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BRIEFING PAPER APRIL 2021

BOOSTING RENEWABLE ENERGY IN THE VISEGRAD REGION

THE ROLE OF BUSINESSES

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There is strong interest by businesses in the Visegrad countries Czechia, Hungary, Poland, and Slovakia to meet their electricity needs from renewable energy sources. While companies have already recognized the economic potential of renewable energy, governments from the region need to catch-up with the market. Poland is making first steps to becoming an offshore wind leader in the Baltic Sea and considering relaxing restrictive regulations. In contrast, supportive policy frameworks for corporate renewable electricity sourcing are lacking in Czechia, Hungary, and Slovakia.

Giving businesses easy access to cheaper renewable energy sources can increase the attractiveness of the Visegrad countries for investments and strengthen their position in the industrial supply chain. To this aim, governments need to provide a stable regulatory environment. This includes showing a clear political commitment to renewable energy by increasing national renewable energy targets, removing regulatory and administrative barriers to the uptake of corporate Power Purchase Agreements and creating financial support schemes to facilitate corporate renewable electricity sourcing. Cross-country exchange can accelerate learning from experiences in other countries.

This briefing presents findings from a survey and interviews with mostly multinational companies operating in the Visegrad region.



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Businesses are a driver of the energy transition

Achieving a climate neutral European economy by 2050 at the latest will require fast emissions reductions in the European energy system.¹ Companies play a central role in the decarbonisation of the energy sector. Industry alone accounts for 26% of final energy consumption in the EU, while the service sector is responsible for 14%.² Both rely on affordable and reliable electricity supply, and industry's needs are projected to increase with growing electrification of industrial processes.³ This will require a rapid increase in electricity production based on renewable energy sources in the EU, reaching at least 65% in 2030.⁴ Companies can accelerate the energy transition by adding additional renewable energy capacities to the grid, complementing the contributions made by existing public tendering schemes. They can also hold governments to account on setting ambitious renewable energy targets and developing supportive policy frameworks.

Already today, companies are increasingly looking for ways to purchase or self-produce renewable energy. They are joining initiatives like RE100 which represents companies from the commercial and industrial sector aiming to source 100% renewable electricity by 2050 at the latest.⁵ The volume of corporate Power Purchase Agreements (PPAs) – contracts that commit a business to finance a renewable energy project in exchange for long-term access to clean energy at a fixed price – is growing in Europe. It increased from 2.2GW of renewable energy capacity supported by PPAs in 2016 to more than 11GW in 2020. The largest markets are in Norway and Sweden, but activity in Germany, Poland and Spain has picked up pace in 2020.⁶ Through PPAs, businesses can contribute to the build-up of additional renewable energy capacities as they provide a project with a guaranteed income, an important consideration for banks when deciding whether to lend to the project.⁷

Interest in sourcing electricity from renewable energy sources is also growing among companies in the Visegrad countries Czechia, Hungary, Poland and Slovakia (V4).

¹ Ecologic Institute & Climact (2020). **Analysing the Impact Assessment on raising the EU 2030 Climate Target**

² Eurostat (2020). **Energy statistics - an overview**

³ Agora Energiewende (2020). **A Clean Industry Package for the EU**

⁴ European Commission (2020). **Communication – Stepping up Europe's 2030 climate ambition Investing in a climate-neutral future for the benefit of our people**

⁵ **RE100**

⁶ RE-Source Platform (2021). **A record-breaking year for corporate renewable energy sourcing in Europe**

⁷ RE-Source Platform (2020). **Introduction to Corporate Sourcing of Renewable Electricity in Europe**



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Multinationals with operations in the region are members of the RE100 initiative.⁸ However, despite a large potential for renewable energy, the V4 still have a low share of wind and solar power in electricity production compared to the EU average.⁹

To strengthen their role in the industrial supply chain and attract investments, V4 governments need to provide a stable regulatory environment that allows companies to meet their electricity needs from cheaper renewable sources. Otherwise, they risk losing opportunities for employment and economic growth. Indeed, the V4 are part of Europe's industrial powerhouse. Poland is among the six EU member states generating three-quarters of the EU's value of sold industrial production. The car manufacturing sector makes up a large share of the national value of sold production in Slovakia (54%), Hungary (33%) and Czechia (31%).¹⁰ What is more, foreign direct investment coming mostly from Euro area member states is an important capital influx in the V4 countries.¹¹ However, relatively high wholesale electricity prices due to continued reliance on hard coal and lignite are becoming a concern for energy-intensive industries.¹²

