2	904.1	779.8	668.8

130 Value calculated as emissions reduction from 2040 values planned by NEP and 80% reduction from 1990 levels.

of commitment of public authorities to renewables and efficiency. This lack of commitment is clearly demonstrated in the National Energy Policy and is copied in the Partnership Agreement as well. The most important consequence is the lack of a clear strategy in the Partnership Agreement and a systematic approach to transforming the energy sector.

## PARTNERSHIP AGREEMENT

The Partnership Agreement<sup>131</sup> approved by the European Commission on 26th August 2014 is based on national development priorities<sup>132</sup> determined by the government as a base for the entire programming process for 2014–2020 and shows clearly where the interests of the government lie. There is no mention of a low-carbon economy, nor any single reference to anything vaguely related to the environment, the use of materials and natural resources or energy efficiency.

### National development priorities

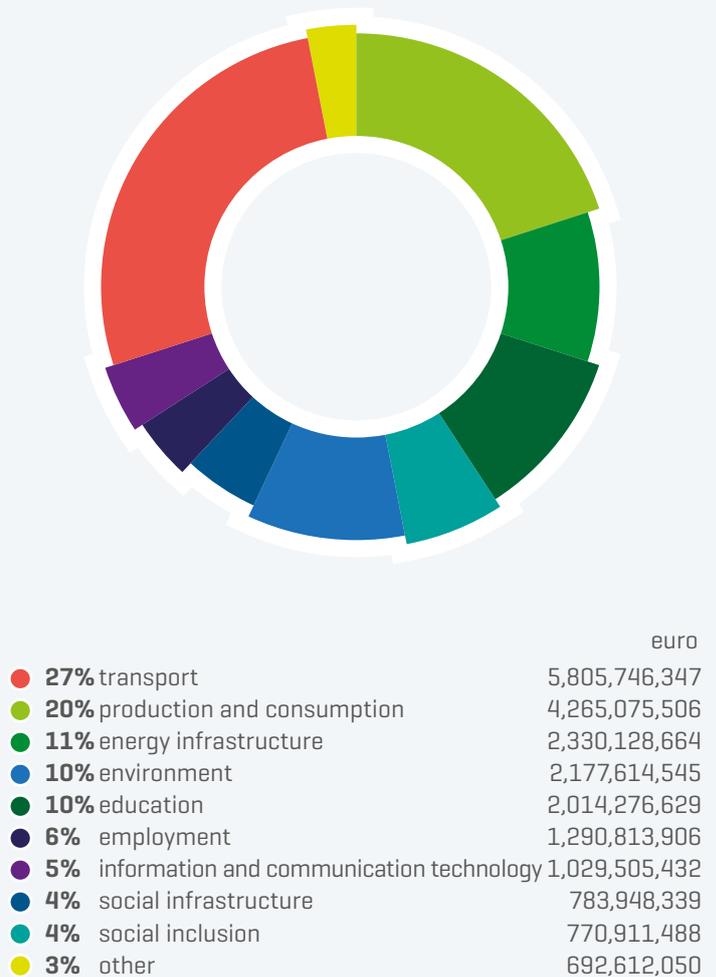
- Increasing the competitiveness of the economy [development of business, labour market, education, innovation, research and development].
- Development of core infrastructure.
- Improving the quality and efficiency of public administration.
- Promoting social inclusion, the fight against poverty and the healthcare system.
- Integrated territorial development.

## CLIMATE RELATED PARTS OF THE PARTNERSHIP AGREEMENT

The Partnership Agreement mentions climate change mitigation, energy efficiency and renewable sources in several places. Despite the prominent position mitigation measures play in the document, in reality, several shortcomings in the Partnership Agreement itself and between the agreement and other documents clearly show the lack of strategic approach, which later appear in the Operational Programmes and their calls for projects. The development needs analysis of the Partnership Agreement claims 'Mitigation measures can be achieved mainly by energy savings and by using renewable energy sources.'

