

Deloitte.

Observation on royalties and
similar taxes – ‘An overview’

Oil and gas upstream in Europe

January 2015



Background and methodology

- ❖ The upstream Oil & Gas business has a long term business cycle. Fiscal and regulatory framework plays an important role in the overall economics of the industry. **We were requested to carry out a straight forward analysis establishing the amount of Royalties and similar taxes as percentage of Revenues in Oil & Gas producing countries in Europe.**

Actual Royalties and similar taxes differ from nominal rates

- ❖ As such every two fields are different, let alone comparing two countries. Similarly, different frameworks may have different objectives in line with each country's energy strategy. Additionally, we note that actual Royalties and similar taxes paid differ from nominal rates resulting from a combination of productivity and incentives differences.
- ❖ The actual royalties and similar taxes observed were assessed as a percentage of revenues, based on the publicly available information. The average rates were computed as arithmetical mean of the actual royalties and similar taxes in European producing countries. In Romania this is approximately 13.9%, compared to the total arithmetical mean for Europe, of 12.2%.

Results: average European Royalties and similar taxes as a percentage of revenues calculated as arithmetic mean of the European producing countries



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Executive summary

Executive summary

- ❖ The current Oil&Gas production in Romania is relatively significant for Romania's internal needs for both Oil & Gas. Considering the maturity of most of the fields, significant investments are required to mitigate production decline. We have been requested by Federatia Patronala Petrol si Gaze ("FPPG") to carryout a straight forward analysis of royalties and similar taxes paid as a percentage of revenues that can be observed in European producing countries, excluding national corporate income tax.
- ❖ The comparability of different countries face numerous irreconcilable challenges such as Oil & Gas production mix, onshore and offshore production mix, average production per field, average well productivity, average production cost, the different mechanism of charging royalties and similar taxes such as linked to production and revenues or linked to profits or a fixed percentage. Also national economic conditions differ amongst various Oil & Gas producing countries. Additionally, some of the regimes e.g. UK, Poland, Croatia, Ireland, Lithuania, Greece have recently been changed or are in the process of being changed, that will effect their current royalties and similar taxes.



Executive summary

- ❖ We note from this exercise, that the observable royalties and similar taxes as a percentage of revenues differ when compared to nominal rates for royalties and similar taxes, due to productivity differences and incentives applied in different countries.
- ❖ This overview is performed as of 2013, except where explained otherwise. The overview is constructed based on publicly available information and doing an average computation purely on a mathematical basis for Europe*), that hopefully can help one step in bringing some focus and basic input to the discussion that should be further built on more extensive analysis and commonly agreed approach.
- ❖ Keeping all the limitations in mind that can affect the results, a simple arithmetical average for the European producing countries would come to 12.2%, while the average of the closest comparable European producing countries based on well productivity would be 6.9%. At present, Romania has an average observable royalty and similar tax paid as a percentage of revenue of 13.9%, mainly arising from the main companies Romgaz and OMV Petrom with 19.6% and 12.4% respectively.
- ❖ *) excluding CIS

Observation on oil & gas royalties and similar taxes

Observation on oil & gas royalties and similar taxes

- ❖ Oil & Gas industry plays an important role in Romania's economy. However, a declining trend is observed. Capturing this decline has meant significant investment over the last few years and will require a continued investment program to further improve the performance of existing fields.
- ❖ The upstream Oil & Gas industry faces numerous complexities given its long term business cycle that requires a significant upfront investment. The private sector Oil & Gas companies (IOC) are to bring know how, technology and capital to areas of interest under different mechanism, cover their costs and earn a return on the risk taken and cost of capital. In principle, it depends on what a particular framework wants to achieve. Effects of any framework must be looked at from the perspective of effect on current production, whether it encourages or discourages marginal field development, what happens to investors willingness to continue production or abandonment, sensitivity to Oil & Gas prices as well as cost changes. There is no one size fits all in this. However, the question of attractive, predictable and stable regulatory and fiscal environment is important, irrespective of the status of Hydrocarbon industry in any country.



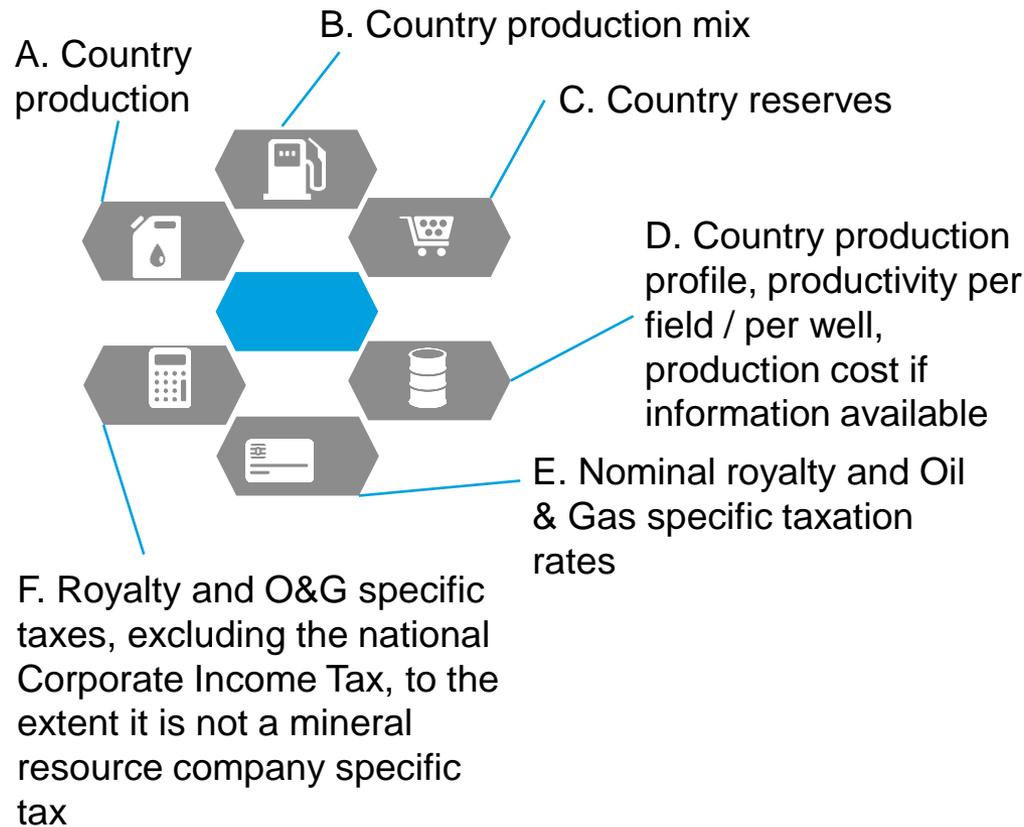
Observation on oil & gas royalties and similar taxes

- ❖ Romania is one of the oldest producing country and it has the lowest well productivity in Europe and one of the lowest production per field in Europe, indicating maturity of onshore fields.
- ❖ Each field is different, let alone countries. This exercise is a straight forward look at what are the main components of the various Oil & Gas related fiscal regimes and what indicative oil & gas taxes that can be observed on an overall basis in these countries.
- ❖ The analysis does not aim at searching for the optimal fiscal regime towards the Oil & Gas industry as a result of this comparison, given that there are numerous risks in such comparisons of fiscal and regulatory regimes as well as the fact that various European countries are at different economic and Oil & Gas sector maturity levels compared to Romania.
- ❖ The overview is not geared to judge the various fiscal and royalty regimes nor it is to promote or criticize any existing system. The main focus point in putting together this overview is to appreciate, to the extent possible, what are observable O&G royalty and similar taxes in various geographies within European countries as a percentage of revenues for 2013.



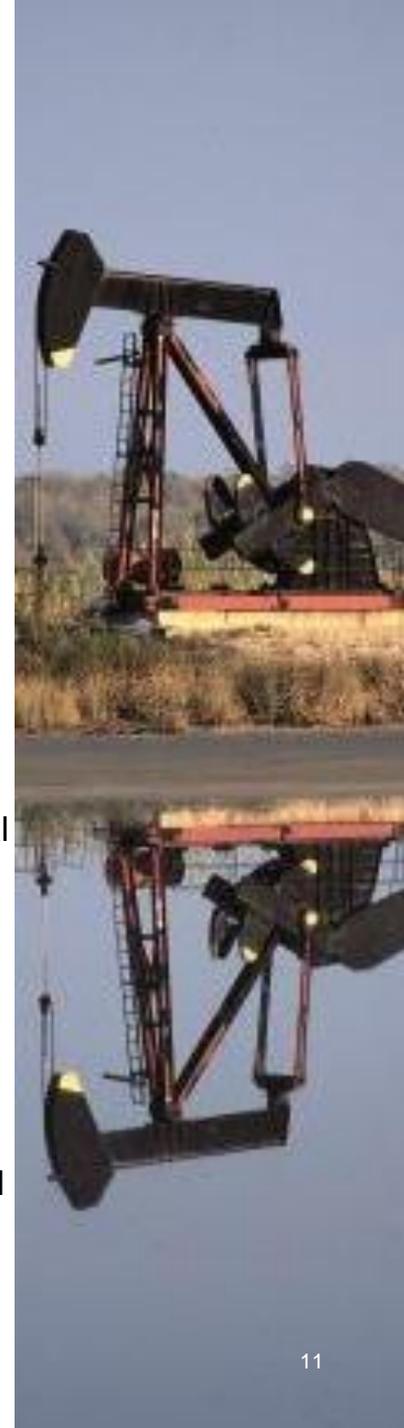
Observation on oil & gas royalties and similar taxes