This briefing explores interest in renewable electricity by companies in the Visegrad region as well as barriers they encounter in purchasing or self-producing renewable electricity. It sets out recommendations for how policy makers in Czechia, Hungary, Poland, and Slovakia can create the right framework conditions that allow companies to source electricity from renewable energy sources. The analysis is based on an anonymous online survey filled out by multinational and national companies, in-depth interviews, and discussions in a March 2021 workshop with stakeholders from the private and public sector. The activities were carried out in cooperation with the Visegrad+ for Renewable Energy Platform.¹³

⁸ This includes, for example, Tesco, H&M, IKEA, Lego, Google, Decathlon, BMW group, Coca Cola, Danone, Deutsche Telecom, JCDecaux, Johnson&Johnson, Kingspan, Mars, McKinsey, Morgan Stanley, Nestle, PWC, SAP, Starbucks, Unilever, and Vodafone.

⁹ Ember & Agora Energiewende (2021). **EU Power Sector in 2020**

¹⁰ Eurostat (2020). **Industrial production statistics**

¹¹ Tomasz Dorożyński & Anetta Kuna-Marszałek (2016). **Investment Attractiveness: The Case of the Visegrad Group Countries**. Comparative Economic Research 19 (1).

¹² European Commission (2021). **Quarterly Report on European Electricity Markets**

¹³ E3G (2019). **Visegrad+ for Renewable Energy Platform**



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Visegrad countries need to catch up on renewables

The Visegrad countries Czechia, Hungary, Poland and Slovakia are among the EU Member States with the lowest share of wind and solar power in electricity production.¹⁴ Similarly, the renewable energy targets set in the National Energy and Climate Plans lag behind other EU Member States and fail to meet the targets recommended by the European Commission.¹⁵ This is despite large potential for electricity production from solar and/or wind in all four countries.¹⁶

Conditions for the coal-to-clean transition in the region are improving. Both Slovakia and Hungary announced to phase out coal way before 2030 and joined the international Powering Past Coal Alliance. The share of coal in the electricity mix in Poland and Czechia is diminishing, with Poland experiencing a decrease by 8% and the Czechia by 15% from 2019 to 2020. The economic profitability of coal is quickly deteriorating due to a rising carbon price under the EU's emissions trading system.¹⁷ At the same time, renewables are becoming ever cheaper: by 2025 new renewables will outcompete all existing coal plants in the EU when it comes to economic competitiveness¹⁸ and new-built battery storage can already be competitive with gas peaker plants.¹⁹ **Financial support from the EU's budget and new recovery fund provide an unprecedented opportunity to accelerate the energy transition in the region.**

Governments in the Visegrad region are increasingly recognizing the economic opportunity and investing in renewables. Poland has adopted an Offshore Wind Act to become a leader in the Baltic Sea and saw its solar photovoltaic (PV) capacities increase rapidly.²⁰ The Czech Republic, Hungary and Slovakia will have to keep pace to not fall behind in the green race (*Figure 1*). Plans by all governments to invest in new fossil gas and nuclear infrastructure risk diverting financial resources and political attention away from the roll-out of cheaper renewables.²¹

¹⁴ Ember & Agora Energiewende (2021). **EU Power Sector in 2020**

¹⁵ European Commission (2021). **National Energy and Climate Plans (NECPs)**

¹⁶ Visegrad+ for Renewable Energy (2020). **Renewables in National Energy and Climate Plans of Visegrad countries**

¹⁷ Ember & Agora Energiewende (2021). **EU Power Sector in 2020**

¹⁸ RMI (2020). **How to Retire Early: Making Accelerated Coal Phaseout Feasible and Just**

¹⁹ Energy Storage (2020). **BloombergNEF: 'Already cheaper to install new-build battery storage than peaking plants'**

²⁰ WindEurope (2021). **Poland adopts historic Offshore Wind Act**; Reuters (2021). **Poland's solar power capacity triples in a year to 3.9 GW**

²¹ Euractiv (2021). **Letter on Taxonomy Proposal by Bulgaria, Cyprus, Czechia, Hungary, Malta, Poland, Romania, Slovakia**



