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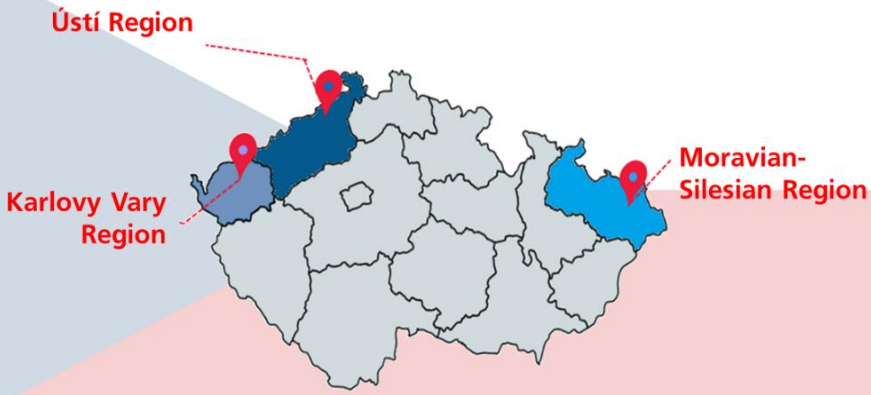
Support to the preparation of Territorial Just Transition Plan in the Czech Republic



D3. REPORT ON THE TRANSITION PROCESS TOWARDS CLIMATE NEUTRALITY (FINAL)

SUMMARY

01.06.2021

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Summary

This report presents an assessment of the transition process towards climate neutrality in the Czech Republic. The report analyses the extent to which the transition towards climate neutrality has been incorporated into existing strategic documents at the national and regional levels. It evaluates existing documents that assess the investment needs to reach climate neutrality and the planned funding from national and regional programmes. The timeline for key transition steps is also being assessed. The report focuses on the impacts of the transition to climate neutrality both at the national and regional levels.

This report was developed using a mixed methods approach, combining desk research of key strategic documents and relevant literature, quantitative top-down and bottom-up modelling, and a qualitative assessment based on in-depth interviews with stakeholders. It builds on an analysis and recommendations from the Deliverable 2 report, which assessed stakeholder engagement and governance mechanisms. Deliverable 3 serves as a pre-stage for the Deliverable 4 report, which will support the drafting of the Territorial Just Transition Plan (TJTP) of the Czech Republic.

The report starts with introducing the country and is followed by Chapter 2, which examines the progress towards climate neutrality by analysing how climate neutrality is reflected in the main national strategic documents, the expected associated investment needs and the structure of funding to support the transition. Chapter 3 provides our assessment of key transition steps. Chapter 4 evaluates the impacts of the climate neutrality transition at the national level (and whether those impacts are also assessed in Czech strategic documents). Chapter 5 provides a regional analysis of the impacts, both in terms of modelling and qualitative analysis based on interviews with stakeholders. We also assess the regional policy framework. In Chapter 6, we extend the impact analysis to other Czech regions to assess effects on heat production and individual heating in residential sector. Chapter 7 concludes and makes recommendations in several fields.

The key strategic documents of the Czech Republic have not yet fully reflected the transition to climate neutrality. The National Energy and Climate Plan (NECP) was prepared in 2018 and finalised in 2019, i.e., before the EU-wide endorsement for the climate neutrality target. Although the Climate Protection Policy (CPP) aims at 80% CO_2 reduction by 2050, the CPP is an indicative, rather than binding, target. The current State Energy Policy was adopted in 2015 and has been linked to 2020 energy efficiency targets, but it does not incorporate greenhouse gas (GHG) emission reduction targets.

These documents were developed in different periods and have not been clearly interconnected with respect to climate neutrality. It can be reasonably expected that climate neutrality will become the main point of reference in the revisions of these documents. The State Energy Policy is undergoing a revision at the time of writing of this report; the NECP will be revised in 2023.

Investment needs for the climate neutrality transition remain to be fully assessed and tracked. The investment needs (reflecting pathways to decarbonisation) have not been entirely quantified in the main strategic documents. The Climate Protection Policy is the closest in assessing the total investment and operational cost of GHG emissions reductions by estimating the total costs of the GHG reduction scenarios. The scenario closest to climate neutrality estimates total costs of CZK 29–33 trillion (EUR 1.1 – 1.3 trillion) between 2010 and 2050. However, the analysis may have been skewed by the prices of low carbon technologies at the time of report creation. **The National Energy and Climate Plan** is less comprehensive and only assesses investment and operational costs for selected sectors (e.g., renewable and energy efficiency under article 7 of the Energy Efficiency Directive (EED)). The estimates relate to 2030 targets as set by the NECP. Analyses by various consultancies have examined the investment costs of the climate neutrality transition and/or coal phase-out. Investment estimates vary between CZK 1–6 billion (EUR 39-234 million) per year. However, the studies vary in scope and applied methods. Therefore, the comparability of the estimates remains low. The availability of funding to support the climate neutrality transition and the specific conditions of public support programmes are currently being negotiated. Importantly, a system that tracks both public and private sustainable investment in a systematic way should be established at the national level. The EU Taxonomy will be instrumental to develop such a system. Nevertheless, proper implementation in the analysis, evaluation, and decision-making processes will be key for its success at the national and regional level.