❖ To carry the exercise, some of the key areas looked at are:



Observation on oil & gas royalties and similar taxes

- ❖ Romania currently produces more than 100 million boe of Oil & Gas per annum. The production is dominated by two main companies accounting for more than 95% of current annual production. Romania's observable effective royalty and similar taxes rate is around 13.9%, 19.6% for Romgaz and 12.4% for OMV Petrom. The difference between the two companies comes as a result of one being only a Gas company, while the other having a production mix of both Oil & Gas, as gas production had a supplementary tax linked to price liberalization.
- ❖ Some countries can be considered to have a number of similar features such as annual production, share of onshore vs. offshore, daily production, field maturity and some other indicators. Looking at the production profile a close match to Romania is Italy (excluding Val D'Agri field), Poland, Croatia, Serbia and France. Romania's production per field approximately 699 boe/day, compared to Poland, Serbia, Croatia and France, with it is 595, 760, 831 and 482 boe/day, respectively. On the other hand, when we look at average daily production per well, Romania is approx. 20 boe/day, compared to Poland, Serbia, Croatia and France, where we noted 37, 43, 53 and 36 boe/day, respectively. For Italy (excluding Val D'Agri), we noted better field and well production rates of 715 and 165-boe/day, respectively.
- ❖ Similarly, if we take very low productivity e.g. below 40 boe/ well/day, we note Poland, France, Bulgaria, Lithuania and Turkey to be close to Romania.
- ❖ However in terms of annual production Romania is ahead of all these countries and it is closely followed by Italy then Poland, while Turkey, and Croatia are having production close to or less than 20 mn boe per annum. Serbia and France have a production of close to or less than 10 mn boe per annum.
- ❖ Romania and Italy have both large amount of O&G production although Italy has more equal weight of total oil in the total oil & gas production compared to Romania. Poland is mainly gas production and Croatia has higher weight of gas in its total production. Turkey and France have substantially oil production.

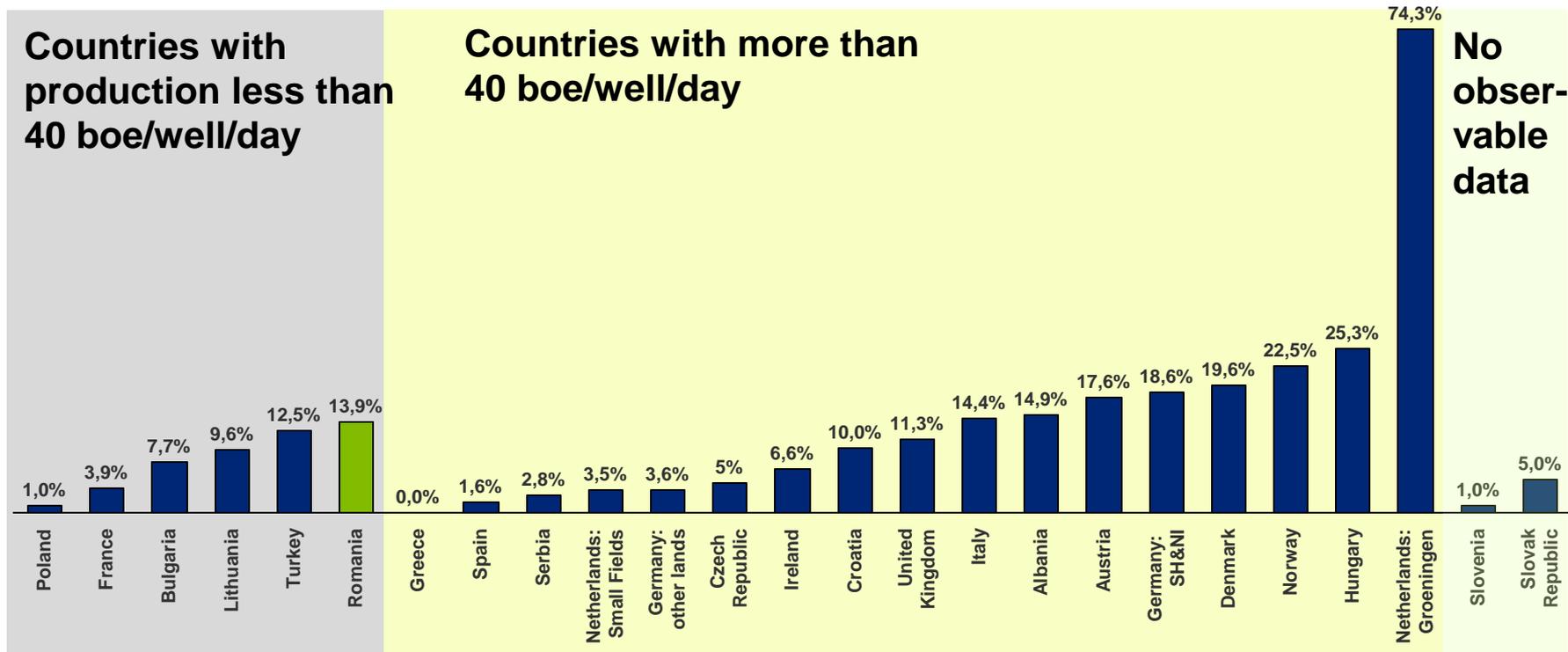


Observation on oil & gas royalties and similar taxes

- ❖ Other countries in Europe that are producing significantly more than above are Denmark, Netherland, United Kingdom and Norway. However, they are all mainly offshore, except Netherlands, and are significantly larger in term of field size, well and field productivity, as well as total reserves (especially UK, Norway and Netherlands). Romania's Oil & Gas fields profile and production are not comparable to these countries.
- ❖ The other European Oil & Gas producing countries are relatively small in respect of total production when compared to Romania. Furthermore, a number of countries do not have any Oil & Gas production (although some have now exploration ongoing) and are not included in the observable indicative effective royalties and similar taxes calculation.

Observation on oil & gas royalties and similar taxes

2013 or latest available data
2013 Brent oil price: 109 USD/bbl



Observable effective tax rates % of revenues

| | | |
|-----------------------------------------------------------|-------|----------------------------------------|
| Romania ¹ | 13.9% | - Out of which 9.4% permanent taxation |
| Other countries with less than 40 boe/well/day production | 6.9% | |
| All European countries without Groningen | 9.6% | |
| All European producing countries | 12.2% | |

¹ If construction tax would have been 1%, total effective tax rate would be 13.1%, out of which 8.6% permanent taxation and 4.5% temporary taxation. Permanent taxation includes royalties, construction tax, tax on crude oil sales, while temporary taxation refers to supplementary tax for oil&gas introduced in 2013

Summary

Summary_1

Production Profile – 2013

| Country | Year of first production | Onshore % | Est. oil&gas reserves (mn boe*) | Production oil&gas/ well (boe/day*) | Production/ field (boe/day*) | Production cost (USD/boe) | Total Production (mn boe/ annum*) | Oil Production (mn boe/ annum*) | Gas Production (mn boe/ annum*) |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-----------|---------------------------------|-------------------------------------|------------------------------|---------------------------|-----------------------------------|---------------------------------|---------------------------------|
| EUROPE | | | | | | | | | |
| Romania | 2 nd half of 19 th century | 90% | 1,260 | 20.1 | 689.2 | 12.6 | 101.4 | 29.7 | 71.7 |
| Italy | 2 nd half of 19 th century | 56% | 910 | 271.6 | 1,204.4 | 12.9 | 87.9 | 39.4 | 48.5 |
| Poland | 2 nd half of 19 th century | 97% | 740 | 37.2 | 595.3 | 10.0 | 46.1 | 7.0 | 39.0 |
| France | First half of 20 th century | 100% | 150 | 36.2 | 397.4 | 15.2 | 10.3 | 5.6 | 4.7 |
| Croatia | 2 nd half of 19 th century | 68% | 230 | 53.0 | 831.1 | 12.1 | 20.3 | 4.8 | 15.5 |
| Serbia | First half of 20 th century | 100% | 380 | 42.7 | 760.2 | 8.9 | 11.7 | 8.5 | 3.1 |
| Turkey | First half of 20 th century | 98% | 310 | 31.0 | No data | 10.6 | 20.3 | 16.9 | 3.4 |
| Germany: Bayern, Hamburg, Rheinland-Pfalz, Thüringen, Brandenburg, Mecklenburg-Vorpommern, Sachsen-Anhalt* | 2 nd half of 19 th century | 100% | *) | 49.6 | 782.8 | | 5.1 | 2.4 | 2.7 |
| <ul style="list-style-type: none"> • Please see individual country snapshot for details ** Offshore production | | | | | | | | | |
| Germany: Lower Saxony & Schleswig-Holstein* | 2 nd half of 19 th century | 99.3% | *) | 178.3 | 2,195.2 | | 84.1 | 16.6 | 67.6 |
| United Kingdom | 2 nd half of 19 th century | 1% | 4,670 | 363.5 | 4,762.4 | 26.5 | 549.3 | 307.3 | 242.0 |
| Netherlands Small Fields | First half of 20 th century | 35% | 7,980 | 214.3 | 1,814.2 | 5.5 | 183.4 | 11.6 | 171.8 |
| Netherlands Groningen | 2 nd half of 20 th century | 100% | No data | 3,328.1 | 985,117.4 | | 359.6 | - | 359.6 |
| Norway | 2 nd half of 20 th century | 0% | 18,390 | 2,350.1 | 47,826.8 | 8.0 | 1,347.2 | 663.2 | 683.9 |
| Denmark | 2 nd half of 20 th century | 0% | 1,080 | 964.7 | 13,607.0 | 16.0 | 94.5 | 64.0 | 30.5 |

