10\textsuperscript{th} Anniversary of Poland’s membership in the International Energy Agency

How has the energy world changed?

Under the supervision of the Permanent Representation of the Republic of Poland to the OECD.
Acknowledgements

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This year we celebrate the 10th anniversary of Poland’s accession to the International Energy Agency (IEA). The main reason for Poland’s accession to the IEA was to strengthen the country’s energy security by joining the international mechanism of support during the crisis situations in the oil market. Today, energy security remains one of the Polish government’s energy policy priorities. Energy sovereignty is a fundamental element of energy security and, through that, of economic development of the country. A consistent policy of optimising the use of domestic resources of raw materials, as well as diversifying oil and gas supplies, is then necessary to achieve objectives in these fields. The construction of the Baltic Pipe gas pipeline, the expansion of the LNG Terminal in Świnoujście and the Oil Terminal in Gdańsk are key projects that are part of this policy. Their implementation will enable Poland to become independent from natural gas supplies from the east and to take full advantage of the opportunities created by the global crude oil market and the emerging global liquefied natural gas (LNG) market.

Energy security, despite shifts in IEA priorities, has remained the core activity of the organisation. We can therefore continue to work together on solutions that will allow for an effective response to emerging challenges in that field, such as digitalization of energy systems and their increased vulnerability to cyberattacks, the growing share of developing countries in global oil consumption, the impact of climate change on security of supply, and changes in energy balances and the associated need to adapt instruments aimed at ensuring the continuity of energy supply to consumers.

However, new challenges and trends have also emerged in the last ten years, and they need to be addressed. One of them is to ensure a harmonious transition to a low-carbon economy – which is necessary to meet the international emission commitments made under the climate agreement adopted in Paris. The COP24 summit in 2018, hosted by Poland, will have to work out and adopt a package of decisions ensuring full implementation of the Paris Agreement.

The introduction of a low-carbon economy and the fight against air pollution remain very serious problems in Poland. For the government of Poland, solving these problems is a big challenge. The energy policy prepared by the Ministry of Energy assumes an increase in the role of low-emission energy sources in the energy balance of the country. The investments made and planned will help to strengthen the role of natural gas, which, in our opinion, can effectively play the role of a low-emission fuel. However, popularisation of natural gas requires the development of the natural gas distribution network. Lack of access to this network touches the regions of Eastern Poland in particular – we treat this issue very seriously, and it is our priority to supply natural gas to these regions. Thanks to the development of gas networks in Poland, approximately 50 000 new customers are connected to the distribution network.
annually, and the percentage of districts with no access to natural gas is systematically falling. By 2022, the level of gasification of the country should increase by about 10% to achieve 72%.

The Ministry of Energy, as the body in charge of fuels, has also raised initiatives aimed at reducing transportation emissions. In order to tackle emissions reduction from the transport sector, the Ministry of Energy has developed the Clean Transport Package, which includes a number of regulations promoting low- and zero-emission vehicles in our country. By 2020 an electric vehicle (EV)-charging infrastructure will be created in Poland, covering approximately 6 000 publicly available EV chargers. Our ambitious plans will be implemented through the recently adopted Act on electromobility and alternative fuels and the Act on Biocomponents and Liquid Biofuels introducing a key support instrument – the Low-Emission Transport Fund. For us, supporting electromobility means not only following global trends, we perceive it as an opportunity to improve the quality of life in our country and to remain competitive on the global market.

The dynamic changes in the global energy market are accelerating. Guidance on how to manage them is essential. I believe that co-operation with partners within the IEA, and the professional assistance of the Secretariat of the Organisation, will help us to choose the best path for further development.

H.E. Krzysztof TCHÓRZEWSKI
Minister of Energy
Republic of Poland
Message

H.E. Dr Fatih Birol
Executive Director of the IEA

The global energy landscape looked vastly different ten years ago when Poland joined the IEA family as the 28th member country. Renewable energy was just a niche market, electric vehicles were not much more than a concept. Meanwhile, the shale oil and gas revolution – not to mention the rise of LNG – was still a few years away from transforming the global market. The IEA was still seen as the “rich countries’ club”, with the opening of our doors to emerging economies still many years away.