The agreement references the Europe 2020 climate and energy objectives, but fails to identify the facts that were already well known at the time of its adoption: the fulfilment of the emissions reduction target and the near fulfilment of the renewable one. On the other hand, it focuses on the high energy intensity of the economy: 'the partial aim of the Czech Republic is thus getting closer to the EU average [energy intensity] in 2005, which was 10.5 t CO<sub>2</sub> eq., while in the Czech Republic it was 12.7 t CO<sub>2</sub> eq. in 2011. The strategy fails to set a pathway

**GRAPH 52:** Investment areas of Cohesion Policy funds in the Czech Republic. Source: our own calculations based on approved Operational Programmes according to categories of intervention



for energy efficiency improvements that would be sufficient to overcome this gap. It also fails to identify measures that would use the full renewable and mitigation potentials even beyond the 2020 targets.

The paradox of increasing electricity consumption despite energy efficiency measures repeats itself in the Partnership Agreement. Here, it serves to legitimise investments in distribution and transmission grids: 'A slow gradual increase in power consumption is visible in the entire Czech Republic [...] This results in the increased need for transformation output of the transmission/ distribution systems.' There is a single state-owned transmission operator [ČEPS] and just three distribution grid operators, which are monopolies in their respective regions [ČEZ, RWE and PRE]. Rather than transforming the grid to connect new renewables and save energy, EU funds are used to support further increases in capacities for these monopolies.

131 Ministry of Regional Development: Partnership Agreement for the Programming Period 2014–2020, Czech Republic <http://www.strukturalni-fondy.cz/getmedia/92b600c0-fa29-4467-a758-9696268dcefb/CZ-PA-adopted-by-EC-20140826.pdf?ext=.pdf>

132 National development priorities were set by Government Resolution No 650/2011.

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In terms of energy production, the agreement identifies the high dependency on non-renewables and seeks solutions to the increase of share of renewables, but only for selected ones: biomass, biogas and bioethanol and small hydro. For others such as wind or solar, the PA looks for excuses and repeats the mantra of ‘low exploitable potential of renewable energy sources’. It lacks mention of solar energy potential and comparisons with countries that have sharply increased installed power in solar photovoltaics in similar geographic areas like Germany.

Despite identifying renewable energy as a solution for reducing greenhouse gases emissions, the Partnership Agreement does not integrate energy infrastructure plans with climate change mitigation requirements and, on top of it, shows discrepancies even with some of the domestic strategies.

In comparison with the National Energy Policy, which praises the country for its grid interconnections (the country is the seventh major electricity exporter in the world), the Partnership Agreement claims that ‘the interlinking of the Czech energy networks with those of neighbouring countries [mainly in the north-south direction] is not sufficient.’<sup>133</sup>

Moreover the climate change mitigation part does not include a list of development needs in all other sectors. Instead, it reads: ‘Mitigation measures are addressed in detail in the problem areas: competitive businesses, transport infrastructure and accessibility/mobility, energy infrastructure and environmental protection.’

Indeed, the competitive businesses or infrastructure parts deal with energy efficiency, renewables and smart grids, but as described above, these measures follow their own logic, not necessarily that of climate change mitigation. The lack of a strategic approach towards mitigation is here clearly illustrated.

## **LACK OF CLIMATE CHANGE MAINSTREAMING INTO OTHER PRIORITIES**

The Partnership Agreement as a whole pays little attention to coherence of the strategy and its different parts.

Although the Competitive Businesses priority analysis reads ‘The Czech economy is currently at the threshold of transferring to competitiveness based on innovations’ and ‘It

is also essential to decrease energy and material intensity’<sup>134</sup>, strategic guidance on how to best use the innovations to improve energy efficiency is missing. This section identifies the need to develop sectoral innovation centres that offer specialised technical services, but again, it fails to identify that the Czech Republic, with its highly-developed manufacturing and energy sectors, is ideally positioned to be a leader in energy innovation. The main reason why businesses should become more efficient in energy use, according to this part of the agreement, is not the competitive advantage in quality and innovation, but simply the burden of a high electricity price, which is, however, driven high by state regulation, not by power price.

In the Infrastructure section, the unfinished backbone of the transport network is the number one priority. Both TEN-T railway and motorway connections will be supported. While the agreement acknowledges that most of the TEN-T railway corridors have already been modernised to the target speed of 160 km/h, it fails to draw conclusions about what this means for the construction of more motorways. For example, the Prague-České Budějovice link is almost finished, but at the same time, planning of two parallel motorways [D3, R4] is ongoing, despite strong public protest.

