

# Special Hydrocarbon Tax And Taxation Of Shale Gas In Poland

Przemysław Pest, Ph.D., Chair of Financial Law, Faculty of Law, Administration and Economics, University of Wrocław

Mateusz Lewandowski, Faculty of Law and Administration, University of Warsaw

## Introduction<sup>1</sup>

Shale gas is considered as a new unconventional resource which may help to diversify the supply and increase accessibility of the gas among the final recipients. The exploration activities of shale gas in Poland are conducted since 2011. It was related with so-called gas revolution – a phenomenon that affected the gas extraction in the United States and Europe. The emergence of the possibility to extract shale gas, previously inaccessible owing to technological limitations, places before Poland the perspective of a significant increase in the production of natural gas and crude oil (Elaboration of government draft Bill on a Special Hydrocarbon Tax).

According to the information of Polish Energy Regulatory Office, at the end of 2011, there were 109 entities which carried out an activity related to the shale gas exploration. Since then, the growing importance of shale gas was recognized as a potential source of tax revenue. The impact of the shale gas business was significant. Just a few years after the beginning of the gas exploration, the Special Hydrocarbon Tax Bill was adopted on 25th July 2014. The regulations came into force on 1st January 2016. Since that day, the system of taxes assessed on hydrocarbon exploration is comprised of:

- special hydrocarbon tax,
- tax on the extraction of some resources,
- income tax,
- environmental usage fee,

<sup>1</sup> It is a longer and amended version of the article published by Przemysław Pest (*Taxation of the prospecting, exploration and extraction of shale gas on Polish territory*) in *Financial Law Review* 2016, np. 1, p. 13-24.

- property tax.

The purpose of this article is to present the taxation of shale gas extraction in Poland. The tax burden imposed on entities conducting commercial activities is considered as a key factor determining the profitability of such activity in Poland. Furthermore, the impact of the regulation on the future extraction has to be indicated.

## 1. Different methods of taxation of shale gas in Poland

### 1.1. Tax on the extraction of some minerals

A tax on the extraction of some minerals was introduced into the Polish legal order by the Act of 2 March 2012 (The Act of 2 March 2012 on the Tax on Extraction of Some Minerals, *Journal of Laws* 2016, item 1581 as amended), which entered into force on 18 April of that same year. The tax is a form of royalty. The assumption guiding the author of the legislation was the intention to capture the excessive profits of entities mining copper and silver (Elaboration of government draft Bill on a tax on some minerals). As of 1 January 2016, the Special Hydrocarbon Tax Act expanded the subjective scope of the tax to include the extraction of natural gas and crude oil. Similarly to the special hydrocarbon tax, the obligation to pay the tax on the extraction of some minerals takes effect in respect of natural gas and crude oil extracted from 1 January 2020. Tax is not levied on extracted natural gas in quantities not exceeding the equivalent of 11 MWh monthly, as well as extracted crude oil amounting to less than one tonne monthly, on condition they are used for research purposes.

The tax on the extraction of some minerals constitutes income of the state budget.

Taxpayers of the tax on the extraction of some minerals are natural and juridical persons, as well as organizational entities without legal personhood, whose commercial activities involve the extraction of copper, silver, natural gas or crude oil. In respect of extraction of natural gas and crude oil, the obligation to pay tax arises at the moment the natural gas or crude oil is introduced into a distribution network, or at the moment natural gas or crude oil is loaded into another mode of transport. The tax base in respect of natural gas and crude oil is the value of the extracted natural gas or crude oil. The value of the extracted natural gas is the product of the quantity of extracted natural gas expressed in MWh and the average price of natural gas. In turn, the value of extracted crude oil is the product of the quantity of crude oil expressed in tonnes and the average price of crude oil. The quantity of extracted natural gas and crude oil is determined on the basis of measurements taken at points where the natural gas or oil is inserted into a distribution network or at the moment the natural gas or crude oil is loaded onto another mode of transport. The average price of one MWh of natural gas and of a tonne of crude oil is announced by the Minister of Finances by the 15th day of every month for the preceding month in the Official Journal of the Minister of Finances, on the basis of the mathematical average of the spot price of natural gas as set by Polish Power Exchange (Towarowa Giełda Energii S.A) for the preceding month, whilst for crude oil it is the average OPEC daily basket price of crude oil as determined by the Organization of the Petroleum Exporting Countries for the preceding month.

The tax rate on extraction of some minerals for natural gas is:

- 1.5% - for natural gas extracted from deposits whose average permeability does not exceed 0.1 millidarcy and the average porosity does not exceed 10%;
- 3% - for natural gas extracted from other

sources than those named above.