What a difference ten years makes.

Today the world is taking confident steps towards a global energy transition, with climate, sustainability and access to energy taking centre stage, backed by innovation and strong government policies. Likewise, the IEA is leading the way, cementing its role as the true global energy authority.

Poland is a key example of how a country can play a leadership role in this context. Look no further than Poland’s presidency of the 24th Conference of Parties (COP24) that is set to take place this December in Katowice. This is Poland’s fourth COP presidency, showing the country’s willingness to tackle the practical and diplomatic challenges involved with galvanising global action on climate change.

I have full confidence that Poland will provide the necessary leadership, diplomacy, and ambition to deliver a successful COP24. This is no small task, as it includes finalising the Paris Agreement rulebook and wrapping up the Talanoa Dialogue to accelerate future ambitions for country nationally determined contributions.

Just as Poland has shown such leadership on the world stage, it has displayed leadership here at the IEA. In particular, Poland played a crucial role at the Governing Board in negotiating an agreement for identifying the key path towards the long-term financial health of the IEA.

The efforts of Mr. Michal Kurtyka, State Secretary in the Ministry of Energy, were essential in spearheading a package that resulted in a new approach and understanding for the proper financing of the Agency. Following extensive discussions spanning over six months, the Governing Board officially agreed on the package just over a year ago, enabling the IEA to continue its important work for member countries.

These are the kinds of efforts that the world needs – the results of global leadership begin with quiet, earnest discussions around a negotiating table or, indeed, with a friendly chat at the IEA café. I look forward to many more successful decades for Poland at the IEA.

Dr. Fatih BIROL
Executive Director
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What tools for energy policy?

H.E. Aleksander Surdej
Permanent Representative of Poland to the OECD

Energy policy lies at the heart of all public policies. All economists agree that public policies are necessary to assure cleaner and cheaper energy and to smooth the transition from an exclusive reliance on traditional energy sources.

Acting in a market environment, respecting basic freedoms, democratic governments design and implement energy policy using a set of public policy tools that is similar across all public policy areas. It is useful to think of these tools along a range, starting from soft to administratively hard measures passing through the financial ones.

Information is a subtle but powerful policy tool. Governments can supply information directly to consumers (and energy producers) to inform them about the consequences of their choices when these are not easily seen and understood. In such cases, it is expected that better-informed agents would voluntarily correct their choices and change the course of their actions. Public informational campaigns are an obvious form of nudging by advising as a policy tool.

Financial incentives are thought to be the most efficient tool of any public policy. The reasoning is simple: people react to changes in prices. When a good becomes cheap, it is consumed in larger quantities; when it gets more expensive, it is used more sparingly. Taxing and subsidising are the two techniques to increase or reduce the price of energy. Subsidies can be designed according to various formulae to influence either consumer or energy producer.

Regulations and regulatory standards are the third type of energy policy tools. Regulations can, for instance, set carbon emissions standards for coal-powered plants or car pollution standards. Regulatory standards need to be enforced: monitoring, inspecting, and punishing actions are needed. Such activities are costly, so they must be designed efficiently.

Finally, governments can rely on their core power: the ability to ban an activity. Governments could announce that they will discontinue the generation of energy from certain sources, and this is a right no other agent has. But, such decisions are rare for they are examined in the light of accessible energy alternatives.

In practice, energy policies are composed of a mix of tools. They address the supply or demand for energy in direct or indirect ways. For instance, governments’ decisions shape the gas pipeline routes and influence the price and availability of natural gas; they target aggregate carbon dioxide emissions by designing emissions trading systems or subsidise the emergence of electro-mobility and investments in emissions-reducing infrastructure.