Although some of the measures, such as rail infrastructure, urban intelligent transport systems and cycling infrastructure, have the potential to contribute to transport sector decarbonisation, the Partnership Agreement completely fails to address the mitigation potential and to identify necessary steps. In this regard, it is in line with the National Energy Policy that, for the next ten years, counts on continuous increases in energy consumption in the transport sector. Similarly, the transport infrastructure part fails to address the issue of air pollution from transport.

The result of these omissions is clearly visible if we look at the division of the allocations for transport in the Czech Republic in the following graph. Road transport, the most carbon intensive of all supported modes, receives almost half of the allocation.

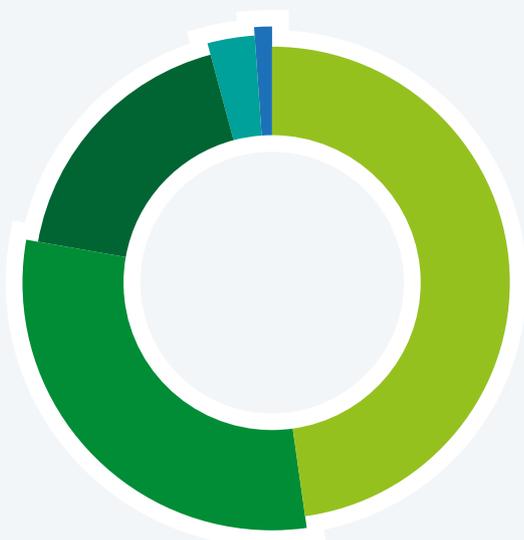
It is also interesting to see that the Partnership Agreement mentions the development of cycling infrastructure, but we can find no financing allocated. In the Operational Programmes, cycling infrastructure will have to compete for the same finance in the urban low-carbon development with

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133 Partnership Agreement, pg. 62

134 Partnership Agreement, p. 40

**GRAPH 53:** Share of transport modes in total transport funding in the Czech Republic. Source: our own calculations based on approved Operational Programmes according to categories of intervention



	euro
48% roads	2,765,516,420
30% railways	1,764,577,190
18% clean urban/regional	1,036,913,615
3% multimodal	177,894,853
1% water ways, ports	60,844,269
0% airports	0

CNG buses or intelligent traffic lights. Pedestrian transport and its role in urban development are not mentioned at all in the Partnership Agreement.

## HORIZONTAL PRINCIPLES FLOATING IN SHALLOW WATERS OF IMPLEMENTATION

Implementation of sustainable development includes climate protection as one of its principles. Yet, in the context of the Czech Republic, this principle does not bring any real change to the priorities and the ways in which EU funds will be spent. The Partnership Agreement by 'links climate to other actions: 'it will be effective to prioritise synergistic actions that simultaneously reduce the emissions of substances risky to health.'

This provision is, however, weakly implemented in the Operational Programmes. Air pollution measures such as boiler exchanges, for example, enable the financing of coal boilers. This prioritisation of synergies between air pollution and climate actions is only provided by a subsidy bonus of 10 percentage points in favour of biomass boilers, which is insufficient and does not motivate consumers to switch

from coal after decades of using it. Other synergies, such as coordination between biomass production and its use for energy purposes in order to improve the sustainability of biomass and shorten transport distances are not in place.

The section on climate protection also mentions the CO2MPARE tool for the assessment of effectiveness of interventions in terms of greenhouse gas emissions. This instrument was only added to the agreement after NGO pressure and its effect is minimised as it is only left for mid-term and ex-post evaluations. The opportunity to use it for strategic decision-making on climate protection measures was left unused, despite the fact that the data for the Czech Republic was available.

Spatial planning is another principle of sustainable development, however, it fails to mention the role of clean energy transition strategies and plans in territorial development.

Environmental aspects of public procurement should strengthen the sustainability of EU funds implementation. But the text of this principle is basically just a list of references to EU and national regulation on public procurement without any requirements for conditions that would lead to greening of public procurements.

## LACK OF STRATEGIC APPROACH TO CLIMATE CHANGE MITIGATION

The failure to include properly identified and reasoned development needs under the mitigation chapter is a good illustration of the lack of a strategic approach.

Energy efficiency measures are spread across four different Operational Programmes: Enterprise and Innovation for Competitiveness, Environment, Integrated Regional and Prague - Pole of Growth. This breakdown makes coordination between the various programmes difficult.