Summary_1

Production Profile – 2013

| Country | Year of first production | Onshore % | Est. oil & gas reserves (mn boe*) | Production oil&gas/ well (boe/day*) | Production/ field (boe/day*) | Production cost (USD/boe) | Total Production (mn boe/ annum*) | Oil production (mn boe/ annum*) | Gas Production (mn boe/ annum*) |
|----------------|--------------------------------------------------|-----------|-----------------------------------|-------------------------------------|------------------------------|---------------------------|-----------------------------------|---------------------------------|---------------------------------|
| Hungary | First half of 20 th century | 100% | 80 | 47.9 | | 4.7 | 19.9 | 7.7 | 12.3 |
| Austria | First half of 20 th century | 100% | 110 | 49.2 | 377.2 | 11.1 | 15.1 | 6.6 | 8.6 |
| Estonia | First half of 20 th century | 100% | - | | | | 4.4 | 4.4 | - |
| Bulgaria | 2 nd half of 20 th century | 7% | 50 | 19.1 | 1,605.5 | 4.2 | 2.1 | 0.4 | 1.7 |
| Czech Republic | First half of 20 th century | 100% | 40 | 61.5 | | 10.6 | 2.7 | 1.1 | 1.6 |
| Spain | 2 nd half of 20 th century | 1% | 170 | 334.3 | 1,755.2 | 11.6 | 3.0 | 2.7 | 0.4 |
| Greece | 2 nd half of 20 th century | 0% | 20 | 66.6 | 666.4 | | 0.5 | 0.5 | 0.0 |
| Slovakia | First half of 20 th century | 100% | 100 | | | | 0.9 | 0.1 | 0.8 |
| Ireland | 2 nd half of 20 th century | 0% | 60 | 390.4 | 975.9 | | 2.2 | - | 2.2 |
| Lithuania | 2 nd half of 20 th century | 100% | - | 30.0 | 128.3 | 39.9 | 0.7 | 0.7 | - |
| Albania | First half of 20 th century | 100% | 180 | 41.3 | | 13.3 | 6.3 | 6.2 | 0.1 |
| Slovenia | First half of 20 th century | 100% | - | | | | 0.02 | 0.0 | 0.02 |

* Please see individual country snapshot for details

Summary_2

Fiscal terms overview – 2013

| Country | Nominal fiscal terms* | Observation on royalties and similar taxes as a % of revenue* |
|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Romania | Oil: 3.5%-13.5% Gas: 3.5%-13.0% Construction tax 1.5% on gross value of assets Suppl. Tax: 60% of add. gas revenues and 0.5% of crude oil sales | 13.9% |
| Italy | 0-10% on revenue; Sicily: 20% and 6.5% supplementary tax on profits | 14.4% |
| Poland current regime (2014) | PLN 36.84/tonne for crude oil (~ US\$1.53 /bbl) PLN 6.23/mcm for high methane natural gas (~ US\$1,92/thm ³). | 1% |
| France | Oil: 0-12%; Gas: 0-5% on revenue | 3.9% |
| Croatia | 10% on revenue | 10.0% |
| Serbia | 3 %/ 7% on revenue | 2.8% |
| Turkey | 12.5% on revenue | 12.5% |
| Germany: Bayern, Hamburg, Rheinland-Pfalz, Thüringen, Brandenburg, Mecklenburg-Vorpommern, Sachsen-Anhalt | 0-10% on revenue | 3.6% |
| Germany: Lower Saxony & Schleswig-Holstein | Oil: 0-21% (wellhead value); Gas: 0-37% on revenue (wellhead value) | 18.6% |
| UK | 0 - 32% Supplementary charge 0- 50% Petroleum Revenue Tax (PRT) is still levied on profits for fields given development consent on or before 16 March 1993. | 11.3% |
| Netherlands Small Fields | 0-14% on revenue + 0-25% on profits | 3.5% |
| Netherlands Groningen | special terms resulting in a high share of profits | 74% |
| Norway | 0 - 51% on profits | 22.5% |
| Denmark | 0 - 39% on profits | 19.6% |

* Please see individual country snapshot for details

Summary_2

Fiscal terms overview – 2013

| Country | Nominal fiscal terms * | Observation on royalties and similar taxes as a % of revenue* |
|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Hungary | Oil: 0-36%; Gas: 0-36% on revenue | 25.3% |
| Austria | Oil: 15-20%; Gas: 19-22% on revenue | 17.6% |
| Estonia | 1,39 EUR per ton oil shale extracted | No observable data |
| Bulgaria | 2,5% - 30% on revenues | 7.7% |
| Czech Republic | oil 0,5%/5% revenues, gas 5% revenues | 5% |
| Spain | 5% on profits | 1.6% |
| Ireland | 0-12.5% on revenue licenses prior 2007; 0-15% on profits licenses 2007-2014; 0-40% on profits proposed for licenses starting 2015 | 6.6% |
| Slovakia | 5% on revenues | 5.0% |
| Slovenia | 1% on revenues | 1.0% |
| Albania | 10% on revenue + profit share depending on agreement | 14.9% |
| Lithuania | New regime: Conventional oil 12%; Unconventional gas 1% for first 3 years and 15% thereafter Current regime: 2-20% of revenues | 9.6% |
| Greece | 0-20% on revenues | 0.0% |
| Average observable effective royalty and similar taxes of the closest comparable European producing countries based on well productivity | | 6.9% |
| Average observable effective royalty and similar taxes – all producing countries (Romania included) | | 12.2% |

* Please see individual country snapshot for details

Summary_3

Fiscal terms overview – 2013

Non producing countries

| Name | Nominal fiscal terms |
|---------------|-----------------------------------------------------------|
| Iceland | 5% revenues and 0-45% profits |
| Cyprus | Profit share according to Profit Share Agreement |
| Montenegro | oil 5-12% on revenues; gas 2% on revenues; 45% on profits |
| Portugal | oil 0-10% revenues; gas 0% revenues |
| Sweden | 0% tax |
| Faroe Islands | 2% on revenues; 0-40% on profits (R-factor) |
| Malta | profit share according to profit share agreement |
| Greenland | 2.5% on revenues; 0-30% on qualified profits |

Country snapshots

Country snapshot

Romania

| Period | Oil | | Gas | |
|-------------|-----------|------------------------------------|-----------|------------------------------------|
| | Reserves* | Production per annum ^{R1} | Reserves* | Production per annum ^{R1} |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 600 | 29.73 | 663 | 71.66 |

*Source: EIA

There are two major producing companies in Romania (OMV Petrom and SNGN Romgaz SA) which produced during 2013 95.77% out of the total oil & gas production in Romania (97.09^{R6+R7} mn boe from the total production of 101.39^{R1} mn boe).

| Company | No. of fields | Avg. production/field | Avg. production/ day/well | Production cost/boe |
|------------|-------------------|-----------------------|---------------------------|---------------------|
| | | th boe/day | | USD/boe |
| OMV Petrom | 239 ^{R8} | 717 ^{R9} | 17 ^{R8} | 17.9 ^{R6} |
| Romgaz | 147 ^{R9} | 644 ^{R9} | 29 ^{R9} | 7.2 ^{R7} |

Production cost/boe disclosed by OMV Petrom when presenting the results as of June 2014: 17.9^{R10} USD/boe.

Indicative production cost/boe computed based on figures disclosed by Romgaz SA in its annual financial statements for the year ended December 31, 2013: 7.2^{R7/R11} USD/boe.

Royalty and Oil & Gas related taxes

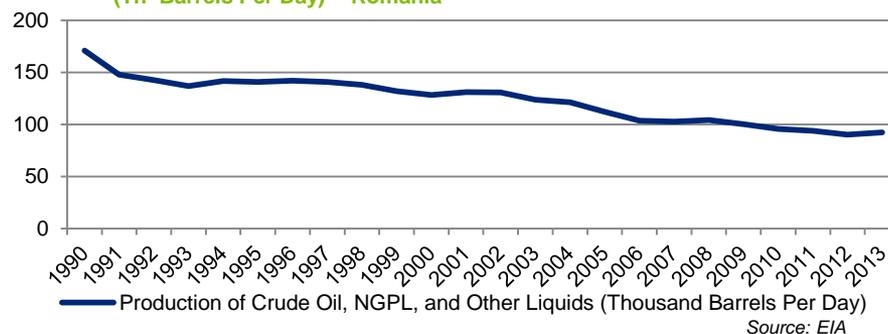
| Royalty | Rate ^{R2} |
|-------------------------|--------------------|
| | <10 – 3.5% |
| Oil (th tons/ quarter): | 10-20 – 5.0% |
| | 20-100 – 7.0% |
| | >100 – 13.5% |
| Gas(mn cm/quarter): | <10 – 3.5% |
| | 10-50 – 7.5% |
| | 50-200 – 9.0% |
| | >200 -13.0% |

Other taxes:

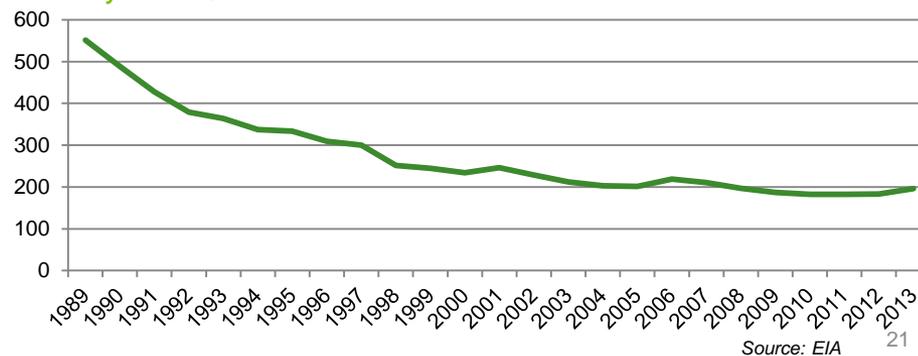
- EUR 4/ tons of oil sold^{R5}
- Supplementary taxation 60% on gas sales >495 RON/000 cm indexed with inflation, with maximum 30% investment allowance
- 0,5% on revenue from crude oil sales
- Construction tax currently at 1.5% per year of gross book value of assets that qualify as constructions. Ministry of Finance announced that starting 2015 constructions tax will be reduced to 1% of gross book value and that constructions located beyond Romania state frontier will not be subject to this tax.
- Internal technical consumption for fields operations of natural gas and diesel is subject to excises

| 9-months ended, Sep 30, 2014 | OMV Petrom (mn RON) ^{R12} | SNGN Romgaz SA (mn RON) ^{R13} |
|------------------------------------------------|------------------------------------|----------------------------------------|
| Royalties | 638 | 205 |
| Supplementary taxation oil&gas | 310 | 235 |
| Construction tax | 204 | 67 |
| Tax on crude oil sales | 2 | - |
| Total | 1,154 | 507 |
| Observable effective royalty and similar taxes | 12.3% | 19.6% |

Production of Crude Oil, NGPL, and Other Liquids (Th Barrels Per Day) - Romania



Dry Natural Gas Production Evolution - Romania



Country snapshot

Italy

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------------------|-----------|-----------------------------------|
| | Reserves* | Production per annum ¹ | Reserves* | Production per annum ¹ |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 521 | 39.43 | 392 | 48.49 |

*Source: EIA

| Indicator | Onshore ¹ | Offshore ¹ |
|---------------------------------|----------------------|-----------------------|
| Production 2013 | 56% | 44% |
| - Gas | 31% | 69% |
| - Oil | 87% | 13% |
| Total no. of wells: | | |
| - Gas | 719 | 559 |
| - Oil | 168 | 328 |
| No. of exploration licenses | 94 | 21 |
| No. of exploitation concessions | 134 | 66 |

*Source: EIA

| Avg. production/ field including/ excluding Val D'Agri ¹ | Avg. production/ well including/excluding Val D'Agri ¹ | Production ¹ |
|---------------------------------------------------------------------|-------------------------------------------------------------------|-------------------------|
| boe/day | boe/day | boe |
| 1,204.4/714.6 | 271.57 / 164.97 | 87.92/ 51.91 |

The **Val'd Agri field** is a relatively large oil field located in the region of the Southern Apenines. Considering its characteristics, a split is analyzed to appreciate the O&G production profile with and without Val d'Agri field.

Royalty and Oil & Gas related taxes

Royalties to the oil & gas business applied generally in the range between 0%-10%, depending if the concession is on shore or off shore and if it regards oil or gas with different levels of exemption and a different treatment in Sicily (Sicily onshore royalty rate 20% with no exemption)

A summary of royalties is as shown in the next table².

| Production | Exempted production Quota (0% royalty) | Royalty Rate | Additional rate |
|------------|----------------------------------------|--------------|-----------------|
| Oil | | | |
| - Onshore | -20,000 tons | - 7% | - 3% |
| - Offshore | - 50,000 tons | - 4% | - 3% |
| Gas | | | |
| - Onshore | - 25 mncm | -7% | - 3% |
| - Offshore | - 80 mncm | -7% | - 3% |

Royalty and Oil & Gas related taxes

Main incentives²:

- Zero percent royalty applies to production per field not exceeding: 20,000 tonnes oil / 25 mncm gas per year (onshore), 50,000 tonnes oil/ 80 mncm gas per year (offshore); this exemption applies also for larger fields, for production within the above thresholds
- Internal gas consumption for field operations is exempt from royalty

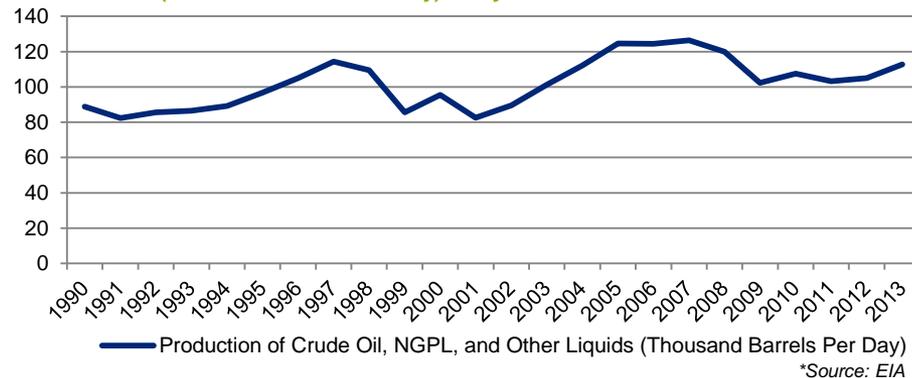
Special Taxes applies to the oil & gas industry²:

- Robin Hood Tax, a "special tax applied only to certain sector activities such as the oil & gas business: 6,5% (before 2014 this tax was computed at 10,5%);

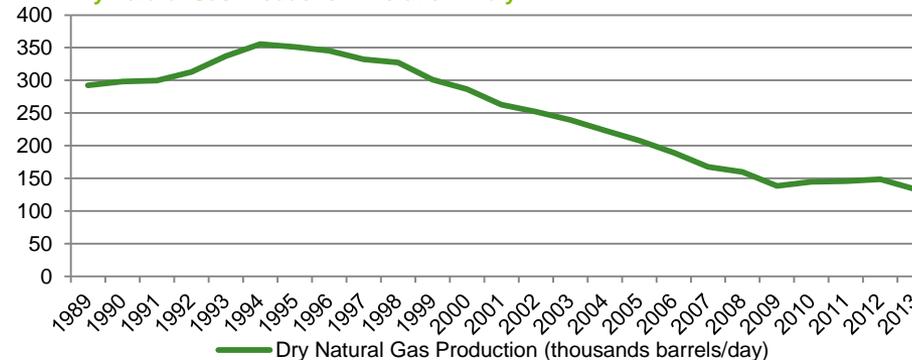
These taxes excludes CIT applicable to Companies in the country.

ENI produced 76%¹³ from total oil & gas production of Italy for 2013, and is used as proxy for observable royalty and similar taxes. Indicative rate computed based on figures provided in ENI Financial Statements for the year ended December 31, 2013 is 14.4%¹³. This rate includes 8.6% average royalty and 5.8% supplementary corporate income tax payable by companies from oil and gas and other sectors.

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - Italy



Dry Natural Gas Production Evolution - Italy



Country snapshot

Poland

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 157 | 7.02 | 579 | 39.03 |

*Source: EIA

| Avg. production/ field P1 | Avg. production/ well P1 |
|---------------------------|--------------------------|
| boe/day | boe/day |
| 596 | 33.6 |

Indicative Production cost/boe: 10.01 USD/boe^{P3} (computed based on information disclosed in PGNIG Annual Report for 2013 financial year; PGNIG is the major oil & gas Company from Poland producing 72% from the total production of Poland for 2013), and is used as a proxy for Poland.

No of producing wells Poland 2013 operated by PGNIG: 2.215^{P4} (according to PGNIG Corporate Presentation - Financial Results FY2013).

Indicative well productivity based on information provided by PGNIG: 33.6^{P3&P4} boe/well/day.

Royalty and Oil & Gas related taxes

Current regime

Fixed rate (revised annually) on gross production.

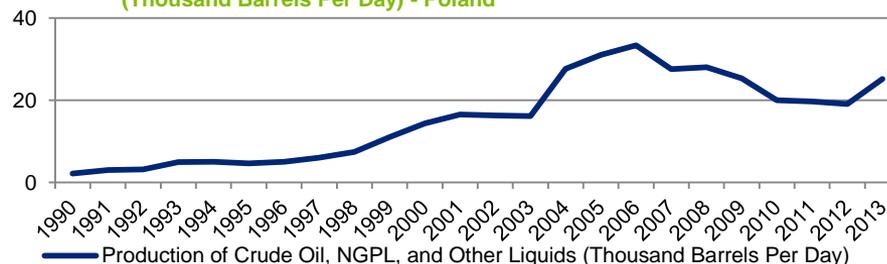
| | Rate ^{P2} [PLN*] | | |
|--------------------------|---------------------------|-------------|-------------|
| | 2013 | 2014 | 2015 |
| Crude Oil | 35.87/tonne | 36.84/tonne | 37.73/tonne |
| High methane natural gas | 6.06/mcm | 6.23/mcm | 6.38/mcm |

*PLN: Polish Zloty

New regime applicable starting 2016 (effective as of 2020). For information only, not used for this report.