An energy policy that is effective, efficient and distributionally fair needs to be carefully examined in all its complexity. It is not an easy task, and that is why membership in the IEA is so much appreciated by Poland.
Energy security: Goal and instruments

The unicorn of energy security seems to be pursued from all possible angles, driving the energy sector design and its operations. What for governments is a “must have”, for business is a powerful transformational factor. The IEA defines energy security as the continuous availability of energy sources at an affordable price.

The uninterrupted availability of energy sources is determined by dozens of elements, starting from identification of possible sources of energy, through technology and production to transmission and distribution of final products. Each and every link of this chain comprises also the unknown which is the political and policy dimension influencing the design and construction of infrastructure – via regulations.

Providing affordable energy is an even more complex issue. The United Nations (UN) is including in its Sustainable Developments Goals yet another factor – not only should energy be affordable and modern but clean too. While we all tend to think about energy as its end-users, paying various “energy bills”, we mustn’t forget about the producers’ perspective. How could we count on affordable energy without allowing producers to invest securely, with reasonable expectations of profits in new discoveries, technologies and innovations in how natural resources are transformed into ready fuels and energy. Security of supply dilemmas intersect here with security of demand challenges, probably the most significant price determinant in the market. Given that supply-demand balance is also directly triggering investments, IEA forecasts for energy markets are critical and represent perhaps its most prominent role.

Various instruments for safeguarding energy security have been developed continuously for decades, taking the shape of both short- and long-term solutions. While for short periods of time the ability of the energy system to react promptly to sudden changes may rely on robust demand restraint measures, long-term tools require more structured investments on the supply side in line with policies and socio-economic developments. Storing energy was a natural first instrument – scaled up at national levels to strong stockholding mechanisms, like that of IEA member countries for oil.

For energy-importing countries, diversifying both sources and routes of supply of energy are key to securing uninterrupted energy streams. This tool helps in responding to technical failures of infrastructure, which, more and more, are prone to targeted attacks, and to political shocks, which are usually a means of exerting pressure on a given country or region. A good level of diversification requires tremendous investments in infrastructure – pipelines, ports, grids, and terminals – which are staggering expensive and very difficult for private stakeholders to build, which tends to shorten their return cycles more and more in post-crisis years.

Whatever the approach, energy security cannot work without one key player: governments, which are, in the end, solely responsible for providing energy security to citizens and for applying a whole range of solutions – both at national level and at the regional, integrated-markets level.
Energy and transport

By 2040, energy consumption by the transportation sector will rise by more than 50%. While in the Organisation of Economic Co-operation and Development (OECD) countries energy consumption remains almost at today’s levels or will decrease slightly, developing countries will almost double their share in global energy use for transport over the next 25 years.

Average yearly growth of 1 million barrels per day (mb/d) of oil use by 2040 is led by an almost 20-mb/d increase in demand in the transportation sector, according to the IEA in its World Energy Outlook 2017 (WEO 2017). There are over 100 million passenger cars and more than 15 million freight vehicles sold on average every year by 2040, assuming continuation of current policies. Furthermore, without significantly tightening vehicle fuel-economy standards, and with limited growth in sales of electric vehicles – which still is the case, this leads to an upsurge in demand for oil in road transportation.

This is most pronounced in the People’s Republic of China and in India, which together account for over 30% of new passenger cars and 25% of trucks sold. As a result, by 2040, China and India alone will account for a quarter of global oil demand (up from 17% today). And this is only road transport.

Air passenger demand is increasing all over the world, notably in India and China. Yearly growth of 13.5% in China and an astonishing 20.5% in India are strongly driving jet fuel demand. We learn from the September 2018 edition of the IEA Oil Market Report that India is the world’s fastest-growing domestic aviation market. The reasons behind the boom are mainly lower airfares since 2014, supported by the oil price drop in mid-2014, and an increase in airport connectivity, linked with strong economic growth which has added to the emergence of a growing middle class. Noteworthy to know, that Airports Authority of India owns and manages 125 airports, and the government has ambitious plans to construct around 100 new airports by 2035. India’s demand for jet kerosene alone rose by 30% from 2015 to 2018.