Energy efficiency criteria and indicators differ in each of the programmes. Coordination of these measures is difficult due to strict sectoral divisions that the managing authorities maintain. Only recently, after the risk of potential non-compliance with the energy end-use savings target under the Energy Efficiency Directive, a new energy efficiency coordination body was established at the Ministry of Industry and Trade. This coordination is, however, only starting now, so its influence on the most important part of programming and implementation of the programmes will be absent.

Similarly, renewable energy support is scattered around the programmes. While there is a dedicated specific target under Enterprise and Innovation for Competitiveness, renewables will be part of the efficiency measures mentioned above. The lack of expertise on renewable energy among managing authorities which normally do not deal with this issue, leads to a situation when selection criteria in programmes combining energy efficiency and renewables are not optimised.

## SETTING THE TARGETS, MONITORING THE IMPACTS

In order to be able to monitor EU funding for climate change mitigation, the Operational Programmes include a set of output and outcome indicators. Outcome indicators show the progress of the whole country, but do not track how much of that was actually achieved by EU funds. Surprisingly, output indicators that show real change delivered by EU funds are often missing. The problems the Czech Republic are currently facing with the energy savings target is caused by the improper measurement and accounting of energy savings.

Below, we list the climate-related output indicators of the four most relevant programmes. It is surprising how few they are and how incompatible and incomparable they are. Some of them (like the number of households with improved energy classification) do not provide any idea of the volume of savings, despite the fact that this data could be easily retrieved from the energy labels of the buildings. Note also that the biggest of all programmes, Transport, lacks any climate or energy-related targets. Therefore we only include a list of selected indicators at least vaguely related to climate change.

Through a lack of indicators, unambitious targets and cumbersome reporting, it is impossible to properly identify the effects that the vast allocation of money to energy efficiency will deliver.

In the previous programming period, the Court of Auditors in its reporting on energy efficiency subsidies pointed to low standards and low overall performance in three countries, the Czech Republic among them. We see these issues being repeated in the current period as well.

**TABLE 11: Greenhouse gas emissions reduction output indicators and targets in programmes**

OP	Indicator	Target	Unit
PRAGUE - POLE OF GROWTH	Annual GHG emission reduction	900	tCO2
ENTERPRISE AND INNOVATION FOR COMPETITIVNESS	Annual GHG emission reduction	480000	tCO2
ENVIRONMENT	Annual GHG emission reduction	620000	tCO2
INTEGRATED REGIONAL	Annual GHG emission reduction	205221	tCO2

**TABLE 12: Renewable energy output indicators and targets in programmes**

OP	Indicator	Target	Unit
PRAGUE - POLE OF GROWTH			
ENTERPRISE AND INNOVATION FOR COMPETITIVNESS	New renewable energy installed capacity	70	MW
ENVIRONMENT	New renewable energy installed capacity	30	MW
	Heat production from renewables	150000	GJ/year
INTEGRATED REGIONAL			

**TABLE 13: Energy savings output indicators and targets in programmes**

OP	Indicator	Target	Unit
PRAGUE - POLE OF GROWTH	Reduction of end-use energy consumption	0,32	PJ / year
ENTERPRISE AND INNOVATION FOR COMPETITIVNESS			
ENVIRONMENT	Reduction of end-use energy consumption	2	PJ / year
INTEGRATED REGIONAL	Number of households with improved energy class	75338	pcs.
	Number of households without improved energy class	25000	pcs.

**TABLE 14: Selected Operational Programme Transport indicators and targets related to climate change**

OP	Indicator	Target	Unit
TRANSPORT	Reconstructed / modernised railway TEN-T	95	Km
	Reconstructed / modernised railway non TEN-T	45	Km
	New / reconstructed motorways TEN-T	143	Km
	New / reconstructed roads non TEN-T	143	Km
	New or reconstructed metro/tram lines	7,9	Km
	New rail vehicles	125	pcs.
	New infrastructure for ecological vehicles [including CNG]	1000	pcs.

## ENERGY EFFICIENCY

Public funding from EU sources or policies, whether the ESIF, ETS revenues, EIB financial instruments or intermediated loans, is the most important driver for energy efficiency in the Czech Republic. This is also reflected in the prominent position these instruments play in the National Energy Efficiency Action Plan.<sup>135</sup>

The ESIF promotes energy efficiency in multi-apartment houses, public buildings and industry, in households through support for efficient boilers, in transport through the purchase of new vehicles and generally and indirectly in many other areas.