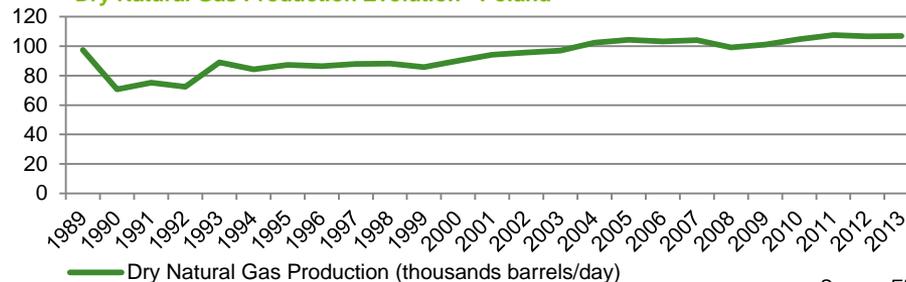
- Royalty payable starting 2020: Crude oil offshore and shale oil 3%, conventional onshore 6%, Natural gas: offshore and unconventional 1.5%- conventional onshore 3% . Well producing in a month less than 80 tons of crude oil and respectively less than 1100 MWh are exempt from royalty.
- Special hydrocarbon tax payable starting with profits from 2020, while R-factor starts to be calculated from 2016: tax rate (sliding-scale) depends on the R-Factor, i.e. R<1.5: 0%; 1.5<R<2: 12.5%-25% (linearly); R>2: 25% (obligation to pay this special tax effective-from January 1, 2020)
- Mineral Extraction Tax (modified rates payable starting 2016): Natural Gas 6.23/24 PLN/mcm, Crude Oil depending on volume of production: 50/36.84 PLN/tonne

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - Poland



Source: EIA

Dry Natural Gas Production Evolution - Poland



Source: EIA

Country snapshot

France

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 85 | 5.62 | 67 | 4.70 |

*Source: EIA, Authorities Report 2013

| Avg production/ field ^{FR4} | Avg production/ well |
|--------------------------------------|----------------------|
| boe/day | boe/day |
| 397 | 36 |

The total number of fields is 71, with 64 producing oil and 7 producing gas. The production of these deposits now covers only 1 to 2% of the national consumption.

In France, the favorable sedimentary basins for exploration cover a hydrocarbon area of over 200,000 km² in the sea and more than 70 000 km² onshore^{FR6}.

The geographical distribution still shows a predominance of the Paris Basin with 59.6% of the national production (in 2013).

Indicative Production cost/boe: 15.2 USD/boe (computed based on information disclosed in Vermilion Annual Report for 2013 financial year; Vermilion is an oil & gas Company from France producing ~70% from the total oil production of France for 2013)^{FR4}.

France has an exclusive economic zone of 11 million square kilometers, the second largest in the world after the USA, and therefore has the potential for substantial production of offshore oil and gas. France is still, however, in the early stages of exploration^{FR7}.

In 2013, there were 55 active exploration licenses for oil and gas in France. Only two new licenses were awarded, seven were renewed and thirty-five new applications were considered eligible^{FR1}.

Royalty and Oil & Gas related taxes

Crude oil, per annual production (in tons)^{FR2}:

| PRODUCTION | Royalty rate (%) |
|--------------------|------------------|
| < 50,000 | 0% |
| 50,000 to 100,000 | 6% |
| 100,000 to 300,000 | 9% |
| > 300,000 | 12% |

Gas, per annual production (million cubic meters)^{FR2}:

| PRODUCTION | Royalty rate (%) |
|------------|------------------|
| < 300 | 0% |
| > 300 | 5% |

*For wells that are older than 1980, different royalty rates apply. Royalty rates are applied in a step wise approach (e.g. for fields with an annual production higher than 50 th tons), first 50 thousand tons are exempt of royalty. Additionally are payable fixed royalties that vary depending on the date production started in the respective fields^{FR3}:
 Natural Gas (100,000 cubic meters): EUR 670,9/162,4
 Crude Oil (100 tones): EUR 1856,7/563,4
 Observable indicative rate for 2012 is computed based on figures provided by authorities and average prices for oil and gas provided by Vermilion Annual report 2012. As a result, the rate for 2012 is 3.89%^{FR5},^{FR8}.

Country snapshot

Croatia & Serbia

Croatia

| Period | Oil | | Gas | |
|-------------|-----------|------------------------------------|-----------|------------------------------------|
| | Reserves* | Production per annum ^{C1} | Reserves* | Production per annum ^{C1} |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 71 | 4.8 | 157 | 15.5 |

*Source: EIA

- Production profile: Oil & gas, onshore (68%) and offshore (32%)

| Oil & gas fields | No. ^{C1} |
|---------------------------|-------------------|
| Oil fields, out of which: | 41 |
| - Crude oil | 33 |
| - Gas condensation | 8 |
| Gas fields, out of which: | 26 |
| - Onshore | 17 |
| - Offshore | 9 |

| Avg. production/ field ^{C3-C6} | Avg. production cost ^{C3-C6} |
|-----------------------------------------|---------------------------------------|
| boe/day | USD/boe |
| 831.07 | 12.08 |

INA DD produced in 2013 13.57^{C3} mn boe out of the total production of Croatia of 20.3 mn boe

Royalty and Oil & Gas related taxes

Royalties: 10%^{C2} on revenue (for 2014)

Serbia

| Period | Oil | | Gas | |
|-------------|-----------|------------------------------------|-----------|------------------------------------|
| | Reserves* | Production per annum ^{S1} | Reserves* | Production per annum ^{S1} |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 78 | 8.52 | 303 | 3.14 |

*Source: EIA

- Oil & Gas: Onshore only
- Most of Serbia's fields are operated and 100% owned by NIS a.d., which benefits of a 3% royalty frozen until payback is achieved for certain investment projects
- NIS produced in 2013 approximately 100% of the total production of Serbia

| No. of oil & gas fields | Avg. production / field | No. of exploited oil wells | No. of exploited gas wells | Avg. production/ well | Avg. production cost * |
|-------------------------|-------------------------|----------------------------|----------------------------|-----------------------|------------------------|
| boe/day | | | boe/day | | USD/boe |
| 42 | 760 | 650 | 98 | 42.68 | 8.88 |

*Source: S1/ S3/ EIA

Royalty and Oil & Gas related taxes

Royalty for 2013: 3% / 7%^{S2} on revenues

Indicative oil & gas royalty and related taxes that can be observed derived from NIS Financial Statements as of December 31, 2013: 2.8%^{S1, S3}

This excludes CIT applicable to Companies in the country

Country snapshot

Turkey

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 270 | 16.88 | 39 | 3.38 |

*Source: EIA

| Avg. production/day/ well ^{T1/ T3} | Avg. production cost ^{T4} |
|---------------------------------------------|------------------------------------|
| boe/day | USD/ boe |
| 30.95 | 10.62 |

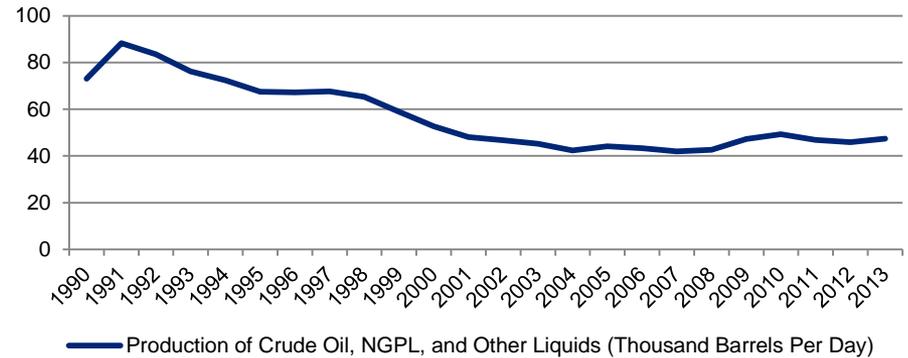
Turkey's fields are mostly onshore

Turkish Petroleum Corporation (TPAO) accounts for approximately 70% of Turkey's oil&gas production in 2013

Royalty rate is 12.5%^{T2} on revenues.

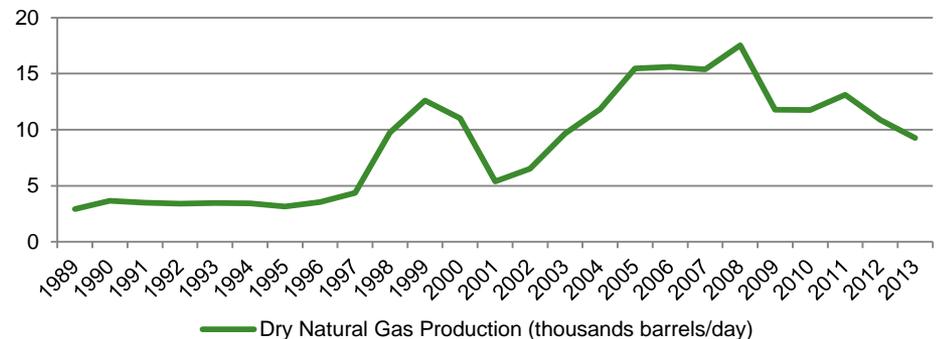
Internal technical consumption of natural gas is exempt from royalty ^{T2}

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - Turkey



Source: EIA

Dry Natural Gas Production Evolution - Turkey



Source: EIA

Country snapshot

United Kingdom

| Period | Oil | | Gas | |
|-------------|-----------|-------------------------------------|-----------|-------------------------------------|
| | Reserves* | Production per annum ^{UK1} | Reserves* | Production per annum ^{UK1} |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 3,122 | 307.29 | 1,547 | 242.01 |

Source: EIA

| Avg. production/ field | Avg. production/ day/well | Production cost/boe |
|------------------------|---------------------------|---------------------|
| boe/day | boe/day | USD/boe |
| 4,762.39 | 363.51 | 26.5 |

Royalty and Oil & Gas related taxes

Hydro-Carbon Tax Rate ^{UK2}:

- 32% Supplementary charge (SC), as of 2013 (Reduced in Autumn 2014 statement, effective January 2015 to 30%)
- 50% Petroleum Revenue Tax (PRT) is still levied on profits for fields given development consent on or before 16 March 1993.
- 100% first year allowance on qualifying exploration, capital and operational expenditures.