Same for China – according to the International Air Transport Association (IATA), China will be the fastest-growing market in terms of additional passengers, surging from around 500 million in 2016 to 1.5 billion by 2036. Looking ahead, China is expected to become the world’s largest aviation market by 2022, thanks to an expanding middle class and ongoing government support for airport construction. By 2020, China plans to build 74 new airports, bringing the total to a striking 260. China’s kerosene demand rose by close to 35% from 2015 to 2018.

While the transport sector isn’t referenced explicitly in Paris Agreement and is not part of the EU ETS, the necessity of lower-emission transport appears in the discussions within all fora – the transportation sector represents 23% of fuel-burning CO₂ emissions globally, or 18% of all human-made CO₂ emissions. And there is much to do in developed countries – on average, inhabitants of OECD countries emit around 2.8 tonnes of CO₂, whereas in non-OECD countries, the figure is only 0.5 tonnes per year.

Energy and transport
Sources of energy: Drivers of energy mix

Out of 7.4 billion people on earth, more than 55% live today in towns and cities. By 2040 yet another 1.7 billion people will be added to the urban population – what the *World Energy Outlook 2017* pictorially describes as a city of Shanghai being added to world’s cities every four months. Shanghai is a megacity of 24 million inhabitants. To put it in a Polish perspective: a new Warsaw will be emerging on a world city map every week for the next 25 years.

Generally, higher income in cities adds to higher ownership of energy appliances and spurs demand for energy-intensive products – steel and cement for constructions, public transport and machinery to name only some. All in all, as strongly highlighted by the IEA – by 2040 global energy consumption will be 30% higher than today. Again to depict it: that means that the energy system in 2040 will have to respond to the energy demand of today plus another India and China combined.

It is then obvious that the energy mix is driven in part by global shifts which steer the trends in energy use. Yet energy mixes are always created in a multi-dimensional environment but at local level. Price factor is therefore crucial, and regulations are set to facilitate the supply of all energies at the lowest possible price to consumers, especially vulnerable ones. The only global factor directly impacting local choices is technology development in the context of the inherited combination of technological lock-in and investment patterns.

Due to the critical role of investments in meeting energy demand, infrastructure plays a major role in setting the energy mix at national levels. Complementing this picture with the security of supply element, critical in many regions, it is no surprise that, in the end, it is a combination of domestic sources with the available infrastructure and energy system regulations that drives the energy mix.

Technology may, however, rapidly change the picture, especially in those countries and regions where a forecasted increase in demand forces governments to make a difficult choice among the variety of available technologies – and, also, in view of climate and air quality goals. Strong, fact-based and reliable policy advice is thus what countries greatly appreciate, especially in times of transformation as new technologies are emerging and maturing.

The IEA is best positioned to influence policy debates which in turn result in decisions on energy mixes. These, however, cannot rely on short-term flashy solutions and technologies, but must deliver in long-run without harm to domestic economies and in line with social development.

Poland knows well how inherited, obsolete infrastructures can be transformed over time in line with modern patterns and is happy to follow IEA advice in this regard.
Production of energy comes at a high environmental price, and this has been the case ever since Prometheus defied the gods by purloining their fire and offering it to mankind. Certainly, the fire referred to in this legend has parallels for today. Emissions from burning fossil fuels and related air pollution kills close to 3 million people a year. This number will rise to over 4 million by 2040. Energy accounts for 65% of total greenhouse gas emissions (GHG) and as much as 80% of CO₂ globally; therefore, any effort to mitigate climate change simply must embrace the energy sector in the first place.

The IEA was the first in the world to forecast decoupling of economic growth and GHG emissions a few years back. But in 2017 global energy-related CO₂ emissions grew again by 1.4% to reach a historic high of 32.5 gigatonnes (Gt) – after three years of global emissions remaining flat. While most major economies saw a rise, others experienced declines, including the United States, the United Kingdom, Mexico and Japan. The biggest decline came from the United States, mainly because of a higher deployment of renewables.