The Czech Republic has been a pioneer in public finance programmes for energy efficiency, at least in the CEE region. Currently, it is the first country in the region to use the ETS auction revenues for similar purposes, in a continuous call for projects to be sustained over several years.

The country did not opt for the Energy Savings Obligations in order to comply with the Energy Efficiency Directive, using rather the alternative measures, including EU funding.

It uses significant amounts of its ESIF allocation, almost 9% or EUR 1.9 billion, for direct energy efficiency measures. Of

this, over EUR 622 million will be invested in energy efficiency renovations of existing multi-apartment residential buildings [typically panel blocks of flats] and another EUR 603 million on public buildings. In the corporate sector, SMEs will be able to use over EUR 447 million and large enterprises almost EUR 300 million for energy efficiency of their buildings as well as technological processes.

Selection criteria in calls for projects with energy efficiency components have been set to favour stronger efficiency effects under the Environment Operational Programme for public buildings and especially under the Integrated Regional Programme for multi-apartment houses. After pressure from Bankwatch and other NGOs, three levels of financial support have been established according to the level of savings achieved. The first one is aimed at buildings, which have already been partially thermally-insulated or where only partial renovation is possible. It is not required for these measures to achieve a result in terms of energy class of the building, but on the other hand, each of the elements used for the renovation must have a very high efficiency standard, not only above the minimum legal level but even above recommended efficiency levels. The other two levels aim at complete renovation, and the principle of more savings, more subsidies is applied.

**TABLE 15:** Levels of support favouring deeper energy renovation in IROP

Measure	Energy savings minimum	Energy class minimum	Energy efficiency of each construction element	Share of support on eligible costs
Partial energy renovation	20%	-	Very efficient	25.5%
Shallow renovation	30%	C	-	25.5%
Deep renovation	40%	B	-	32.3%

In the Enterprise and Innovation for Competitiveness Operational Programme, one of the most important selection criteria the project scores on is the emissions reduction as well as price for emissions reduction [CZK/tCO<sub>2</sub>]. However, the call for proposals is not built in a competitive manner and requires the applicants simply to reach a certain score (60 out of 100) to be eligible for the subsidy. There is enormous demand exceeding the allocation for this call. It is therefore questionable why the calls for energy efficiency projects should not be competitive when the selection criteria would clearly give preference to projects with higher CO<sub>2</sub> emissions savings and a lower price for the CO<sub>2</sub> reduction.

Despite the high allocation and selection criteria which favour energy savings, the late start of the programmes may lead to a situation when the Czech Republic will not be able to comply with the energy end-use savings target [see above].

## NEGLECTED SUPPORT FOR RENEWABLES

Energy efficiency and renewable allocations could not be further away. The only Operational Programme that supports renewable installations aimed at electricity generation for distribution is Enterprise and Innovation for Competitiveness.

Renewable energy will, in the years between 2014 and 2020, receive just EUR 53 million, 0.24% of the total allocation. Wind, solar and geothermal energy have no support allocated, as most of this amount will be invested into biomass and small hydro sources as well as to heat output from existing biogas stations.

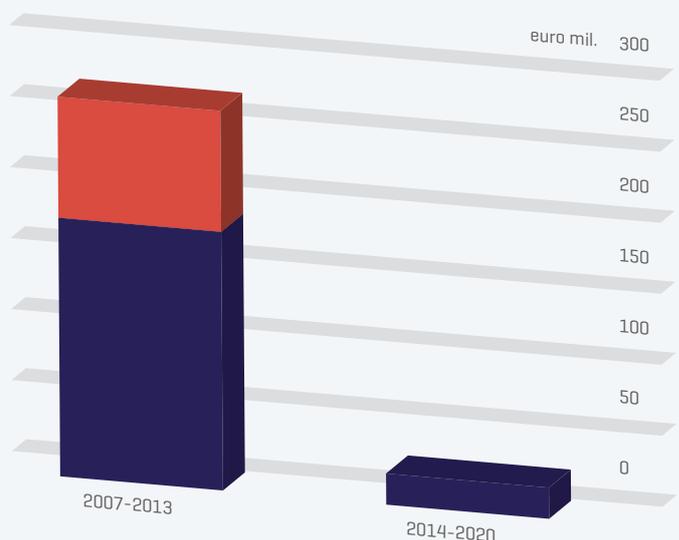
EUR 175 million (0.79% of the total) for waste management under the Environment Operational Programme will be dedicated to waste treating biogas plants. However, mechanical-biological treatment and costly waste incinerators, once permitted, will be financed from this same amount, meaning that financing for renewables will be minimal.

