



## The time for rapid redevelopment of coal regions is now

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### Key messages

The economic slow-down caused by the pandemic will aggravate the existing stress in some regions, especially those relying on lignite, coal and peat as their main economic activity. But efficient and effective use of Covid-19 recovery funds can give real meaning to the 'just transition' concept if they focus on tangible progress to the benefit of the regional, national and EU economy while improving the environment and implementing the European Green Deal.

- For coal regions, the European Commission needs a regional place-based approach that builds on the 'targeted approach' of the European Green Deal while identifying urgent actions.
- Member states must reinforce regional strategies for coal regions in light of the recovery measures and the European Green Deal for the next multiannual financial framework 2021-17, taking account of the transition towards a more sustainable and lower carbon economic structure.
- Appropriate EU instruments should be combined in a complementary way to restructure the economies of the regions by developing low-carbon power and other carbon-saving solutions, using the know-how and infrastructures in place.
- Solid strategies to address the transition costs that creating an investment-friendly economic environment should be devised to build up self-sustainable activities and avoid subsidy dependency. The opportunities offered by InvestEU should be used as funding leverage to attract large-scale new industry investment.

The short-term economic and social costs should soon be recovered. By contrast, supporting declining activities will most likely lead to significant long-term losses. Many good examples of conversions exist to inform those addressing inter- and intra-generational redistribution issues.



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Despite the devastation caused by Covid-19, among the many opportunities that the policies and financing of the recovery offer is the chance to take a decisive step towards redeveloping the European regions that face transformation. Europe can show many successful cases in this regard, not all directly linked to or dependent on coal sector closure. Among them are Katowice (Poland), the Ruhr region (Germany), South Limburg (the Netherlands), the Nord-Pas de Calais region (France), Ida-Viru county (Estonia), Prievidza (Slovakia), Matra (Hungary), Plovdiv (Bulgaria) and the Manchester/Liverpool (UK) region. All are advancing with or have already successfully addressed their economic transformation.

## Opportunities for economic modernisation under the European Green Deal

In addition to responding to the challenges of climate change, the European Green Deal is meant as an economic modernisation and growth strategy. Combined with the Covid-19 economic recovery packages, it offers a unique opportunity to kick-start and accelerate the process of regional transformation. This will give the ‘just transition’ concept a practical meaning with tangible progress, able to make a lasting difference to people as well as to the environment. Over time, further technology revolutions such as those we have witnessed in renewables will occur as climate change is addressed. The car industry, steel sites and, more generally, all fossil fuel-based industrial clusters or the Central and Eastern coal regions will face radical transformation.

Coal and to some extent peat regions are the obvious place to start to address the implications of transformation. Coal is increasingly outcompeted by wind and solar. According to [Agora Energiewende and Sandbag \(2020\)](#), in as late as 2015 coal-fired power generation was still twice the volume of wind and solar combined. By 2019, the situation had reversed: wind and solar stood at 18% in the share of EU electricity generation, leaving coal behind at 15%. And coal decline is accelerating. The decline in coal was the single most important source of the 9% fall in EU ETS emissions in 2019.<sup>1</sup>

This is just the beginning. ‘Pressure’ on coal will increase with tighter rules on industrial nitrogen oxides, sulphur dioxide and particulate matter emissions for large combustion plants coming into force in 2021 already, and the planned tightening of emissions limits to bring it in line with the Green Deal, let alone possibly higher EU 2030 GHG emissions reduction targets.

## Coal industry profitability collapse

The situation of the Maritsa East 2 coal power plant, the Balkans’ biggest, is telling. In 2019 alone it reported a loss of over €100 million, bringing the accumulated loss to over €410 million. The loss for the first quarter of 2020 alone was €32 million. Maritsa East 2 is not unusual. As much as 62% (149 GW) of the EU’s coal fleet capacity is already [cash-flow negative](#). The global

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<sup>1</sup> Even if the carbon price levels of €15-20 seen since the onset of the Corona crisis may create some breathing space for coal, low gas prices and lower electricity demand combined with zero marginal cost-renewables are likely to continue [putting pressure on coal power plants](#).

picture is no different. According to [Carbon Tracker](#), globally 46% of coal plants will run at a loss in 2020, the share of which is likely to increase by 52% by 2030.