Even if all that was terrifying, humanity has no choice but to continue using energy sources to survive. Global energy demand grew by 2.1% in 2017, more than doubling the growth in 2016. This pace is even scarier: to meet the entire global energy demand of last year, over 14 billion tonnes of crude oil would have had to be burnt. To illustrate, this means the yearly oil consumption of Germany is burnt in a day. 81% of energy used in 2017 was actually fossil fuels – this number hasn’t changed since the early 1980s! It was again the IEA that came with this head-cooling analysis in WEO 2016: even if all that was pledged during COP21 in Paris was carried out, the share of fossil fuel energy would, perhaps, decrease to only 77%. Also, improvements in global energy efficiency slowed down in 2017 in comparison to 2016.

So it isn’t the fact of using energy that is wrong; there’s no another way. But, sometimes the way we do so should be more cautious, with greater care for the environment, a larger share of local community engagement, and, possibly, with an unnoticeable drop in profits – on both the supply and demand side. The production of traditional energy does create immense environmental challenges, but available technology, if implemented, could critically reduce the environmental burden with negligible added cost. All the methane leakage in gas production cycles could actually be curtailed at no additional cost – by following certain rules, known as the IEA Golden Rules.

Technologies are in place and they are proven to work well if only given the chance. And perhaps the energy and environment relationship is all about the chance – we steal the fire from gods with every spade put into the ground reaching for resources, and, possibly, the punishment waiting around the corner is similar to the one experienced by Prometheus. But it’s worth taking a moment to think about how humankind is producing and distributing energy sources and to see that relatively small efforts have the potential to result in great improvements.
Energy and poverty

Access to energy sources, especially electricity, generates massive opportunities. Health, learning, connectivity and expanded knowledge – all of these depend on access to energy. We live in a plug-in era. We know that whatever new appliance we buy, be it kitchen equipment, a new chandelier or the newest smartphone, it will work propelled by the wall socket that is actually inbuilt in a cozy, warm home. Rarely do we realise what’s behind this – all the super-complicated technologies, the supply management systems, the trillions of dollars invested, the skills and scientific knowledge. Almost never do we dare to think about the fact that, in 2018, there are still around 2.8 billion people who must cook their daily meals using collected biomass – often ordure of all kinds – and the lowest-quality coal or kerosene.

Half of these people live in China and India. Mongolia is the only country in the world where men and boys have primary responsibility for collecting water and bringing it home. In dozens of other countries, women and girls spend even 1.5 hour a day to get any water. 10% of the world’s population drink water not protected in any way from contamination – this is 700 million people. They don’t even think about getting to the “plug-in” level that we live in.

Over 1 billion people today lack access to any electricity. By 2040, this number may decrease by only 20% if we (and they) are lucky. In particular, sub-Saharan Africa, the region with the highest population growth on the planet, falls far short of providing electricity: the number of people without access to electricity actually grows from now to 2040 – from some 600 million to 711 million, according to findings published in WEO 2017. And, again, the same striking statistics – close to 3 million people die every year, also because of constant exposure to pollutants from burning whatever they have access to during cooking. And this number is increasing.

The UN highlights access to clean, reliable and affordable energy for all through its Sustainable Development Goals – to be achieved by 2030. Very tight schedule, indeed.

All economists agree that wealth creates more wealth even if it is not fully efficiently managed. There is no doubt whatsoever that poverty and a lack of even the smallest chance to change their lives is looming over billions today. What can change this is access to energy. And, fortunately, we have the technologies that can enlighten, literally, people in many forgotten regions.

Sub-Saharan Africa is blessed with a solar potential that could gradually move millions of people into the plug-in era, at least. Allow them to learn; allow them to know about the world; allow them to have access to basic health care: maybe this is the biggest challenge of all time?

The IEA has done much work to point out this blind spot of the energy world. Energy systems can only heed this call. The role for governments is even simpler: don’t forget that the plug-in world is only available to some.
E-mobility

The whole world is facing a revolution in the automotive industry. According to the Polish government’s plans, in about ten years one million cars on Polish roads will be powered by electricity. Norway shines as an example in Europe, where electric cars accounted for 39% of new car sales in 2017 – the world’s most advanced market of electric cars in terms of sales share.