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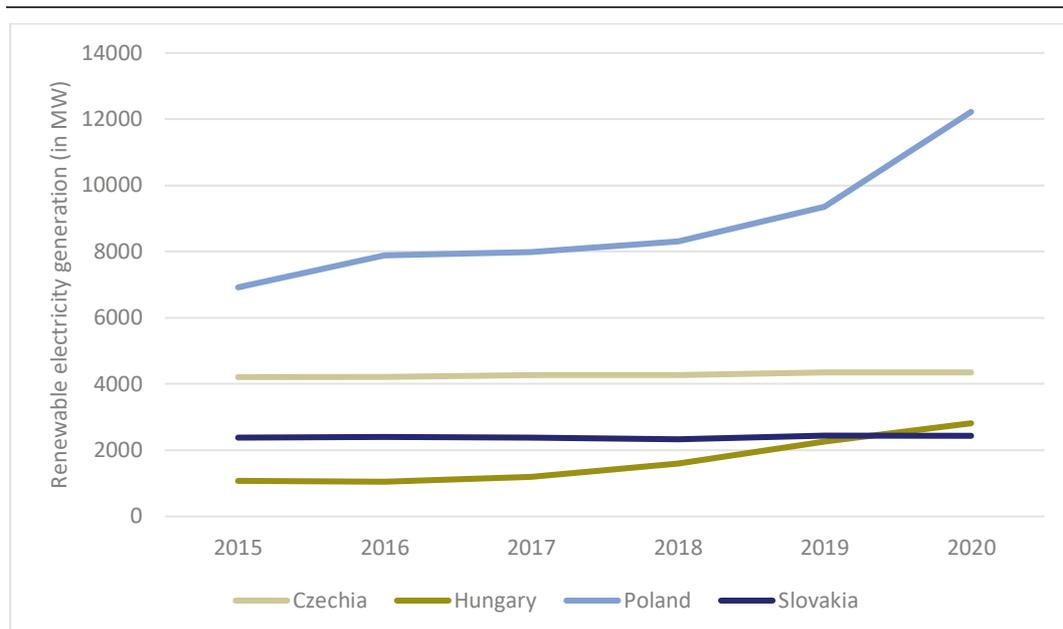


Figure 1 : After years of stalling growth in renewable electricity generation in the Visegrad countries Poland is becoming a regional leader (Source : Irena)

High corporate interest in renewable electricity in the Visegrad region

There is large interest among companies in all V4 countries in purchasing or self-producing electricity from renewable energy sources. This is the outcome of a survey carried out among 36 businesses with operations in the Visegrad region (see Annex for further details on the methodological approach). With few exceptions, all companies that participated in the survey are planning to achieve a 100% renewable electricity supply by 2050, with many seeking to reach this target by or before 2030 (Figure 2).

These findings stand in contrast to the renewable energy goals which governments in the region have put down in their National Energy and Climate Plans. Furthermore, it underlines that there is real ambition on the ground. Many of the companies interviewed included national branches of international actors, which have set global targets for green electricity use, showing that global targets can enable positive feedback loops within internationally operating companies.



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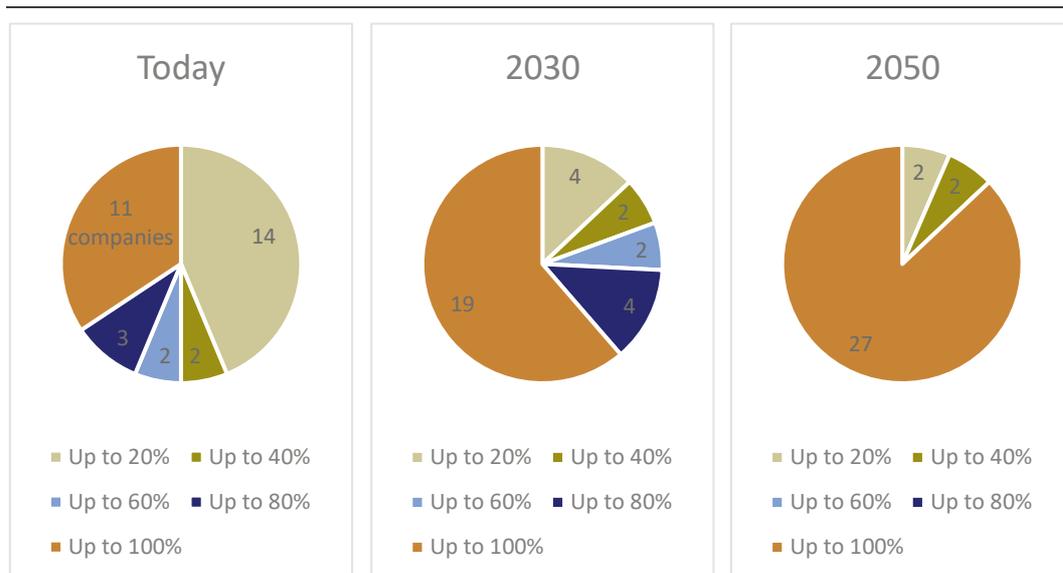


Figure 2: Businesses in the Visegrad countries want to completely green their annual electricity consumption by 2030 or 2050 at the latest

There is broad support for all sources of renewable electricity, in particular solar

Most companies are open to all sources of renewable electricity, with many voicing a preference for solar PV (Figure 3). Interest in onshore and offshore wind is expressed mostly by Polish companies with high energy consumption of more than 100,000 MWh per year.