This compares with recent auctions and power purchasing agreements (PPAs) outcomes for new PV or wind, which for an industrial solar power contract in Portugal reached €14.76 a megawatt hour in 2019, well below the wholesale average market price in Europe. While this auction price may be exceptionally low, it points to a consistent downward trend in prices for utility solar and wind generation. This is confirmed year on year by projections such as those by the Fraunhofer Institute, Lazard or Bloomberg New Energy Finance. Yet, this does not take into account the trend of rapidly falling technology costs for battery-based solutions, which will make combined battery and renewables competitive for peak demand.<sup>2</sup>

Against this background, it is estimated that almost 70% of coal plants, mainly in Western Europe, are to be phased out in the next five years.<sup>3</sup> Central and Eastern European coal plants may follow soon, given the market fundamentals. While few tears will be shed for uneconomic coal, closures will affect the jobs of half a million people in direct and indirect activities, of which approximately half are expected to be lost by 2030.

## Regional transition opportunities

The European Union is well-advised to strongly support the development of comprehensive regional strategies to address this challenge arising from technological step change. The recent [European Commission report](#) (Kapetaki, Ruiz et al., 2020)<sup>4</sup> is showing the way, by identifying among others transition opportunities related to renewables.

It bodes well that EU member states are increasingly embracing the opportunities that renewable energy offers for both climate change and industrial development. The European Green Deal has linked them. Renewable energy offers Europe the possibility to develop industrial value chains and the promise to retain industrial capacity that is linked to the carbon-neutral transformation, possibly offering manufacturing opportunities now located outside Europe. Central and Eastern European member states are especially well placed for the latter.

Ministers from eight member states – Austria, Estonia, Greece, Latvia, Lithuania, Luxemburg, Poland, Spain – some of which include the very carbon-intensive electricity sectors – have explicitly asked the European Commission to focus on renewable energy value chains to unlock new investment potential following the Covid-19 crisis. Contrary to what is often claimed, a

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<sup>2</sup> According to Bloomberg New Energy Finance, battery costs for storage are now a bit under 140 Euro/MWh already. In comparison, the 2019 IEA projections under the New Policy Scenario forecasted by 2040 still a cost of just above 200 Euro/MWh.

<sup>3</sup> Belgium and Austria were among the first to phase out coal-fired power plants; a significant drop in coal share in power generation was observed in Spain (from 13% in 2018 to 5% in 2019) and the Netherlands (22% in 2018 and 14% in 2019). Germany has adopted a firm table for coal phase-out by 2038, and the UK drastically reduced its coal fleet from 40% (2012) to 2% (2019) in less than a decade.

<sup>4</sup> For solar alone, see [Bódis, K et al \(2019\)](#).

study for the [European Commission](#) (2019, p. 15) shows that some member states, e.g. Germany have been able to retain significant parts of the renewable energy value chains within Europe, even for solar PV. From the countries examined, the same study shows great potential to manufacture goods and services produced in the area, jobs and growth for all member states, in particular for Bulgaria and Poland and to some extent for Romania.

Support under Covid-19 recovery funding is also one of the areas that offer significant short-term employment and national value creation for future technologies. The governments of Austria, Bulgaria, France, Germany, Greece, Italy, Luxembourg, Romania and Spain have called for [“speeding up the decarbonation](#) of the European industry through the European Green Deal” by, among other means, financing green projects by “focusing on green technologies and solutions”.

New industrial clusters such as for IT in Cluj-Napoca or Sofia, e-buses near Poznan or bicycles in Plovdiv can emerge. The redevelopment of industrial clusters of future technologies has the advantage of building upon existing human capital and infrastructures. Coal regions usually have well-developed power grids as a result of their large generation capacities. They could be used to speed up the integration of renewable energy and storage solutions. Energy crops on degraded land may offer other opportunities.