The transition steps towards climate neutrality are still to be defined. In December 2020, the Czech Coal Commission recommended the phase-out of coal by 2038. However, given the lack of supporting analysis, the Government has taken note of the date without approving it yet. Thus, it is possible that the final date for the coal phase-out could change to an earlier suggested date of 2033. An earlier phase-out has also been highly recommended by civil society and environmental groups. The underlying

analysis tends to omit some aspects, e.g., infrastructure costs. However, key sectoral players, such as those in the district heating sector, are likely to phase-out coal at an earlier stage due to other factors such as the unavailability of coal, the development of emission allowances, and other factors irrespective of the final governmental decision.

If the national climate transition is carried out in line with the NECP and coal-phase out expectations, it will have a positive impact on employment, the environment, and the economy. Within this context, much of the renewable energy deployment is expected to happen by 2026 and a significant reduction of final energy consumption will take place by 2030 (12% reduction compared to 2015) and an additional CO_2 reduction of 17% to baseline levels taking into account the climate transition of the NECP. This will be accompanied by increased economic activity through the coming decade, driven primarily by investments needed to make the transition inducing increased economic activity in the construction and manufacturing sectors and indirect gains through supply-chain linkages. Nevertheless, an important employment decrease in the energy and utilities sector (which includes coal mining and coal-based power generation) is projected, resulting in the loss of about 3,000 jobs in the sector by 2030. This will be counterbalanced by an employment increase in the manufacturing sector (peaking in 2027 and driven by fabrication of electric components and other components that are necessary to build up the renewable capacity; after 2027 the job growth will be driven by an increase in electromobility) and the construction sector (driven by demand for energy efficiency and related labour, as well as the transition and deployment of renewable sources). By 2030, the overall net effect of the climate transition will be the creation of over 50,000 jobs nationally (compared to the baseline). To realise these positive net effects, there is a need for people to transition to new jobs (by upskilling and re-skilling). However, these new types of jobs do not necessarily have the same value added as the jobs in energy and utilities, which needs to be considered.

The climate transition will have different impacts on the three transition regions. It will have to be borne in mind that existing differences in the socio-economic indicators of the three transition regions exist. For instance, there is a significant gap in R&D institutions, technological readiness, education and healthcare between the Moravian-Silesian, Ústí and Karlovy Vary regions, and the rest of the Czech Republic. However, some indicators in Moravian-Silesian are closer to the Czech average than for the other two regions (Ústí and Karlovy Vary).

Impact on Climate transition by 2030 (compared to the baseline scenario)

Indicators	Czech Republic	Moravian-Silesian region	Ústi region	Karlovy Vary region
CO_2 reduction	-17%	-27%	-28%	-28%
GDP/GVA (for regions)	2.9%	2.2%	0.3%	0.8%
Employment (jobs)	50,000	4,700	2,400	700
Employment in Energy and Utilities sector	-3,000	-900	-1,300	-400
Employment, jobs (baseline vs. 2018)	*0*	*-3,700*	*-12,800*	*-13,200*

Source: Cambridge Econometrics E3ME modelling (2021)

Modelling the regional impacts of climate neutrality to 2030 further illustrates the divergence between the regions. The Moravian-Silesian region is expected to converge with other regions by 2030, though still among the lowest performing regions. By contrast, the modelling shows that without a (properly implemented) Just Transition Mechanism, the Karlovy-Vary and Ústí regions would remain substantially below the Czech average in terms of employment and the gross value added (GVA). These trends are acutely visible for the energy sector, where employment levels are expected to decrease in both regions. Employment rates are expected to grow the fastest in the information and communication sector.

Regional development strategies have mostly reflected the coal phase-out at the technical level. The regional development strategies reflect the coal phase-out commitment and climate transition in the energy sector. They predominantly focus on technical aspects. Less attention is paid to the diversification of regional economies. There is limited attention paid to the social dimension of the Just Transition such as impacts on the job market (especially in older age cohorts and employees with lower qualifications) and the demand for different job profiles and qualifications.

Awareness and engagement can be strengthened. The in-depth interviews and workshops revealed that large companies operating in the region are generally well informed about the Just Transition and have been actively involved in the regional discussion platforms. However, the situation is different for other regional stakeholders. Interviewees and stakeholders from smaller municipalities, SMEs and NGOs generally lack sufficient levels of information on the process and plans of the Just Transition unless they take a proactive approach or are personally represented at the regional government platforms.

The interviewees further suggested that coordination capacities in terms of the transformation process should be substantially strengthened, especially (but not exclusively) in the Northwest region. Stakeholder engagement, activation and a participatory approach will be crucial for the success of the Just Transition. A clear strategic vision to guide the transformation processes and projects is equally needed.