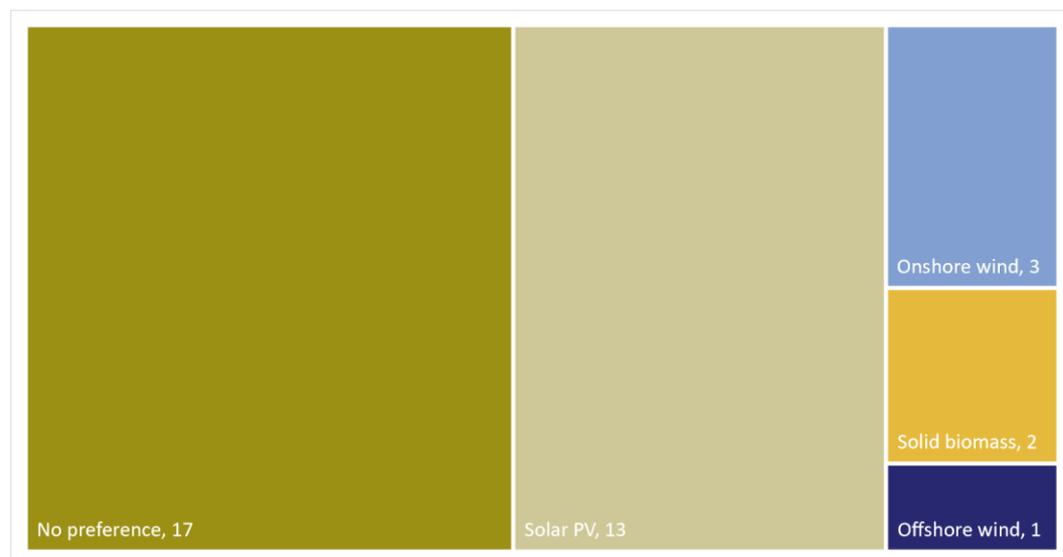


Figure 3: There is broad support for all sources of renewable electricity among businesses in the Visegrad countries with many preferring solar power



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The survey revealed a strong interest in on-site self-production (11 out of 36 companies) and purchasing green electricity or certificates proving clean electricity consumption (8 out of 36 companies). Three-fourth of the companies with a preference for solar PV are especially interested in on-site PPA models, explained by the fact that solar PV rooftop installations are suitable for many circumstances.

Economic and reputational reasons drive renewable electricity procurement

Notably, it is not government policy that is incentivizing companies to source green electricity. Instead, they are ahead of national governments, recognizing the economic benefits from procuring electricity from renewables. Across the interviews, these four drivers were mentioned most frequently by companies:

- > **Financial savings** through access to electricity at a low and less volatile price. In the EU, the cost of renewables has already fallen so far that it is cheaper to build new renewable energy capacity including battery storage than to continue operating 80% of the existing coal capacity.²² Off-grid solutions such as direct wire PPAs reduce electricity costs even further by avoiding grid charges as the renewable installation is located near the power consumer and the two are connected through a private wire, circumventing the grid.²³ Some companies state that while renewables are not always the most economic choice at present, they expect them to become it in the future with an increased carbon price under the EU ETS and implementation of new EU targets. Companies are clearly aware of the benefits that electricity from renewable sources provides for their long-term competitiveness. High wholesale electricity prices in Poland – the highest in Europe – are already threatening the competitiveness of the Polish industry and led steel company ArcelorMittal to close one of its plants.²⁴
- > **Reputational reasons** as renewables are associated with a positive brand image of a socially and ecologically responsible company. Companies are increasingly aware of their impact on the environment and climate and using electricity from renewables often corresponds to their company values and is seen as a way to green the company's reputation. Some companies also noted that their own employees are strongly advocating for the use of clean electricity.