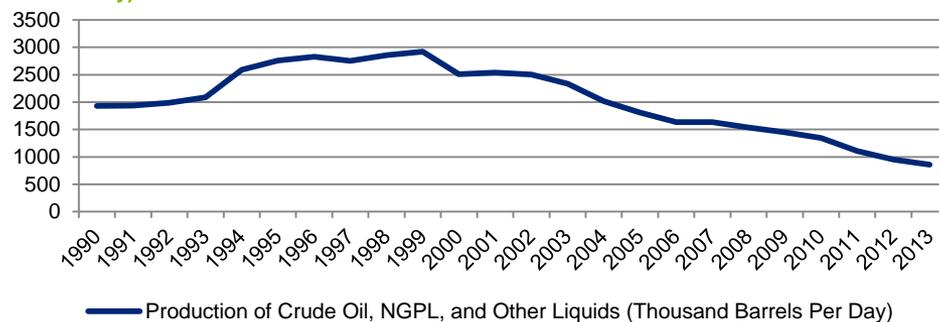
Main Incentives, if certain conditions are met ^{UK1, UK2}:

Note: All allowances cover at least 5 years and shelters income from supplementary charge only (not CIT):

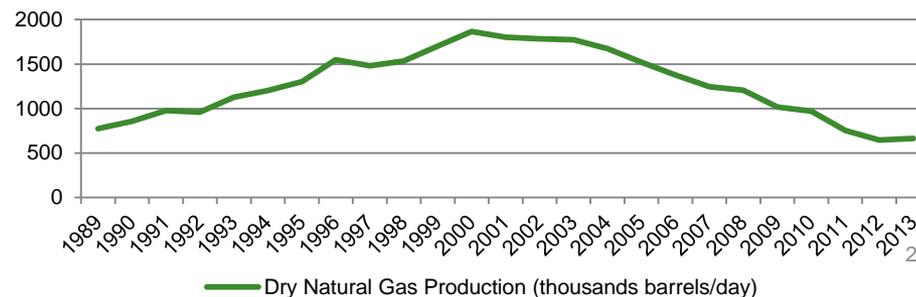
- Small field: 0-£150m
- Ultra heavy oil field: £800m
- Large deep water gas field: £800m
- Large deep water oil field: £3,000m
- Large shallow water gas field: £500m
- Onshore allowance: exemption from SC equivalent to 75% of the qualified capital expenditure a company incurs on qualified onshore oil and gas projects up to a maximum 7 mn tons of oil or natural gas equivalent

- In 2012 a new Brown Field Allowance was announced in respect of incremental projects approved by the Department of Energy and Climate Change (DECC) from that date. This applies to qualifying projects with capital costs per tonne of incremental reserves expected to be in excess of £60. The allowance is £50 per tonne of expected incremental reserves where the capital cost per tonne is £80 or more. There is a straight-line taper to zero allowance where the capital cost per tonne is £60 per tonne. The field allowance per project is capped at £250m. The cap for projects in fields paying Petroleum Revenue Tax is £500m.
- Indicative observable oil & gas tax that can be observed derived from the Authorities Report as of December 2013 is 11.29%^{UK1} on revenues.
- Business rates are property taxes applicable for the onshore properties, including upstream O&G
- Losses carried forward can be increased with 10% (Ring-Fence Expenditure Supplement)
- Offshore internal consumption of natural gas and diesel is not subject to excises

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - UK



Dry Natural Gas Production Evolution - United Kingdom



Country snapshot

Norway

| Period | Oil | | Gas | |
|-------------|-----------|----------------------|-----------|----------------------|
| | Reserves* | Production per annum | Reserves* | Production per Annum |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 5,366 | 663.23 | 13,020 | 683.93 |

* Source: EIA

| Producing fields | No. ^{NO1} |
|------------------|--------------------|
| North Sea | 60 |
| Norwegian Sea | 16 |
| Barents Sea | 1 |

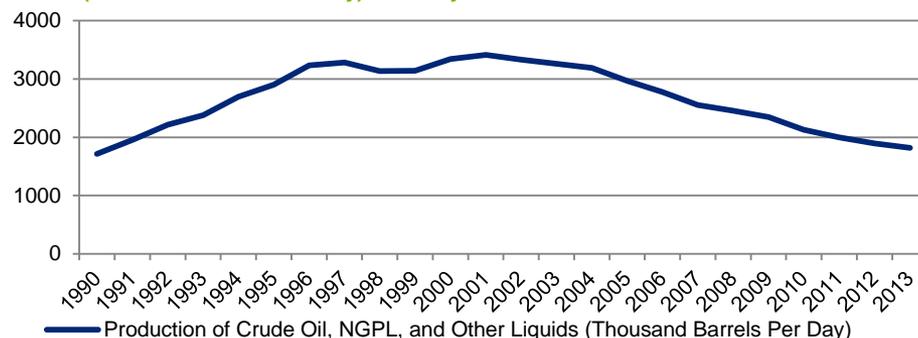
| No. of fields | Avg. production/field | No of operational wells | Avg. production/day/well | No. of oil wells | Avg. production/day/oil well |
|------------------|-----------------------|-------------------------|--------------------------|------------------|------------------------------|
| boe/day | | boe/day | | boe/day | |
| 77 offshore only | 47,826.83 | 1,567 | 2,350.14 | 1,386 | 1,105.34 |

Source: NO1, NO2

Royalty and Oil & Gas related taxes^{NO2}

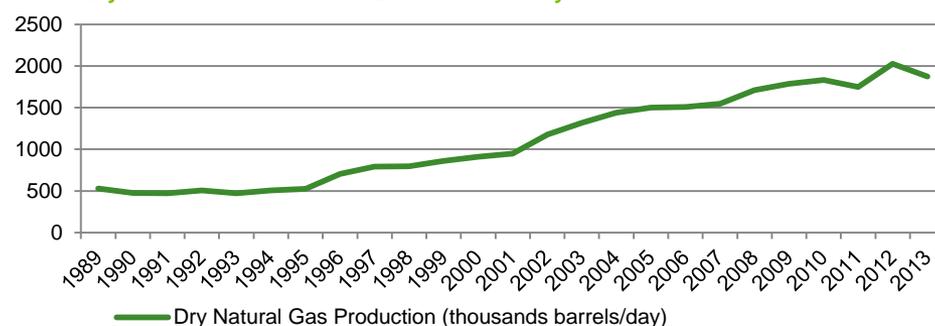
- Royalties – none
- Special Tax on Profits: 51%. The tax basis for calculating special tax on extractive activities (i.e. 51% on profits) is essentially the same as for ordinary taxes except for the treatment of interest costs and uplift allowances.
- Additional allowances are permitted at a rate of 22% when calculating the special tax basis for the 51% tax rate (i.e., 5.5% each year over a 4-year period).
- Effective oil & gas royalty and related taxes as a percentage of revenues that can be observed derived from "Facts 2014"^{NO1} Report: 22.51%
- Losses carried forward are increased with 1.5%
- Refund of the tax value of exploration expenses for each tax year loss, including direct and indirect expenses related to exploration activities
- Refund of tax value of losses when activity ceases
- Offshore internal consumption of natural gas and diesel is not subject to excises

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - Norway



Source: EIA

Dry Natural Gas Production Evolution - Norway



Source: EIA

Country snapshot

Denmark

| Period | Oil | | Gas | |
|-------------|-----------|-------------------------------------|-----------|-------------------------------------|
| | Reserves* | Production per annum ^{dk1} | Reserves* | Production per annum ^{dk1} |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 805 | 64.02 | 270 | 30.47 |

*Source: EIA

| No. of producing fields ^{DK1} | Avg. production/field ^{DK1} | Avg. production/ day/ oil & gas well ^{DK1} | Avg. production/ day/ oil well ^{DK1} |
|----------------------------------------|--------------------------------------|-----------------------------------------------------|-----------------------------------------------|
| | boe/day | boe/day | boe/day |
| 19 (located in the North Sea) | 13,606.96 | 964.67 | 895.93 |

| Active wells | No. ^{DK1} |
|-----------------------------|--------------------|
| Total number, out of which: | 375 |
| - Oil | 196 |
| - Gas | 72 |
| - Water injection | 106 |
| - Gas injection | 1 |

Royalty and Oil & Gas related taxes^{DK2}

A royalty is payable on very few licenses.