The tax rate on extraction of some minerals for crude oil is:

- 3% - for crude oil extracted from deposits whose average permeability does not exceed 0.1 millidarcy and the average porosity does not exceed 10%;
- 6% - for crude oil extracted from other sources than those named above.

The differentiation of tax rates for deposits based on permeability and porosity results from the fact that hydrocarbons stored in deposits featuring low permeability and porosity are difficult to reach, and their extraction is associated with higher investment costs (Elaboration of government draft Bill on a Special Hydrocarbon Tax). The tax bill for a given month is the sum of the products of the value of extracted natural gas expressed in PLN, or the value of extracted crude oil expressed in PLN, and the tax rate given above.

The Act on the extraction of some minerals also contains tax exemptions concerning stripper wells. The extraction of natural gas from a prospecting or extracting well is exempt from taxation in the event the monthly volume extracted does not exceed the equivalent of 1100 MWh, while in the case of crude oil this exemption applies when the monthly volume extracted does not exceed 80 tonnes.

## 1.2. Income taxes

Prospecting, exploring and extracting shale gas in Poland is subject to both the special taxes described previously and income taxes. Income taxes are regulated in the Personal Income Tax Act of 26 July 1991 (Journal of Laws 2016, item 2032 as amended) and the Corporate Income Tax Act of 15 February 1992 (Journal of Laws 2016, item 1888 as amended). Revenue from income taxes is allocated to the state budget and the budgets of local self-government units, in compliance with the regulations in the Local Self-Government Units Income Act of 13 November 2003 (Journal of Laws 2016, item 198 as amended). The awarding of a shares in the revenue from income tax-

es to local self-government units is intended to defray the costs they must bear in conjunction with the extraction activity conducted in their territory. It is also intended to compensate for the damage caused to the natural environment by extraction activities (Lipiński, 2001). It additionally facilitates the development of local self-government units owing to additional own revenues which can then be used to make investments.

Taxpayers of personal income tax are exclusively natural persons. Corporate income tax is paid by juridical persons, capital companies in organization, and organizational entities which do not possess legal personhood, excepting companies without legal personhood: civil law partnership, general partnership, professional partnership and limited partnership. Partners in such companies pay personal income tax. From 1 January 2014, taxpayers of corporate income tax also include limited joint-stock partnerships with their seat or management board located in Poland. A capital group may also be a corporate income tax payer. All types of income, regardless of the source of the revenue, are subject to income taxation, excepting income explicitly exempted from taxation. The tax base for income taxes is income, understood as the difference between revenue and the costs of its acquisition. An exception to this principle can be identified in lump-sum forms of taxation in which the tax base consists of revenue. Both pieces of legislation contain extensive lists of exemptions. A progressive scale with tax rates of 18% and 32% is applied to personal income tax, while natural persons with a registered commercial enterprise may opt for a 19% flat tax rate. The primary tax rate for corporate income tax is 19%.

Of significance for the profitability of conducting commercial activity that consists in the prospecting, exploration and extraction of shale gas in Poland is that neither of the income tax statutes consider the special hydrocarbon tax or the tax on the extraction of some minerals as tax-deductible costs.

### 1.3. Environmental usage fee

Another form of public tribute which enterprises engaged in prospecting, exploring and extracting shale gas in Poland must pay is the environmental usage fee, regulated in Chapter VII of the Geological and Mining Act. The detailed regulations concerning the prospecting, exploration and extraction of shale gas were implemented by the Act of 11 July 2014 amending the Geological and Mining Act and some other Acts (Journal of Laws 2014, item 1133), also referred to as the “hydrocarbon amendments” (Lipiński, 2014). This Act, together with the previously-referenced Special Hydrocarbon Tax Act of 25 July 2014 comprised a legislative package regulating the issue of prospecting, exploring and extracting shale gas in Poland. The changed entered into effect on 1 January 2016. In accordance with the new rules, income from the environmental usage fee as relates to hydrocarbons is split: 60% goes to the commune, 15% to the county, and 15% to the province in which the activity is conducted, while 10% goes to the National Fund for Environmental Protection and Water Management. The Geological and Mining Act distinguishes the fee for awarding a concession from the environmental usage fee proper.