²² RMI (2020). **How to Retire Early: Making Accelerated Coal Phaseout Feasible and Just**

²³ RE-Source Platform (2020). **Introduction to Corporate Sourcing of Renewable Electricity in Europe**

²⁴ Ember (2020). **Poland's wholesale electricity prices rise to the highest in Europe**



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- > **Climate targets set by the parent company** that specify goals for renewable electricity use which must be achieved by national subsidiaries can be a driving force as well.
 - > **Independence from fossil fuel supplies and the national grid** through corporate PPAs was frequently mentioned by companies in Czechia and Hungary. Companies located in Poland also noted that corporate PPAs would help reduce budget risks caused by electricity price fluctuations on the national market. Another company in Czechia noted that new electricity sources were needed due to the anticipated phase out of coal power generation.

In addition, companies in all Visegrad countries are highly embedded in international supply chains. Slovakia is the largest car manufacturer per capita in the world.²⁵ The car manufacturing sector makes up a large share of the national value of industrial production in Slovakia (54%), Hungary (33%) and Czechia (31%).²⁶ If international corporates like car manufacturer Daimler or Volkswagen commit to the climate neutral production of vehicles,²⁷ suppliers in the V4 countries are at risk of losing out if they are not able to provide zero-emissions products. There is growing awareness of this dependence among businesses in the region.

Strategic implementation of targets remains a challenge

While all companies interviewed have the ambition and ideas for how to become greener, most companies do not yet have a comprehensive national strategy in place for increasing their renewable electricity consumption. Most often, companies have specific plans for individual actions, such as deploying solar PV, but these are not always linked to a strategy for transitioning to 100% renewable electricity consumption.

On-site solar PV electricity generation is the most common measure and has been named by companies from a wide range of different sectors. Some companies are purchasing renewable electricity or developing PPAs in a targeted way. One major industrial company has purchased a wind farm for its own electricity needs. Lastly, companies that are active in the power generation or chemical sectors are planning a switch to biomethane and hydrogen.

Positively, green procurement and engagement of suppliers is picking up speed. More than one third of the companies that responded to the survey are already working with their suppliers to support their transition to renewable electricity, and some companies

²⁵ Euractiv (2021). [Slovakia struggles to keep pace with rapidly transforming car sector](#)

²⁶ Eurostat (2020). [Industrial production statistics](#)

²⁷ CLEW (2020). [German automakers appear to be finally waking up to climate neutrality](#)



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have more wide-ranging green procurement standards for energy purchases and other services. Some companies noted that their green engagement was in part motivated by the desire to comply with ISO norms, such as ISO 14001 on environmental management and ISO 50001 on energy management, but that those norms themselves were not sufficiently comprehensive to drive the full transition to green electricity.

Barriers to corporate renewable electricity procurement persist and have their roots in unfavourable policy frameworks

In all four countries, companies that aim to green their electricity supply encounter barriers that can be grouped into political and legislative, administrative as well as technical, financial, and organisational barriers (*Table 1*). Notably, many administrative, technical, and financial barriers are caused by a lack of supportive legislation.

The main barrier mentioned by companies in all V4 countries is the lack of long-term political support and a stable regulatory framework for renewables. Regulatory stability and predictability are central for businesses to plan their energy supply. Otherwise, they cannot develop long-term strategies and enter a PPA for 10-15 years. High energy price fluctuations in Poland make it even more difficult to establish a fixed energy price for a long-term PPA.

Most barriers result from unfavourable policies, but these are slowly improving in some of the V4 countries. In all four countries, the onshore wind potential is not exploited because of restrictive regulations. For instance, in Poland and Hungary, regulations currently prohibit installations of onshore wind turbines closer than 10 respectively 12 times the tip height to settlements. The Polish distance rule is now under review. Similarly, the new Czech renewables act is an opportunity to allow for the exploitation of solar and onshore wind potential. While legal frameworks facilitate corporate PPAs in Czechia, Hungary, and Poland, they are not possible in Slovakia.²⁸

Property structures are a barrier to self-producing or purchasing renewable electricity. Businesses from the retail, finance and banking sector often do not own their premises. Their ability to install on-site solar PV or purchase green electricity depends on the owner of the premise and there is often a lack of interest by the landlord. Moreover, the building type might not allow for on-site installations. In Poland, self-production is only exempted from grid and distribution fees if the business owns the premise and the installation; however, installations are often owned and managed by a third party. ICT companies outsource their server operations overseas and have difficulties to even track the sources of electricity.