It should be noted that implementing the most modern technologies, which are economically advantageous and universal in application, is a natural aspiration of the automotive world and not merely a response to the climate challenge of our times. Henry Ford, by introducing the Ford T car in 1907, which revolutionised transport at the beginning of 20\textsuperscript{th} century thanks to its relatively low price, liked to repeat that he came to operate at a time when nobody was waiting for a mass car, but only for better-organised and faster horse transport. However, this did not prevent him from selling more than 15 million Ford Model Ts within 20 years. A vehicle with an internal combustion engine quickly pushed horseback transport off American streets. The technological change defended itself. The car was simply more comfortable, faster, and more reliable – wrote H.E. Dr. Michał Kurtyka, author of Polish e-mobility plan and president of COP24, in one of his e-mobility promoting articles.

According to the latest IEA Global EV Outlook 2018, electric cars will be most widespread after 2020, but countries and companies must immediately start preparing for the development of appropriate vehicle manufacturing infrastructure and EV-charging networks to avoid the “backwardness” trap after 2020 and benefit economically from this revolution, which seems inevitable. The global stock of electric cars surpassed 3 million vehicles in 2017 after crossing the 1\textsuperscript{st} million threshold only in 2015 and the 2 million mark in 2016. It expanded by 56% compared to 2016. In 2017 China had the largest electric car stock: 40% of the global total (plus some 200 million e-scooters and more than 170 thousand electric city buses).

Meeting the commitments made by countries at COP21 in Paris in December 2015 means 13 million electric cars on the road in 2020 and as many as 100 million in 2030. Achieving the 2\textdegree C target would require 140 million electric cars on the roads in 2030. Even the most pessimistic increase in global temperature by 4\textdegree C still means 22 million electric cars on the roads in 2030.

Technology is cheaper and cheaper – since 2008, the cost of producing batteries for electric vehicles has fallen more than fourfold and their capacity has increased fivefold.

An electric car is far easier to use than the Ford Model T, for which a separate category of driving license was required for driving in pre-WW II Poland. Let the technology defend itself with a little help from friends of e-mobility.
Smart energy use

Less than a year ago, the IEA published its Digitalization & Energy report, which not only showed the energy system of the future but also strongly emphasised the necessity of approaching this transformation with awareness of all the risks smart energy use entails. This report has been a powerful voice in the global rush to make everything “smarter” every day. Smart energy systems are not so much about state-of-the-art applications as they are about about aligning consumers’ behaviours to Information and communication technology (ITC) models.

We can describe a smart energy system as one that delivers energy in real-time management operation to the consumer when it is needed. Those are the basics. Energy is supposed to be both smart (produced from highly digitalized sources and responding to current system management needs), and consumption too. This involves energy-intensive businesses such as factories or retailers shifting their energy use to times when demand on the grid is low, which saves money.

Internet traffic has tripled over the last five years, according to Digitalization & Energy. We also see this every day as road traffic becomes more and more congested by drivers late responding to traffic lights because they’re on their smartphones. This is far from what we want to call a smart use, but it’s happening.

Digitalization has a huge potential; it aims to actually cut the usual demand–supply patterns by making both reciprocally responsive, interdependent, and fluid. The report also comprehensively analyses the potential financial gains from widespread application of digital technologies in the energy sector – up to USD 80 billion (United States dollars) in power generation costs annually, up to 20% cost reductions in oil and gas production, 10% cuts in energy use in buildings, and weighty gains in other parts of energy systems.

At the same time, the IEA is pointing to a very important issue that is valid, in fact, for the whole energy production–consumption chain, not necessarily only in relation to digitalization. If we believe too much in efficiency gains thanks to new technologies, then the well-known economic phenomenon of rebound effect may occur: energy is used more because it’s cheaper/more accessible – while real efficiencies are not actually achieved, the result may be catastrophic in terms of energy system disruptions. All these millions of new devices and connectivity appliances serving to achieve further steps of digitalization also consume energy! Data centres worldwide consumed around 194 terawatt-hours (TWh) of electricity in 2014, or about 1% of total demand. Data centre workload is forecast to triple by 2020, and some bigger consumption is also expected here.