## RENEWABLES UNECONOMIC, ABSORPTION IN RISK

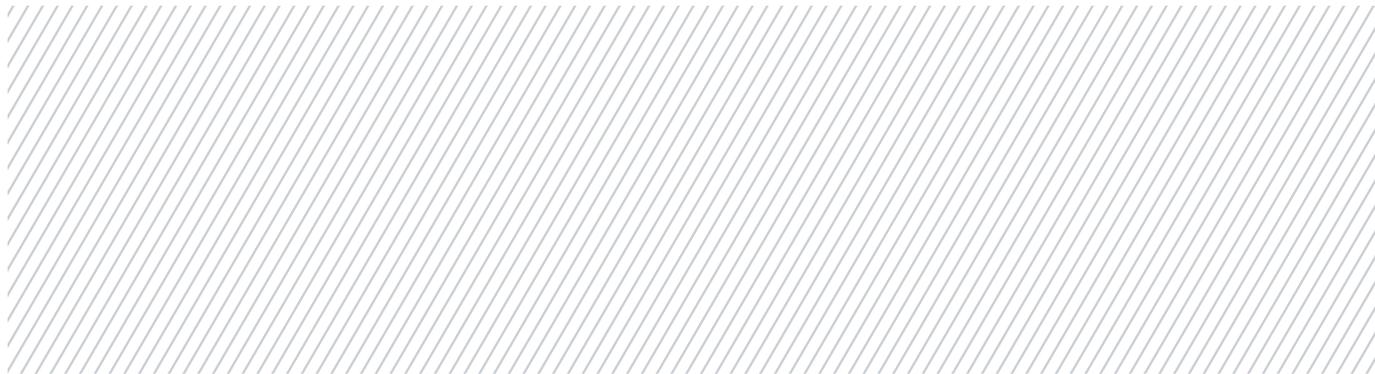
In the current set-up, at least hydropower and biomass will receive operating support from a feed-in tariff and investment support from Enterprise and Innovation for Competitiveness. But the programming document does not allow any combination of operating and investment support: investors have to choose. According to the Chamber of Renewable Sources, it is unprofitable to run such an installation without

**GRAPH 54:** Renewable energy allocation 2014 - 2020 compared to 2007 - 2013. Source: Own calculation based on categories of intervention for 2014 - 2020 Quarterly Monitoring report IV.Q 2014 for 2007 - 2013

- Public beneficiaries [municipalities, academia, state]
- Private beneficiaries [SMEs]



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any operating support, even with an investment subsidy. As the operating support is under heavy political pressure, and plans have surfaced for abolishing it completely for new installations, small hydro plants and even combined heat and power from biogas and biomass may not apply for the support from the Enterprise and Innovation OP for Competitiveness.

## **SUPPORT FOR RENEWABLES AS PART OF EFFICIENCY MEASURES: FINALLY A WAY TO GO**

Despite the bleak situation with direct subsidies, renewables will enjoy a certain level of support as part of energy efficiency and air pollution preventing measures. All the Operational Programmes that deal with energy efficiency measures – Enterprise, Environment, Integrated Regional and Prague will allow costs associated with renewable projects – whether biomass boilers, solar collectors, solar photovoltaics or heat pumps – to be eligible. This is a turning point in the history of support schemes in the country.

The selection criteria under the Operational Programmes allow beneficiaries to choose between the renewable or efficiency measures that are more economic. Overall CO<sub>2</sub> emission reductions will be evaluated in the criteria.

Within the selection criteria for biomass installations, especially mid-sized boilers for public buildings and industry, sustainability criteria for biomass have been introduced as well. Both Environment and Enterprise Operational Programmes rely on the sustainability criteria included in the Commission's report on the state of play of the sustainability of solid and gaseous biomass used for electricity, heating and cooling in the EU. On top of this, both programmes encourage local origins of biomass. In the case of the Environment Operational Programme, local means a 50 kilometre radius and projects score extra points for it. In the case of the Enterprise Operational Programme, the radius is 100 kilometres, but all projects must comply with this criteria.