Land may well become a key to success because in coal regions land is typically owned or controlled by a single owner, often the state, that could provide it for free and waive administration fees and barriers with a single government or parliamentary decision, thereby further reducing the cost of installation.

Extra political impetus has been provided by the marked difference between how predominantly renewable-focused electricity companies have performed when compared to their fossil peers. The Siemens CEO for renewable energy expects wind to be one of the ‘winners’ of the recovery.<sup>5</sup>

A proactive approach to developing coal, lignite and peat regions by accelerating and managing the transformation began well before the Covid-19 crisis. Eighteen member states<sup>6</sup> have requested “targeted support to the regions most impacted by the transition towards a climate-neutral economy and with less capacity to deal with the challenge”. All requests were approved by the European Commission on May 7<sup>th</sup>.

## Make coal regions the drivers of transition, not the victims

Governments of coal regions in the EU have been embracing change for a long time. Central and East European member states are no different. Reluctance to change, for example in the energy sector, is mainly related to the importance of mitigating the social implications in the

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<sup>5</sup> According to Bloomberg Newsroom, 6 May 2020.

<sup>6</sup> Belgium, Bulgaria, Cyprus, Czech Republic, Greece, Spain, Finland, Croatia, Hungary, Ireland, Italy, Latvia, Lithuania, Poland, Portugal, Romania, Sweden and Slovakia.

region and beyond. The way to address this is through economic modernisation, whose benefits will go beyond the region and spill over to the national and therefore the EU economy.

## Attracting investment through a comprehensive regional strategy

Funding, while crucial, is but one enabling tool to ease the implementation of a transition strategy. EU support, for example under the Just Transition Fund, will be needed to address the hardship and cover the unavoidable adjustment costs that occur from the economic collapse of coal.

In addition, a comprehensive strategy to attract investment is an equally important foundation to attract good businesses. Measures such as building business parks and subsidising new businesses have often failed due to the lack of the right *ecosystem* that can attract future-oriented financially sustainable activities.

Successful actions that create a new sustainable economic structure in the regions are those focusing on forward-looking approaches to attract investments in modern businesses and structural reforms, capable of changing the regions' economic model. The example of the Plovdiv economic zone in Bulgaria shows how businesses establish themselves when framework conditions are right. This will require, first, good governance and then quality 'programming' as part of regional, national and EU regional policy.

All successful *place-based* approaches have in common the determination to change and the use of innovative approaches. Experience tells us however that successful models differ and need to be adapted to local realities.

## Creating flagship initiatives for the EU budget, financial instruments and recovery funds

Member states and the EU institutions will be unleashing considerable financial aid through a plethora of existing and new instruments. This is against the background of an emerging consensus in the European institutions and the large majority of member states that the bulk of the emergency and recovery funds of the EU should be directed to the implementation of the European Green Deal ([“Every euro we invest must flow into a new economy rather than old structures. We must avoid that at all costs”](#) ).

This means that the redevelopment of coal and peat regions towards longer-term sustainable economic activities must be among the flagship initiatives. They can build upon existing human capital and infrastructures, helping to facilitate new low carbon energy generation systems and other clusters of industrial developments and infrastructure for the future carbon neutral economy. Fortunately, governments increasingly seem to understand that former mine sites can be reconverted to renewable energy generation, such as wind or solar parks, or re-used for geothermal energy or hydropower applications.

Part of the labour force are engineers and technicians with high level qualifications and extensive experience.<sup>7</sup> Developing low carbon industrial clusters in coal regions could absorb, retain and expand this valuable expertise, which otherwise could be dispersed and lost.

The less skilled workforce will need additional retraining to equip them for the needs of a future diversified local economy.

Along with industrial size renewables, expansion in coal regions could attract new pilot and commercial hydrogen installations, a wide variety of storage plants, battery manufacturing, electric car and bus plants, the production of electric micro-mobility vehicles, cables, insulation materials, LED lighting, solar and wind energy components, bio-economy and biofuels and dozens of other enterprises that would need primarily regulatory and political support rather than heavy subsidies.