End consumers’ behavioural change must therefore follow the proposed digital applications. But this takes time to happen and requires trust. If we think about the possible hitches of smart energy use, we must acknowledge that it takes away a bit of our freedom (system operators would know exactly when one takes a shower, does laundry, or go to sleep – thieves may know it as well breaking in to the system); and it exposes already vulnerable energy systems to cybershocks. It doesn’t mean we shouldn’t pursue the goal of universal digitalization, but we should take a moment to think about how to do it right.
Energy challenges and international co-operation

Although we live in a fast-changing world, energy challenges deserve a deeper look and definitely not hectic actions. There is an old African proverb that says: if you want to go fast, go alone, but if you want to go far, go together. In the energy world we must sometimes go fast, but never alone because, first and foremost, we want to go far.

There are no doubts whatsoever that energy challenges need not only a regional perspective but more and more global responses. Some of these challenges can actually be only tackled at a global level (climate, standardisation, new technologies, pricing). Even country-level or transboundary energy challenges make up part of a broader energy landscape: Poland’s long-standing dependency on one route for gas supplies is resulting in building a new pipeline up to Norway, through the Danish system, all according to European Union rules. It may seem relatively small in scale, but it is a crucial Polish problem involving many stakeholders.

That brings us to a very straightforward conclusion – energy co-operation simply must take multi-dimensional shape. Poland will host the COP24 summit during the first two weeks of December 2018. Close to 200 delegations will work to get the Paris Agreement implemented by introducing a set of tools to achieve the agreed goals. As pointed out in H.E. Dr Fatih Birol’s remarks earlier in this brochure, which marks the 10th anniversary of Poland’s accession to the IEA, some very important international activities may start at the IEA meetings.

Looking at national energy problems outside of a global context is a risky approach that may result in not making full use of existing opportunities. Somewhere the same problem may have been already tackled, so reinventing the wheel may be unnecessary. Less resources engaged, critically less time wasted and a similar result.

Thus energy co-operation is tremendously important for all players. Everyone comes to the IEA with full suitcases of their own experiences which are then highly enriched by the experiences of others. Even though the weight of the suitcase taken back home may be the same, the quality of the content never is. Sharing problems and solving them, and sharing the huge responsibility for the final result, is what keeps us all returning to the IEA whenever possible.

The energy world is also small. The IEA headquarters has seen most of the important world energy players. And, from this site emanates some of the very best energy analysis to the world.
Poland and the IEA: Ten years of the common path

Ms Elżbieta PISKORZ
Director, Ministry of Energy, Poland

In 2008 Poland joined the IEA and became its 28th member. Since then, Poland has participated in the energy dialogue that takes place at the forum of the Agency. This is important in a situation of dynamic changes in energy systems, which we have had an opportunity to observe. These changes require a response at a much broader level than the national one because both energy and climate problems can be solved efficiently only if an appropriate coherence of actions carried out at the global level is ensured. Identification of threats, development of optimal solutions and support in the implementation of policies aimed at achieving member states' energy objectives, taking into account global conditions, is becoming particularly important nowadays. The role of the IEA in this area cannot be overestimated. Polish representatives participate in all IEA bodies and working groups, drawing knowledge and inspiration and gaining experience, which can then be used in the development of Polish energy policy.

Over the last ten years the energy market in Poland has undergone visible transformations. Responding to global trends and the related need for specific knowledge on the part of the member states, the scope of IEA activities and the distribution of priorities have also changed. However, due to historical conditions resulting in a significant dependence on energy supplies from one direction, energy security remained the fundamental goal of the Polish energy policy. It is also the IEA’s core principle, although the scope with which the IEA deals with this issue has changed, along with changes in the way energy sectors function, trends in the consumption of energy resources, and identification of new threats.