The concession fee for prospecting and exploring deposits of hydrocarbons and for the extraction of hydrocarbons is the product of the rate and the size of the terrain encompassed by the concession, expressed in square kilometres (surface rent tax). This means that the actual amount of the fee is dependent on the size of the land which the concession applies to. In accordance with the information provided by the Minister of the Environment, under the regulations of the Geological and Mining Act, the fee in 2016 for activity related to prospecting and exploring hydrocarbon deposits for one square kilometre amounts to PLN 212.52. The fee is a one-off tribute and is payable within 14 days of the day on which the concession becomes final.

An environmental usage fee is to be paid by an enterprise that acquires a concession

for prospecting and exploring deposits of hydrocarbons, as well as for the extraction of hydrocarbons – the investment decision. The environmental usage fee is established as a product of the rate and the amount of the resource extracted from proven and unproven reserves in one accounting period. The rate of the environmental usage fee for particular types of minerals, as in the case of the fee for issuing a concession, is determined on an annual basis by the Minister of the Environment. For high-methane natural gas whose extraction during a given accounting period exceeds 2,500 thou m<sup>3</sup>, this rate is PLN 24.00 /1000 m<sup>3</sup>, whereas in respect of high-methane natural gas whose extraction in a given accounting period does not exceed 2,500 thou m<sup>3</sup>, the fee is PLN 6.23/1000 m<sup>3</sup>. In turn, the rates for crude oil are PLN 50.00/t for extraction in a given accounting period exceeding 1000 t, and PLN 36.84/t for smaller volumes. It is worth pointing out that the rates for environmental usage fees are four times higher in the event of extraction of high-methane natural gas in large quantities. The intention of the legislator here was to ensure that local self-government units receive their fair share of income from the extraction of shale gas (Elaboration of the government draft Bill to amend the Geological and Mining Act).

The environmental usage fee can also come in the qualified form of an additional fee, or a penalty fee. An additional fee is collected in respect of activity conducted in gross violation of the conditions set forth in the concession, confirmed plans for geological works or plans subject to a notification requirement. The fee is separate from other assessed fees. An additional fee is imposed by way of administrative decision issued by the relevant concession authority or geological administration entity that verified the planned geological works or to whom plans for geological works were submitted by way of notification. The Geological and Mining Act sets out the rates for the fee and the manner in which it is to be paid in Art. 139(3-5). In turn, a penalty fee is assessed on

activity conducted without the required concession, or without a confirmed/submitted plan for geological works. The relevant authorities for such cases are the minister responsible for environmental affairs, and the appropriate mining oversight body. The rates for the fee and manner in which it is to be paid are regulated in Art. 140(2-5) of the Geological and Mining Act.

#### **1.4. Property tax**

Entities conducting activity consisting in prospecting, exploring and extracting shale gas in Poland may also be subject to property tax. This tax is regulated in Section 2 of the Local Taxes and Fees Act of 12 January 1991 (Journal of Laws 2016, item 716 as amended). Revenue collected by this tax constitutes income for communes.

The property tax is assessed on land, buildings and part thereof, as well as structures and portions thereof associated with conducting commercial activity. Taxpayers of the property tax are natural and juridical persons, as well as organizational entities which do not possess legal personhood, and which enjoy freehold rights to real property and/or buildings, the right of perpetual usufruct, and also the possessors of real property and buildings or parts thereof which constitute the property of the State Treasury or a local self-government authority. The tax base for the property tax in respect of land is its area, while for buildings and parts thereof it is the usable area; for structures, it is their value as established on 1 January of a tax year and which constitutes the basis for depreciation calculations in that year. The rate of the property tax is determined by a resolution adopted by individual communes. In respect of land, buildings and parts thereof, the rate is given in PLN and cannot exceed the limit established in statute. In turn, the tax rate for structures is proportional, and may not exceed 2% of their value. The municipal council may also differentiate tax rates for various objects of taxation, taking into account the type of commercial activity conducted, and

it may also introduce additional exemptions.

In respect of prospecting, exploring and extracting shale gas, the property tax to which structures are subject will be assessed on devices, machines and installations used in the exploration and extraction of shale gas which are permanently fixed to the ground, located on the surface of the land, or under the surface of the land (Łaszczuk, Matyka, 2012). However, it is difficult to make a general determination as to the taxation of structures used in the exploration and extraction of shale gas under property tax regulations, as this will depend on the legal categorization of particular elements of well infrastructure as “structures” under Art. 1a(1)(2) of the Local Taxes and Fees Act.