²⁸ Bird & Bird (2021). **Corporate PPAs: An international perspective**



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Barrier	Country
Political & legislative	
Lack of political support and long-term strategy	CZ, HU, PL, SK
Unfavourable legislation	CZ, HU, PL, SK
Sale of surplus electricity from on-site production not possible	SK
No legal framework for implementation of corporate PPAs	SK
Administrative	
Difficult permitting process	CZ, HU, PL
Cumbersome and lengthy grid connection process for solar PV	PL, SK
High complexity of corporate PPAs	HU, PL
Technical	
Maturity of technology	SK
Quality and quantity of supply	CZ, HU, SK
Building type/ownership	CZ, HU, PL
Financial	
High investment costs and long payback period	CZ, HU, PL, SK
High renewable electricity price	CZ, PL, SK
Organisational	
Companies not aware of climate targets of parent company	SK
Lack of strategy with renewable electricity targets	CZ, HU, PL, SK
Lack of knowledge and experience sharing between companies	CZ, HU, PL, SK

Table 1: Barriers to corporate renewable electricity procurement persist

When it comes to financing renewable energy installations, there were different assessments by companies. A few cited high investment costs and the long pay-back period, for instance, of 10-12 years on solar PV installations in Hungary, as a barrier. Other businesses considered renewable electricity economically feasible despite a longer return period. **High investment costs as well as complexity of corporate PPAs are a barrier for small and medium-sized business in particular.**

Finally, many businesses noted that there is a lack of knowledge and experience sharing between companies to allow for the exchange of good practices and know-how.



Recommendations

National governments need to provide political and financial support

Governments in the V4 need to support businesses in realising their full potential for renewable electricity sourcing. Giving businesses easy access to cheaper renewables can increase the attractiveness of the V4 countries for investments and spur job creation and economic growth. It will also keep big market players in the region. **All companies agree that national governments need to provide a long-term perspective for renewable energy to ensure regulatory stability and predictability.**

- > **Show a clear political commitment to renewable energy.** This includes the upward revision of National Energy and Climate Plans (NECPs) following the adoption of the new EU 2030 climate target and an increase of the EU's renewable energy target as part of the revision of the Renewable Energy Directive. All four countries have significant potential to increase their national renewable energy targets.²⁹
- > **Remove regulatory and administrative barriers to the uptake of corporate PPAs.**³⁰ The Renewable Energy Directive requires member states to identify and remove existing barriers to PPAs in their NECPs. The plans from the V4 countries do not include any evaluation of the current barriers to PPAs nor propose measures to facilitate their implementation.³¹ The V4 governments should use all relevant policy processes, including the revision of their NECPs, to facilitate the implementation of corporate PPAs.
- > **Create financial support schemes for corporate renewable electricity sourcing.** Governments need to incentivize the use of renewable electricity. This can include providing direct financial support for the installation of renewable energy technologies, tax relief schemes or compensation for the purchase of Guarantees of Origin – an instrument to track and prove to electricity buyers that a given share of electricity supplied to their business originates from renewable sources. A Contract for Difference scheme by the government to ensure a drop in energy prices does not negatively affect energy buyers can incentivize corporate PPAs which require setting a fixed electricity price despite high electricity price fluctuations.

²⁹ Visegrad+ for Renewable Energy (2020). **Renewables in National Energy and Climate Plans of Visegrad countries**

³⁰ See also RE-Source Platform (2021). **Response to the Public Consultation on the Revision of the Renewable Energy Directive (RED II)**

³¹ European Commission (2021). **National Energy and Climate Plans (NECPs)**



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- > **Strengthen cross-country learning:** Cooperation between V4 governments and countries that have successfully reduced regulatory and administrative barriers to corporate renewable electricity sourcing such as Norway, Sweden, Spain, and Germany can support the sharing of best practices. However, corporate PPAs will need to be adapted to the specifics of the market in each V4 country and address, for example, a lack of long-term bankability of businesses in the region.

A strengthened policy framework for renewables in Czechia

- > Update the renewable energy target in the Czech NECP to at least 28% of total energy consumption by 2030.
- > Adopt the revised Supported Energy Act (No. 165/2012) before the Czech elections in October 2021 as it includes provisions for renewing support schemes for all renewable energy sources.
- > Make the permitting processes for onshore wind and solar PV more effective.

A strengthened policy framework for renewables in Hungary

- > Update the renewable energy target in the Hungarian NECP to at least 30% of total energy consumption by 2030 and elaborate a long-term strategy to reach climate neutrality by 2050 at the latest.
- > Reduce legislative barriers to onshore wind by liberalising the 12h-distance rule and make permitting processes more effective. This will also support the diversification of renewables in the electricity mix.
- > Create financial incentives for corporate sourcing of renewable electricity. This includes the provision of tax relief schemes such as the removal of local tax obligations for SMEs that procure electricity from renewable energy sources, the introduction of public investments support schemes for on-site renewable energy installations to reduce their pay-back period as well as an electricity pricing system that rewards those companies sourcing the largest share of their electricity consumption from renewables.
- > Improve the legislative environment for energy communities to create opportunities for small and medium-sized businesses (SMEs) to source renewable electricity.
- > Raise the private sector's awareness of the 'one-stop shop' technical support provided by the National Energy Expert Network for companies to address the lack of expertise in the private sector.