The IEA’s activities in this area have in recent years provided significant support for policy. Recognising the growing importance of natural gas in the global energy balance and the changes taking place in the market of this raw material, resulting from the shale revolution in the United States and the development of LNG trade (among other factors), the IEA’s activities in this sector have expanded significantly in the last ten years. This has largely met our expectations and was consistent with the energy policy pursued by Poland. Security of supply of natural gas has become a more frequent subject of IEA analysis and publications, and member states’ policies to protect against crises in this market have been subject to IEA Emergency Response Reviews (ERR). Poland has made a significant effort to diversify the country’s natural gas supplies.

One of the key projects enabling diversification using the emerging global LNG market was the construction of a LNG terminal in Świnoujście. Currently, through the terminal we receive LNG mainly from Qatar under two contracts signed by PGNiG S.A. and from the United States under a signed five-year contract, but, according to the
information provided recently, by the end of 2018 PGNiG S.A. intends to sign at least two new LNG supply contracts, increasing the volume of fuel imported by the terminal in the future. In order to ensure the continuity of natural gas supplies to customers in Poland, a system of mandatory reserves of natural gas has also been established. The efforts undertaken were assessed positively by IEA experts in the framework of the ERR to which Poland submitted during the IEA membership period twice, and the recommendations were used to improve the functioning of the market and the system of protection against supply disruptions.

From the perspective of ten years of Poland’s membership in the IEA, one can positively assess the extension of ERR to the electricity sector. A comprehensive approach to the issue of security of supply, with the growing interdependence of energy markets, was the right thing to do. The fact that electricity production was based on indigenous coal resources over the years was the basis for the security of supply of this energy medium in Poland. Taking into account the projected change in the balance of electricity production towards greater involvement of renewable energy sources and natural gas, the exchange with international stakeholders within the IEA framework is of great value.

Despite these changes in Poland’s energy balance, the share of crude oil will continue to be significant, and petroleum-based fuels will be the main driver of road transport for decades. Poland has also made visible progress in this sector during the last ten years. In order to meet the growing internal consumption of fuels, the production potential of Polish refineries has been increased. The capacity of Naftoport – an alternative to the Druzhba pipeline for oil supplies to Poland, and storage capacity – has also been expanded. For several years, the share of oil supplies from other than eastern directions has been systematically increasing. Over the last ten years, Poland has been actively involved in the IEA’s collective response to the disturbances on the oil market. Energy solidarity has always been of paramount importance to us. In this context, we are also looking at the proposals concerning changes to the IEA’s stockholding system. The growing share of non-member states in global oil consumption is a fact, and their involvement in collective response is a necessity. For the IEA to be effective, it is essential that the future system is credible, and this means that all countries participating in the system must be ready to make efforts to have adequate emergency stocks and full, transparent and reliable statistics. They must also be ready to work together in a crisis situation, regardless of where in the world market disruption takes place and which countries are hit hardest by these disruptions. The rules of co-operation with partner countries will reflect this assumption.

The decision on Poland’s accession to the IEA was of fundamental importance not only to strengthen Poland’s emergency response potential, but also to involve Poland in shaping global energy policy, an issue on which the IEA is now focusing more and more. I am glad that ten years ago, as then middle-rank manager of the Oil and Gas Department of the then Ministry of Economy, I had the opportunity to participate in its implementation. It is worth noting that the team preparing for Poland’s accession to the IEA was very modest and consisted of only three people. Before the last review, the team was extended to include three more people who made a significant contribution
to the next stage – the ratification process of the IEP and ongoing co-operation with the Agency. To commemorate this process, I will allow myself to mention these people. Leading the process were then Director of the Oil and Gas Department of the Ministry of Economy, Mr Maciej Woźniak, and the Experts of the Department of Oil and Gas, Ms Elżbieta Piskorz and Mr Marek Kosicki. Extended at the final stage of the accession process were Ms Ewa Chmura – Golonka, Mr Maciej Białek and Mr Miłosz Karpiński.