Nominal hydrocarbon tax (HCT) is

- 52%, which is effectively 39% as Corporate Income Tax (25%) is deductible for HCT
- 70% for licenses granted before 01.01.2004

Main Incentives^{DK2}:

For concessions with HCT 52% - uplift 5% of capital costs for 6 years (30% in total)

For concessions with HCT 70% - uplift 25% 10 years (250% in total)

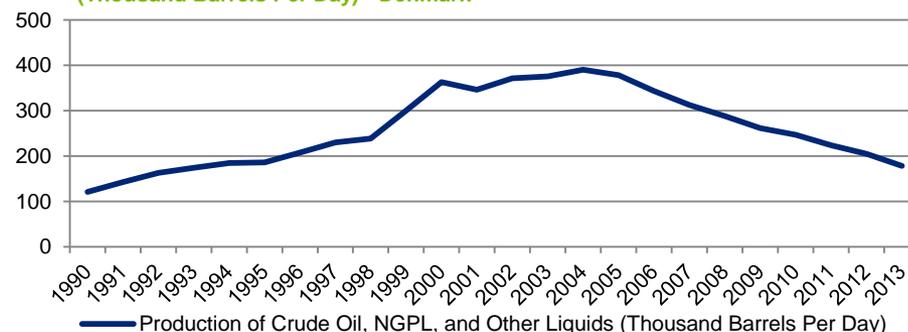
Exploration costs are deductible when incurred. Alternatively, exploration costs may be capitalized and then deferred for amortization over five years when the oil production is commenced or for write-off if the exploration is stopped altogether

Tax losses may be carried forward indefinitely

Tax refund equal to the tax value of losses remaining at closing of business (only for 52% HCT), limited to taxes paid

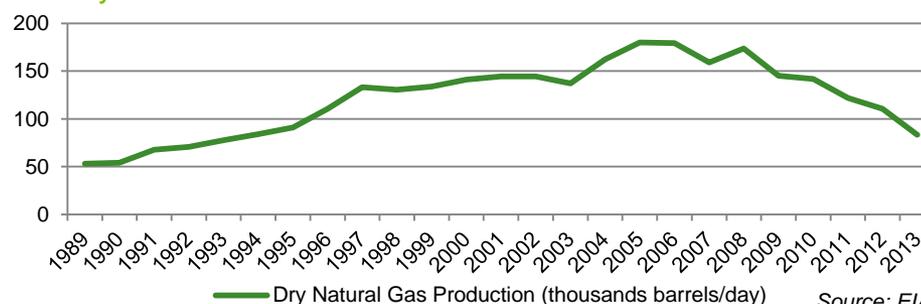
Effective oil & gas royalty and related taxes as a percentage of revenues derived from Danish Energy Agency Report for 2013: 19.6%^{DK1}

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - Denmark



Source: EIA

Dry Natural Gas Production Evolution - Denmark



Source: EIA

Country snapshot

Germany

| Land | Oil | | Gas | |
|-------------------------------------|-----------|-----------------------------------|-----------|-----------------------------------|
| | Reserves* | Production per annum ¹ | Reserves* | Production per annum ¹ |
| | mn boe | mn boe | mn boe | mn boe |
| Schleswig-Holstein and Lower Saxony | 254 | 16.55 | 786 | 67.58 |
| Other Lands | | 2.42 | | 2.72 |

(1) Authorities Report 2013

*Source: EIA

| Avg. production/field ^{DE1} | Avg. Production per field excluding Schleswig-Holstein and Lower Saxony ^{DE1} | Avg. production per well ^{DE1} | Avg. Production per well excluding Schleswig-Holstein and Lower Saxony ^{DE1} |
|--------------------------------------|----------------------------------------------------------------------------------------|-----------------------------------------|---------------------------------------------------------------------------------------|
| boe/day | boe/day | boe/day | boe/day |
| 1,988.5 | 783 | 155 | 49.61 |

The total number of oil & gas fields is 123, out of which 105 are located in Schleswig-Holstein (SH) and Lower Saxony (NI). The largest oil field is the Mittelplate oil field, located in Schleswig-Holstein area^{DE1, DE6}.

The total number of wells is 1,577, out of which 1,077 are extracting oil.

In 2013, the Mittelplate oil field produced 55% of the 2.64 million tons of oil produced by Germany in that year^{DE1}.

Approximately 94% (10.17 bcm in 2013) of the natural gas produced in Germany is from onshore Lower Saxony. The only offshore gas production platform in Germany is located in the far northwest of the German North Sea^{DE1}.

Royalties and Oil & Gas related taxes^{DE7, DE8}

The nominal rates vary with each land, but the highest producing lands have generally the following rates:

- Schleswig-Holstein: Crude Oil 18%/21%; Natural Gas 18%/20%
- Lower Saxony: Crude Oil: 0%/9.5%/19%; Natural Gas: 18.5%/37%
- Rheinland Pfalz: Crude Oil 0%/10%;
- Hamburg: Crude Oil 5%; Natural Gas 0%;
- Bayern: Crude Oil 0%; Natural Gas 0%

Incentives (examples)^{DE7, DE8}:

Lower Saxony and Schleswig-Holstein:

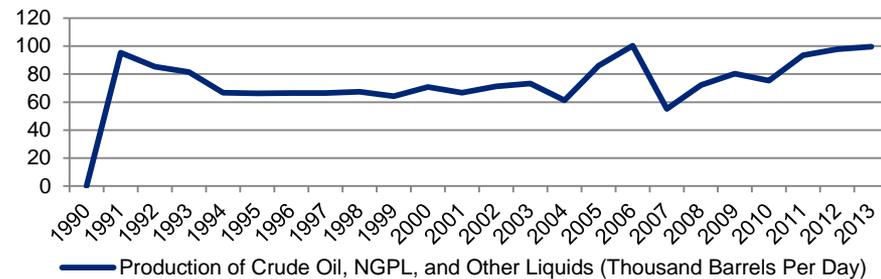
- Royalty payable is reduced due to allowing costs for gathering, processing and transportation of oil and gas, including up to 18% general and administrative costs

Lower Saxony:

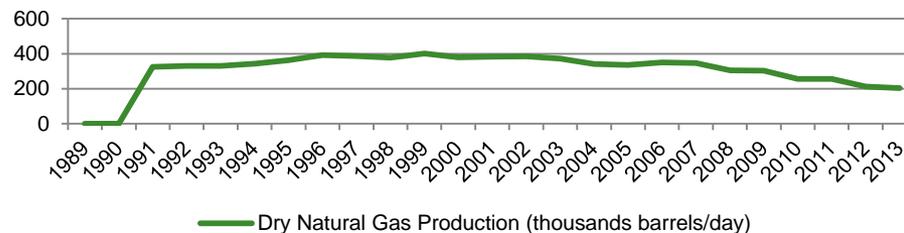
- 0% royalty for certain fields with difficult conditions (eg. very mature, that requires redevelopment)
- 50% reduction in royalty for redevelopment of abandoned fields/different production horizons
- Fields with production <4,500 m³ gas/hour: 40% reduction in royalty
- Wells producing from reservoir with <0.6 mD permeability: 75% reduction on royalty for gas for the first 5 years of production
- Oil wells > 4,000 m depth – 50% royalty reduction
- Oil wells using tertiary procedures – 50% royalty reduction

| Indicative average tax | Royalty (% revenue) |
|------------------------|--------------------------------|
| SH & NI | 3.6% ^{DE2, DE4, DE5} |
| Other lands | 18.6% ^{DE2, DE4, DE5} |

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - Germany



Dry Natural Gas Production Evolution - Germany



Country snapshot

Netherlands

| Field | Oil | | Gas | |
|--------------|-----------|-------------------------------------|-----------|-------------------------------------|
| | Reserves* | Production per annum ^{NL1} | Reserves* | Production per annum ^{NL1} |
| | mn boe | mn boe | mn boe | mn boe |
| Groningen | 244 | - | 7,736 | 359.57 |
| Small fields | | 11.6 | | 171.83 |

*Source: EIA

The term "small fields" is used to describe fields other than the Groningen field. In 1959, the onshore **Groningen** natural gas field was discovered, resulting in the Netherlands subsequently becoming the largest producer and exporter of gas in the EU. The Groningen field is one of the 10 largest gas fields in the world.

| Indicator | Onshore | Offshore |
|----------------------------------------------------------|---------|----------|
| O&G production ^{NL1} : | | |
| - With Groningen | 78% | 22% |
| - Without Groningen | 35% | 65% |
| No. of producing fields, as of Jan 2014 ^{NL1} : | | |
| - Gas 263 (incl. Groningen) | 113 | 150 |
| - Oil 15 | 5 | 11 |

| Total no. of wells | Total no. of wells (excl. Groningen) | Avg. production per well ^{NL1} (boe/day) | Total no. of oil wells | Avg. Production per oil well (boe/day) | Indicative Production cost** (USD/boe) |
|---------------------------|--------------------------------------|---------------------------------------------------|------------------------|----------------------------------------|----------------------------------------|
| 1,198 ^{NL1, NL4} | 902 | 214.28 | 193 | 165 | 5.54 |

*Source: Authorities Report 2013

** computed based on information disclosed in EBN annual report for 2013 financial year^{NL3}

A total of thirty-three oil/gas wells were drilled in 2013 with a technical success ratio of 67%. Furthermore, three appraisal wells, eighteen production wells and six wells for gas storage were drilled (onshore and continental shelf)^{NL1}.

Most gas has been produced from onshore, with relatively small exploration in the Dutch North Sea. In 2012, Energie Beheer Nederlanden BV (EBN), which is owned by the State and which has a 40% stake in oil and gas projects in which it invests, began a large study to identify the potential for oil and gas in the Northern part of the Dutch North Sea^{NL5}.

The total production of Groningen is 985,117 boe/day/field.

Royalty and Oil & Gas related taxes

The following rates for 2013 are applicable stepwise only to onshore fields^{NL2}:

| Bracket | Oil (in th cm) | Gas (in mcm) |
|-----------------------|----------------|--------------|
| 0–200 units | 0% | 0% |
| 201–600 units | 2% | 2% |
| 601–1,200 units | 3% | 3% |
| 1,201–2,000 units | 4% | 4% |
| 2,001–4,000 units | 5% | 5% |
| 4,001–8,000 units | 6% | 6% |
| More than 8,000 units | 7% | 7% |

Special Hydrocarbon Tax (SPS) has a nominal rate of 50%. However, a credit with CIT due is applicable and SPS is deductible at the calculation of CIT, which results in an effective SPS rate of ~25% from profits.