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A strengthened policy framework for renewables in Poland

- > Update the renewable energy target in the Polish NECP to at least 35% of total energy consumption by 2030.
- > Reduce legislative barriers to onshore wind by liberalising the 10h-distance rule which has been blocking new onshore wind development since 2016 even though onshore wind is the cheapest electricity source in Poland.
- > Simplify the permitting procedures for renewable energy installations to increase the pace of renewable energy deployment and allow the industry to take advantage of clean electricity.
- > Enable a direct-line connection between the renewable energy source (PV or onshore wind farm) and industrial facilities. Private-wire PPAs can boost the development of the corporate PPAs market.
- > Enhance grid development since the acquisition of grid connections is a bottleneck for renewable energy deployment. Enabling a direct-line connection can increase the connection capacity for companies.

A strengthened policy framework for renewables in Slovakia

- > Update the renewable energy target in the Slovakian NECP to at least 25% of total energy consumption by 2030.
- > Set up a legislative framework to facilitate corporate PPA models for renewable electricity.
- > Reduce technical, financial, and administrative barriers for on-site renewable electricity generation. This includes allowing the sale of surplus electricity and easing the grid connection process for on-site installations.
- > Make public investment support schemes available to support the roll-out of on-site renewable energy installations for corporations.



Annex: Methodological approach

The Visegrad+ for Renewable Energy Platform carried out an anonymous online survey among 36 companies active in one or more of the V4 countries to find out more about the corporate interest in purchasing renewable electricity in the V4. The survey addressed characteristics of the company, such as size in terms of employment and electricity consumption, renewable electricity targets, preferences for procurement models and existing barriers to increasing electricity consumption from renewable sources. Respondents were evenly spread across Czechia, Hungary, Poland, and Slovakia, with most respondents providing their answers for one country.³² The companies represented a wide spread of different sectors, with most coming from the manufacturing sector (Figure 4). More than half of the businesses have more than 1,000 employees (Figure 5). Many large energy consumers participated in the survey, and more than half of the participating companies consume over 10,000 MWh electricity per year (Figure 6).

In a second step, the Visegrad+ for Renewable Energy Platform conducted in-depth interviews with 18 selected companies to better understand corporate strategies for advancing renewable electricity use, barriers to them as well as support needs. The interviewees included large companies from different sectors, with many companies coming from the retail sector. The findings of both the survey and the interviews were then presented and discussed in an expert workshop with stakeholders from the public and private sector in March 2021.

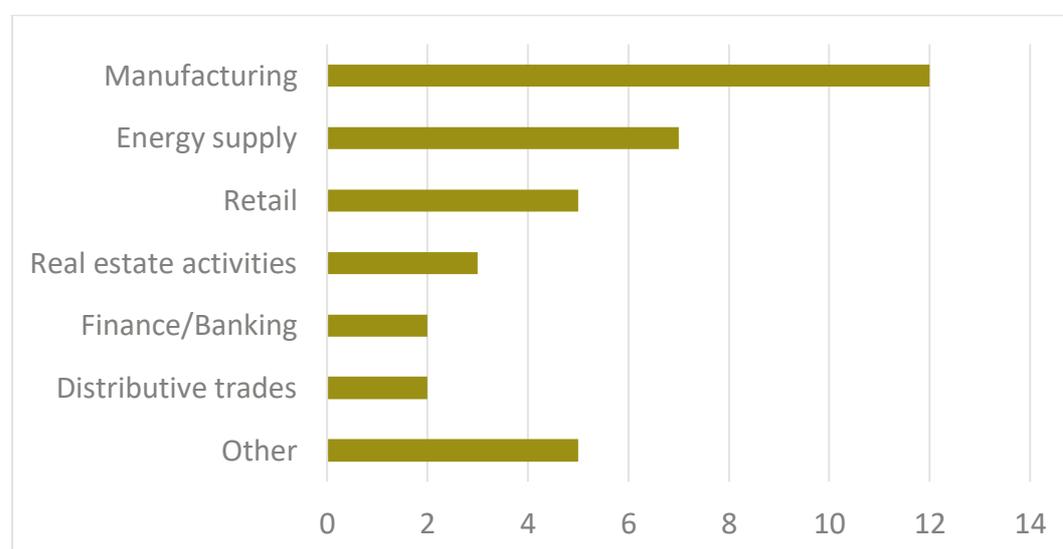


Figure 4: Sectors covered by companies participating in online survey³³

³² Division of respondents by country: Czechia, 9; Hungary, 6; Poland, 9; Slovakia, 10; multiple, 2

³³ 'Other' includes information and communication services, construction, consultation services and media.