In a judgment of 13 September 2011 (case no. P 33/09), the Constitutional Tribunal held that subterranean mining infrastructure was not considered a construction object under the definition set forth in the Building Code of 7 July 1994 (Journal of Laws 2016, item 290 as amended), and by the same token, property tax cannot be assessed on it, neither as a separate structure nor jointly with other elements located within the same infrastructure. In the Tribunal’s opinion, structures located within mining pits – both open-top and underground – can have a property tax levied on them, on condition that they can be qualified: 1) as a structure associated with the conducting of commercial activity as defined by the Building Code, which is simultaneously understood as a structure under the Local Taxes and Fees Act, or 2) portions of structures associated with commercial activity as defined by the Building Code, which are simultaneously understood as structures under the Local Taxes and Fees Act. However, the Tribunal pointed out that in every tax matter concerning infrastructure located in underground mining excavations, it is necessary to determine precisely which objects and devices can be classified as structures under the Local Taxes and Fees Act. The Tribunal’s opinion is that, with consideration to the significant differentiation of objects and devices located within underground mining

excavations, it is necessary to establish with precision whether particular objects and devices, combinations thereof, or the infrastructure in its entirety can be classified in accordance with the names of structures given in the Building Code.

## 2. Special hydrocarbon tax

One expression of the State’s efforts to collect a portion of the resources rent from enterprises engaged in the prospecting, exploration and extraction of shale gas in Poland was the adoption of the Special Hydrocarbon Tax Act of 25 July 2014 (Journal of Laws 2016, item 979 as amended), which introduced a new tax into the Polish legal regime – the special hydrocarbon tax. This tax is a form of resource rent tax on the profit from the production of hydrocarbons and its essence lies in the tax net profit of the extraction of shale gas. The referenced Act also expanded the subjective scope of the tax on the extraction of some resources to include natural gas and crude oil. These regulations came into force on 1 January 2016, while the obligation to pay the special hydrocarbon tax will take effect on income generated beginning 1 January 2020.

The special hydrocarbon tax encompasses taxation of the profit generated by the extraction of hydrocarbons, with the definition of “extraction” to include the prospecting and exploration of hydrocarbon deposits. This tax constitutes income to the state budget. Taxpayers are natural persons, juridical persons and organizational entities without legal personhood, engaged in the extraction of hydrocarbons. In addition, the civil law partnership, which is considered as a contractual relationship (not a separate entity) is also taxpayer of the hydrocarbon tax. Besides, the Act excludes the legal concerns which has arisen under other tax acts, whether the civil law partnership or the partners should be considered as the taxpayers.

The taxpayers are obliged to keep accounting records, prepare financial statements, examine them and submit to the relevant regis-

ter court. The above provisions applies to any entity, even if the taxpayer is not obliged to keep accounting records in accordance with Accounting Act on 29 September 1994 (Journal of Laws 2016, item 1047 as amended). It should be noted that the Hydrocarbon Tax Act extends the accounting duties.

The tax base of the special hydrocarbon tax is the profit on hydrocarbon extraction activity, consisting in the surplus generated in a given tax year from income generated by hydrocarbon extraction activity that exceeds qualified expenditures. If qualified expenditures in a given year exceed the amount of profit, the difference thereby constitutes a loss on hydrocarbon extraction activity. The Act contains more detailed regulation addressing the manner in which income and qualified expenditures are determined. Importantly, under the Special Hydrocarbon Tax Act, qualified expenditures also includes income tax in respect of hydrocarbon extraction activity, the tax on the extraction of some resources concerning natural gas and crude oil, the environmental usage fee levied on the extraction of hydrocarbons, and taxes and fees associated with the administration of real property where the mining facility is located.

The Special Hydrocarbon Tax Act defines the total income as the amount of the revenues referred to in Article 8 of the Act, obtained since the beginning of the hydrocarbon extraction business to the last day of the tax year. The Act stipulates that the income consists of gained money, monetary assets and advance payment amounts etc., obtained for the delivery of the extracted hydrocarbons. The day of the emergence of taxable revenues is the day of receipt of receivables. If the receivables are paid in kind, then the day of receipt should be considered as the day of receipt of goods, rights or other benefits. On the other hand, this rule is limited by the special provisions what hinders the interpretation of the hydrocarbon tax.

The total qualified expenditures is the amount of the expenses referred to in Article 11 of the Act, incurred since the beginning of

the hydrocarbon extraction business to the last day of the tax year. Especially, the qualified expenditures are the expenses incurred for achieving the revenues or preserving or securing the revenues. This also applies to the prospection, exploration, extraction, storage or supply of hydrocarbons or to the termination of extraction activity.