## **EU FUNDS SUBSIDISING FOSSIL FUELS**

After a long debate between the Commission and several Member States, conditions for exchanging small combustion heat sources – boilers – were set in spring 2015. Despite the stress on synergy effects, conditions for these air pollution prevention measures at the end allow financial subsidies for coal boilers. The potential of the EU funds to catalyse a large-scale move in the small boilers sector in the country [the target is to exchange 80,000 boilers] into a low-carbon one was thus left underutilised.

### **Boiler exchange selection criteria and support**

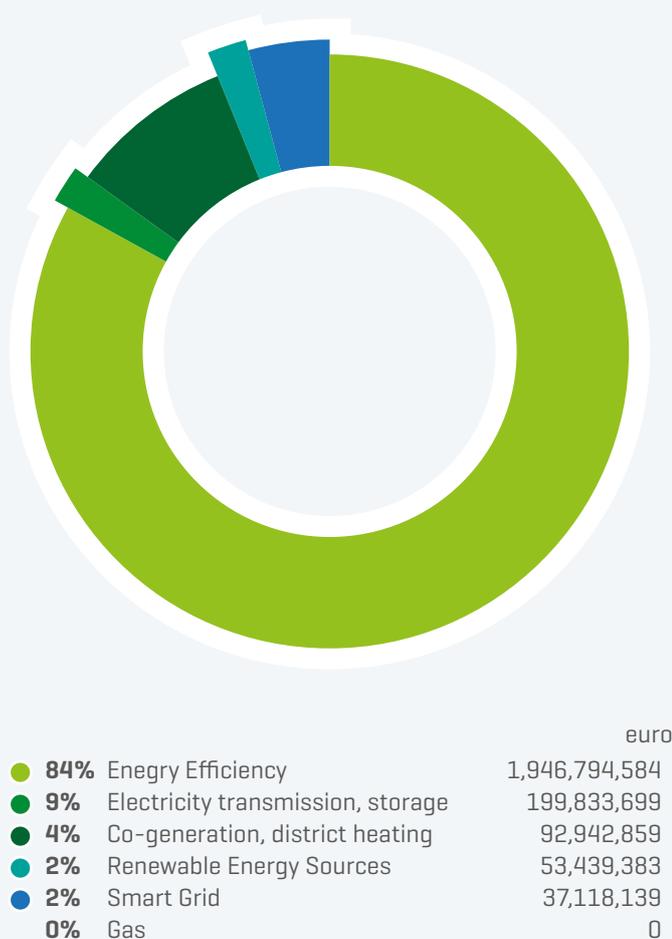
- Boiler efficiency eco-design class 5.
- Boiler fuel: coal and/or biomass (wood, pellets).
- Renewable sources (biomass, heat pumps, solar thermal): 80% support.
- Coal boilers: 70% support.
- Efficiency criteria: class C or efficiency measures.
- Area with air pollution exceeding limits (covers most of the population).
- No difference in support for different income classes and no targeting of poor areas.

So, despite the fact that support for coal boilers is slightly lower than for biomass and heat pumps, the difference is not big enough to motivate households that have used coal for dozens of years to change to renewables.

In the discussions during the programming phase of the Environment Operational Programme, the argument that coal is cheaper than biomass and therefore needs support to avoid energy poverty was often used. But coal is not the cheapest fuel for the supported class 5 boilers; wood is. The measures supported for exchanging boilers fail to address energy poverty, as there are no criteria to favour low-income households.

Yet another fossil fuel is systematically supported throughout several Operational Programmes and their axis: natural gas. Though condensing boilers are required, as well as high efficiency parameters in the case of co-generation, these technologies are widely available on the market and

**GRAPH 55: The different types of energy infrastructure investments. Source: our own calculations based on approved Operational Programmes according to categories of intervention**



do not represent significant innovation. While new boilers do bring energy savings, more attention should be given to the assessment of how much a subsidy is necessary for gas heating and how much should be left to financial instruments or Energy Performance Contracting.