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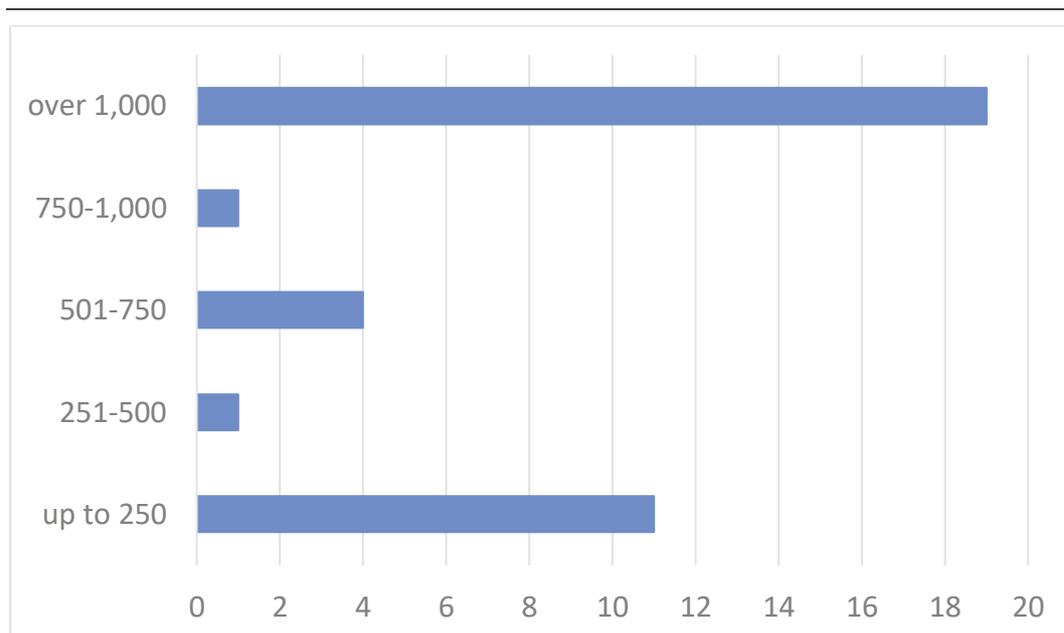


Figure 5: Number of employees working for companies participating in online survey

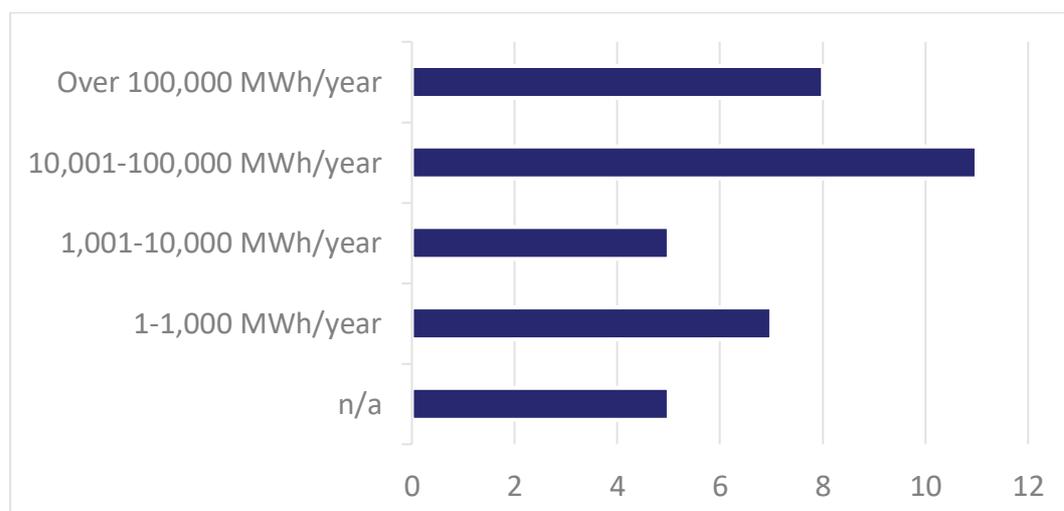


Figure 6: Annual electricity consumption of companies participating in online survey



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About E3G

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