Modernising the energy sector will also need to be linked to an expansion of IT-driven activities, which can contribute to diversification and attracting other firms and activities.

Often infrastructures related to coal are old and cash flows are negative. Decommissioning in exchange for new developments is probably less of a financial loss than a saving and gain in the near future. Sticking to declining activities is likely to be a drain on the economy.

Following on from the above and based on a comprehensive analysis of the regions' potential, other industrial and services sector options can be explored to improve the future of the regions affected.

The key question is how assets in the regions, together with regional innovative planning and EU funding, can be employed and leveraged to create an ecosystem for attracting private investment and businesses.

## EU support for regional strategies

With the Multiannual Financial Framework (MFF) 2021-17 still in the process of approval and the need to adapt it to the recovery after Covid-19, member states should be requested to review the regional plans ([ESF](#), [ERDF](#), [EARDF](#)) in coal regions and adapt the programmes in view of the potential use of a share of the multi-billion € expected European Recovery Fund to support the rapid redevelopment of the coal regions. In addition to benefiting people here and today, these investments would reduce the risk of losses due to the write-down tomorrow.

A precondition would be to integrate and possibly reinforce the recently approved Just Transition plans presented by 18 member states and recently approved by the European Commission into a broader recovery strategy.

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<sup>7</sup> Maritsa East 2, the largest lignite generation region in southeast Europe, employs around 15,000 people. Some 20% of those working on the mines and 25% of those in the power plants are university graduates.

Using the programming and implementation system of the European cohesion policy offers a number of advantages, such as:

- Providing tested approaches to negotiated agreements;
- Building upon existing financial pipelines of investment projects through accredited competent authorities;
- Offering an opportunity to deploy and use at least part of the recovery funds to address identified bottlenecks in key sectors in specific regions;
- Allowing for better coordinated approaches with traditional funds in a targeted and effective way.

The following will most likely have to be fulfilled to be successful:

- Reconsider the industrial and business options of the region, based on all existing capital (human and built).
- Reinforce the focus of the EU's structural and investment funds (ESIF) on the enabling framework conditions in terms of infrastructures, training, business development and environmental remediation of the sites.
- Make traditional support from InvestEU<sup>8</sup> cater for bankable larger projects for infrastructures and innovation attracting private investors, such as ICT or broadband, large energy infrastructures or supra-regional transport and interconnectors.
- Get the affected regions and national governments on board to align the overall regional strategies, the emerging European Recovery Fund (ERF) and social support for employment (SURE) with economic recovery actions in line with the European Green Deal and the subsequent support instruments.
- Focus the extended financial support opportunities as additional temporary tools to develop high-value sustainable solutions. This is to ensure that the strategies always aim for a long-term sustainable economic strategy with a primary focus on *framework conditions* to attract new activities, rather than creating support dependent activities.
- Ensure that the Just Transition Fund primarily addresses the social aspects of the energy transition in the affected sectors.

We should not forget the role of national promotional banks in this endeavour, e.g. BGK in Poland, KfW in Germany, the Bulgarian Development Bank, SZRB in Slovakia, MFB in Hungary, Altum in Latvia. They have often been critical to expanding the support and leveraging private funding, including private equity for new ventures in the region, creating energy efficiency business models, and finance infrastructures, etc.

In sum, strategies are urgently needed to start early in 2021 under the next Multiannual Financial Framework (MFF) for a phased approach out of coal power production, for gradual replacement by low carbon power and other technologies. These should take advantage of existing expertise and infrastructures, and through investment be able to develop new

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<sup>8</sup> The expanded version for 2021-27 of the European Funds for Strategic Investment.

industrial sites that would absorb the labour force and maintain and boost the economic development of the regions.

If necessary, should the costs of stranded assets be high, for example, the decommissioning and transition can be supported in a manner similar to the ongoing decommissioning of nuclear power stations in Lithuania, Slovakia and Bulgaria to help in the building, repurposing and dismantling of boilers and turbines. After all, with the European Green Deal, the European Commission has made climate change and decarbonisation a priority. Accelerating the transition in coal and peat regions would be more than just a first logical step.

## Literature

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