A significant problem is the setting of the tax rate, which is calculated according to the so-called R-factor. R-factor is the ratio of total income to total qualified expenditures. Definitions of total income and total qualified expenses are contained in Art. 2(5 and 6) of the Special Hydrocarbon Tax Act. In the event the R-factor is:

- less than 1.5 – the tax rate is 0% of the tax base;
- equal to or greater than 1.5 and less than 2 – the tax rate is calculated thus:  $(25 \times R \text{ factor} - 25)/100$ ;
- equal to or greater than 2 – the tax rate is 25% of the tax base.

The R-factor is calculated for every accounting period. When the R-factor is equal to or greater than 1, this means that extraction activity has generated a profit, but with a view to the tremendous investment costs in the initial period of the activity, those profits are small. If the R-factor is less than 1.5, this indicates that a profit on extraction activity has been generated, but until this level has been reached the taxpayer does not pay any tax. When the R-factor is between 1.5 and 2, a progressive tax rate is applied ranging between 12.5% and 25%. The highest tax rate kicks in at the moment when the total income is twice that of the total expenditures, when the enterprise can be said to be highly profitable (Elaboration of government draft Bill on a Special Hydrocarbon Tax). As we have seen, the tax rates range from 0% to 25%. Determining a proper tax rate may be a challenge for taxpayers.

The taxpayer is also obliged to submit tax return monthly and pay the advance tax. The above mentioned tax return indicate the amount of profit (or loss incurred) from the

beginning of the tax year, total income and total qualified expenditures. Once a year, the taxpayer submits an annual tax return.

### 3. Conclusions

To summarize, the issue of taxation of prospecting, exploring and extraction of shale gas in Poland is an expression of the conflict between two values – on the one hand, the need to ensure the State Treasury receives its fair share of resource rents as the owner of underground natural resources, while on the other hand the desire to encourage enterprises through a favourable legal regime, including taxation regulations, to conduct extraction activity in Poland.

It should be noted that the prospecting, exploring and extraction of the hydrocarbon is a completely new field of the mining sector. Therefore, increasing of the tax burdens may limit the development of the shale gas exploration. Nevertheless, the positive aspect of the Special Hydrocarbon Tax Act is the fact, that it will take effect on income generated begin-

ning 1 January 2020. The tax authorities and the taxpayers have time to mitigate ambiguities regarding the application of the tax law.

We should not hesitate to agree with the position taken by the Presidium of the Polish Academy of Sciences, in accordance with which “at the present, still-initial phase of exploration for shale gas, the primary objective of state authorities in respect of the private sector, as well as Polish scientific institutions and higher education, should be to strongly encourage them using legal and financial means to engage actively in efforts aimed at quickly and accurately identifying the geological conditions for the possible presence of deposits, as well as to intensify work on technology that will reduce the costs of drilling and extraction. The primary objective should not be to raise (potentially illusory) tax revenue, but rather to ensure significant commercial extraction” (Stanowisko, 2014). Due to the fact that one form of taxation does not exclude the other, the imposition of the special hydrocarbon tax on gas extractor is an additional tax burden.

### References

Elaboration of government draft Bill on a Special Hydrocarbon Tax, amendment to the Act on the tax on the extraction of some minerals, and on amendments to other Acts, Parliamentary Report no. 2351/VII.

Elaboration of government draft Bill on a tax on some minerals, Parliamentary Report no. 144/VII.

Elaboration of the government draft Bill to amend the Geological and Mining Act and some other Acts, Parliamentary Report no. 2352/VII.

Lipiński A., Nowy model opłat eksploatacyjnych w prawie geologicznym i górnictwie (uwagi de lege ferenda) (in:) Księga jubileuszowa Profesora Marka Mazurkiewicza. Studia z dziedziny prawa finansowego, prawa konstytucyjnego i ochrony środowiska, Wrocław 2001.

Lipiński A., Zmiany prawa geologicznego i górnictwa (tzw. nowela węglowodorowa), Przegląd Ustawodawstwa Gospodarczego 2014, no. 9.

Łaszczuk A., Matyka M., Obecny system opodatkowania wydobycia węglowodorów w Polsce z perspektywy jednostek samorządu terytorialnego (in:) Wpływ wydobycia gazu łupkowego na rozwój społeczno-ekonomiczny regionów – amerykańskie success story i potencjalne szanse dla Polski, Raport Instytutu Kościuszki, Kraków 2012.

Stanowisko Prezydium Polskiej Akademii Nauk dotyczące gazu ziemnego znajdującego się w warstwach łupkowych (tzw. „gazu łupkowego”), Gospodarka Surowcami Mineralnymi 2014, no. 2.