The administrative burden of programmes is perceived as one of the prohibitive factors to deploying such programmes. The administrative burden of previous programmes is perceived as one of the prohibitive factors to deploying such programmes, especially for SMEs. The administrative burden can reach up to 25-30% of eligible project costs. Therefore, the future engagement of these stakeholders in the programmes may be largely influenced by the levels of administrative intensity and entry barriers of such programmes. The continuity and stability of the programmes, as well as clarity on their conditions, will be crucial to ensure full absorption capacity. The administrative intensity of the upcoming programmes should be carefully analysed.

Businesses lack qualified and/or requalified employees. The impact of climate neutrality and the coal phase-out depends on the type of industry. Businesses in the energy sector will be affected the most as demonstrated by the modelling results. All companies participating in interviews to date have expressed their continuous need for qualified and/or requalified employees to implement the new strategies, diversify and upscale the business. The lack of such employees is expected to be amplified by the climate neutrality transition and is perceived as one of the core priorities in the Just Transition, which is expected to increase high value-added business in the regions and possibly amplify this need even further.

The coal phase-out will affect the district heating sector and individual heating in other regions. In the district heating sector, which represents a significantly higher share of heat delivery for households than the EU average, coal phase-out will affect the structure of heat production across Czech Republic. Transformation of the heating sector creates a risk for potential discontinuation of cogeneration and heating plants. Coal plays a significant part in most regional district heating systems. However, according to the district heating companies, the heating systems will be transformed into new technologies and fuels rather than disrupted and discontinued. Therefore, we do not expect large employment impacts.

The effect to the price of heating could be attenuated by the expected investment support for these reconstructions from the Modernisation Fund. The Modernisation Fund has funds from the sale of emission allowances, a total of 193 million will be available for the period 2021-2030. The amount of funds will depend on the price of the emission allowance, currently a total of approximately CZK 150 billion (EUR 6 billion) is expected. Depending on the size of the company and the region, the amount of the subsidy will range from 45 to 80%.

However, companies have invested heavily in reconstruction of existing facilities in recent years comply with the emission limits of conventional emissions (not necessarily focusing on GHG emission reduction) and the depreciation of this type of investment could be an issue. These investments were made with an expected life of the heat source of about 15-20 years and a significant part of the investment has not been written off yet.

Additionally, a significant number of households (approximately 300-340,000) depend on coal used for local space heating despite the massive subsidies in boiler schemes. These subsidy schemes supported coal or coal/biomass boilers at the beginning of the programme.

To transform the heating industry, the Modernisation Fund is likely to be instrumental, together with other complementary sources of support (Recovery and Resilience Facility (RRF) and operational support). Avoiding the lock-in of fossil fuel (natural gas) will be the main challenge. While natural gas will most likely be the short-term solution, the district heating companies should seek to diversify their fuel base as much as possible, diversify the business (e.g., seek to provide energy services), and use modern technologies (e.g., PV, battery systems) to stay competitive and remain on the pathway to climate neutrality. The future of district heating will be the mix of highly efficient cogeneration and direct

electrification using Renewable Energy Sources (RES) (heat pumps, solar collectors). Combined Heat and Power (CHP) systems can also be used for energy storage (power-to-heat technology) to efficiently use surplus electricity from intermittent RES to generate and store heat using large heat pumps. Where possible these systems should be explored and piloted as soon as possible.

The Czech Republic still has a long way to go to achieve carbon neutrality. In the area of legislation and strategic plans, greater coherence is needed to reconcile future steps. Simultaneously, these steps must be based on specific needs and measures that are already implemented in the regions. The lack of a nationwide coal-phase out deadline creates an uncertainty. However, other factors, such as the prices of emission allowances, driven by strengthened climate and energy targets, will be among the main drivers of further decarbonisation. Socio-economic factors, such as demographic changes, social infrastructure, and enterprise structure differ between the regions, and often even within the regions themselves. The TJTP needs to carefully reflect these aspects and tailor the priority themes and operations accordingly, to form the well-grounded transformation story. The TJTP should emphasize the upskilling, re-skilling, and requalification of workers. Relatedly, the TJTP is encouraged to enhance community building and social infrastructure. Administrative burdens of the programmes should be carefully observed and minimized wherever possible. Providing technical assistance to create project pipeline especially for small stakeholders should go alongside the own preparation of programmes. Stakeholder involvement, activation and a participatory approach will be crucial for the success of the Just Transition.

Please note that this report has been updated after several rounds of comments by multiple stakeholders and contains the latest available quantitative data and information as of June 1, 2021, unless otherwise stated. The Deliverable 4 (Report on Challenges, Needs and Action Plans for the Most Affected Territories) and Deliverable 5 (Final Report) will reflect any development of key issues happening after the cut-off date of this report.

Disclaimer

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