### NOT SO SMART GRIDS

Both investment into renewables as well as the allocation for smart grids and transmission are rather low: investments into intelligent energy distribution systems at medium and low voltage levels will total over EUR 37 million, with the total amount of renewable sources up to EUR 53 million [See graph 55]. Counter-intuitively, and contradicting the Partnership Agreement, these investments are not aimed at decarbonisation and the integration of renewables. The result indicators chosen for this part of the Enterprise and Innovation for Competitiveness Operational Programme are the SAIDI and SAIFI – the annual average number and time of interruptions in power supply per consumer. Reaching these targets, the grid will definitely be of a better quality and the monopolistic operators able to finance maintenance and innovation that they would need to do anyway. In terms of renewables, connectivity may or may not be a side-effect of the measures.

An allocation of almost EUR 200 million for electricity transmission grid modernisation that should increase energy security, stability of supply and contribute to the completion of the EU single power market is also questionable. This allocation was originally reported under Thematic Objective 4, but as its contribution to the shift to a low-carbon economy could not be proved, it had to be moved to Objective 7. The state-owned ČEPS plans to limit cross-border spillovers from wind power in Germany and to provide new connections for coal power plants in the north and for the non-existent new reactors at the Temelin plant. This finance would just serve as a financial injection for the grid operator and would bring no added value nor improve Czech competitiveness.

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## HORIZONTAL CLIMATE MAINSTREAMING ACROSS THE OPs

For a successful transition to a low-carbon economy, it is necessary to implement climate protection across all the measures that are funded from the ESIF.

This mainstreaming has taken place to a certain extent in some of the Operational Programmes, while in others it is missing.

### Examples of successful mainstreaming

- Ex-ante conditionality is set on energy use of waste. National and regional waste management plans must show incineration is necessary even though the region complies with recycling targets.
- Sustainability criteria are in place for large biomass installations.
- Visitor centres in national parks must be passive buildings.

### Operational programmes working against climate mainstreaming

- Horizontal sustainability criteria are vague, a simple writing exercise for most applicants.
- No criteria are set for emissions reduction of transport investments in the Transport Operational Programme.
- Selection criteria for urban clean transport projects in the Integrated Regional Operational Programme do not guarantee that projects will not result in higher attractiveness of individual car transport.
- Minimisation, reuse and recycling are only granted 27% of total household waste management allocation, while the rest, 73%, will be used for mechanical-biological treatment, biogas generation or straightforward incineration, despite the fact that reduce-reuse-recycle generates fewer emissions.
- The reuse of brownfield sites and reconstruction of unsuitable buildings under the Enterprise and Innovation for Competitiveness Operational Programmes is not geared to energy efficient structures.
- No energy efficiency and just a single renewable energy research centre is planned among large research infrastructure centres from the Science, Research, Education Operational Programme, compared to five centres linked to nuclear research.

## RECOMMENDATIONS

- The analysis and selection of priorities and activities under climate change mitigation – especially in areas linked to EU policies like the 2020 strategy and climate and energy legislation – must be based on sound strategies in the Partnership Agreement, programming documents and those required by ex-ante conditionalities. The selection of activities, allocations, the formulation of rules and selection criteria need to be based on these strategies.
- Programming documents need to include clear guidance on how horizontal climate mainstreaming shall be implemented in all programmes, selection criteria and rules for beneficiaries. The selection criteria need to be based on specific, measurable indicators and set in a way that clearly favours projects with better climate mainstreaming. It is especially necessary to ensure that horizontal mainstreaming is not undertaken pro forma nor are rules for beneficiaries fulfilled through a simple narrative.
- A set of standardised indicators for energy savings needs to be established throughout the Operational Programmes to ensure that the impacts of energy efficiency are properly measured and reported, as well as to ensure comparability of results among the Operational Programmes.
- The impacts of energy efficiency for EU-funded measures need to be accounted for in the National Energy Efficiency Action Plan and other national energy strategies.
- Conditions for financing renewable energy sources need to take into account the economic reality of the sector and allow for a combination of investment and operational support.
- The range of renewable energy sources supported by the EU funds needs to cover all those that are part of the National Renewable Energy Action Plan.
- Any investment allocated under Thematic Objective 4 needs to directly lead to greenhouse gas emissions reduction. For example, each smart grid investment needs to be justified by its emissions reduction effect vis a vis increased connectivity for renewable sources or energy efficiency.