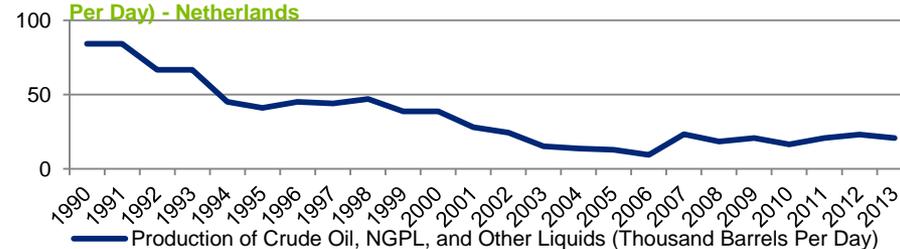
Main incentives for calculation of special hydrocarbon taxation:

- 10% uplift for costs at the calculation of special hydrocarbons taxation
- 25% investments allowance for qualifying gas
- Technical consumption of natural gas for fields operations is exempt from royalty

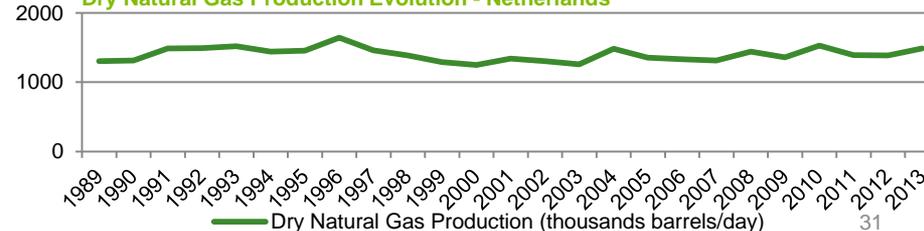
Indicative Royalty and similar taxes for Groningen field is computed based on figure provided by EBN in annual report for 2013 financial year: 74%.

Indicative Royalty and similar taxes for small fields is computed based on EBN Annual Report for 2013: 3.5%.

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - Netherlands



Dry Natural Gas Production Evolution - Netherlands



Country snapshot

Austria

| Period | Oil | | Gas | |
|-------------|-----------|-------------------------------------|-----------|-------------------------------------|
| | Reserves* | Production per annum ^{AT1} | Reserves* | Production per annum ^{AT1} |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 47 | 6.60 | 68 | 8.55 |

*Source: EIA

| | No. of wells ^{AT1} | Avg. production/ well ^{AT1} |
|-------|-----------------------------|--------------------------------------|
| | | boe/day |
| Oil | 679 | 26.6 |
| Gas | 164 | 142.8 |
| Total | 843 | 49 |

| No. of oil&gas fields still onstream ^{AT1} | Avg. production/ field ^{AT1} | Production cost/boe ^{AT3} |
|-----------------------------------------------------|---------------------------------------|------------------------------------|
| | boe/field | USD/boe |
| 110 | 377 | 11.14 |

Royalty and Oil & Gas related taxes^{AT2}

For Oil: 15-20%

For Gas: 19-22%

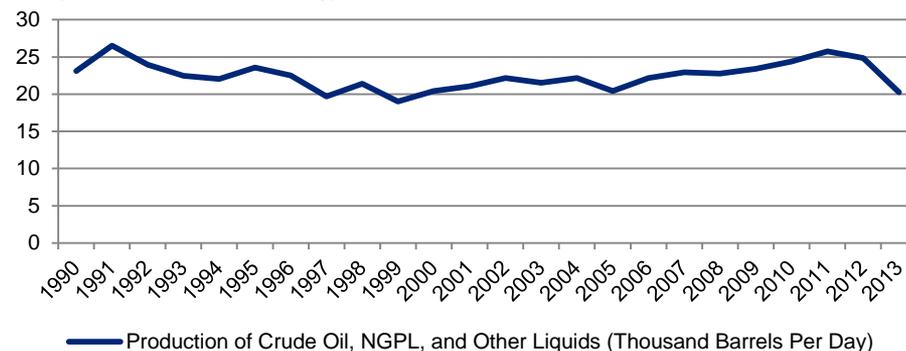
Price sliding scale royalty:

- Crude oil 15-20% (83-121\$/bbl)
- Natural Gas 19-22% (18.4-29.5EUR/MWh)

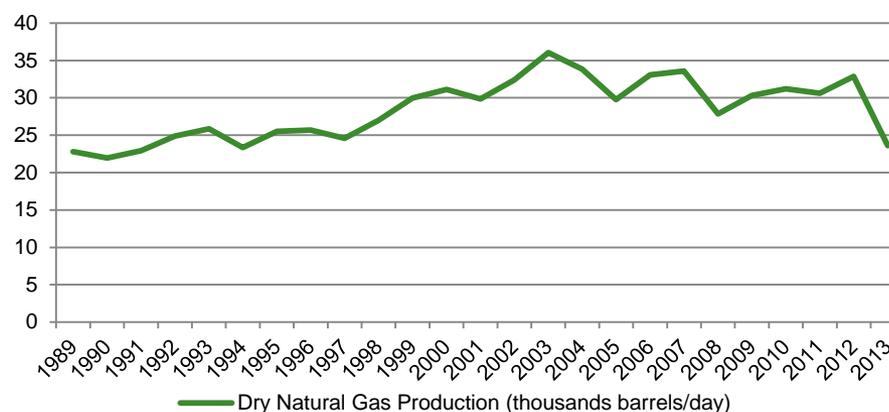
Gas technological consumption is exempt from royalty. Internal gas and diesel consumption is except from excises^{AT2}

Indicative Royalty and similar taxes computed based on data disclosed by OMV in its Annual Report for 2013 is 17.6%

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - Austria



Dry Natural Gas Production Evolution - Austria



Country snapshot

Hungary

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 27 | 7.67 | 51 | 12.26 |

*Source: EIA

| Avg. production/ day/well ^{H1/H3} | Avg. unit production cost ^{H1/H3} |
|--------------------------------------------|--------------------------------------------|
| boe/day | USD/boe |
| 47.9 | 4.7 |

Source: computed based on data disclosed by MOL in its Investors 'Presentation Report for 2013 (MOL accounted for approx 80% from Hungary O&G production in 2013)

Royalty and Oil & Gas related taxes^{H2}

Royalty regime: for Oil: 0%-36% and for Gas: 0%-36%

Price sliding scale:

Royalty and gas increases with 3%/6% if Brent >\$80 / \$90, except unconventional gas and oil & associated gas from EOR (Enhanced Oil Recovery)

Production sliding scale:

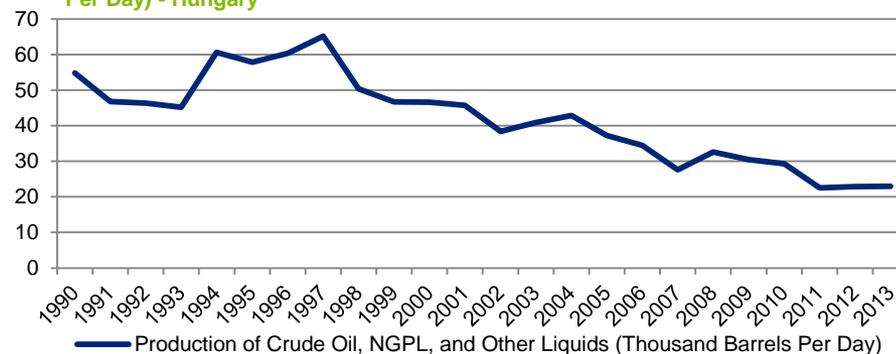
| Fields date | Before Jan 1, 1998 | Jan 1, 1998- Dec 31, 2007 | Since Jan 1, 2008 |
|-------------|-----------------------------------------------|---------------------------|-------------------------------------------------------------------------|
| Oil | 16% | | 12% (\leq 50k) 20% (50k - 200k) 30% (> 200k) |
| Gas | a special royalty calculation formula applies | 16% | 12% (\leq 300 mn m3) 20% (300 mn - 500mn m3) 30% (> 500 mn m3) |

Incentives^{H2}:

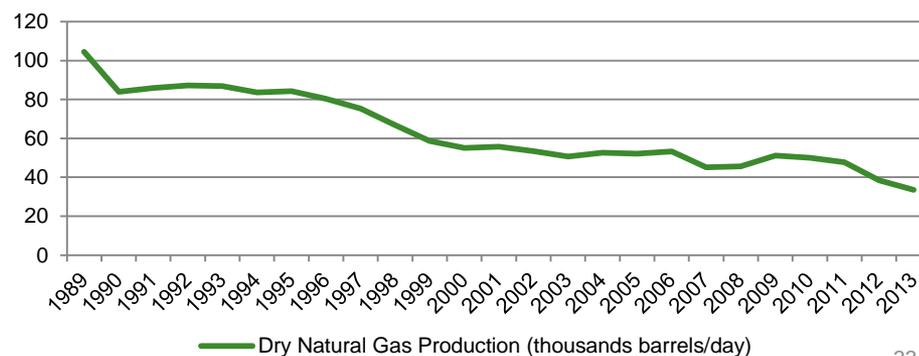
- EOR/IOR production of crude oil and associated gas is exempt from royalty
- Unconventional gas 12% royalty
- Authorities can decide to decrease royalty rate if the concession holder can prove that his cost base has increased to uneconomic levels while attempting to maximize the recovery of reserves.

Oil & gas royalty and related taxes paid by MOL, used as proxy for Hungary, represents 25.3% of its crude oil and natural gas revenues as a mining royalty to the Hungarian State based on 2013.

Production of Crude Oil, NGPL, and Other Liquids (Thousand Barrels Per Day) - Hungary



Dry Natural Gas Production Evolution - Hungary



Country snapshot

Bulgaria & Greece

Bulgaria

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 15 | 0.36 | 36 | 1.70 |

*Source: EIA

| Avg. Oil & Gas production/ field ^{BG1/BG3} | Avg. Oil & Gas production/ well ^{BG1/BG3} |
|-----------------------------------------------------|----------------------------------------------------|
| boe/day | boe/day |
| 1,605.48 | 19.10 |

Royalty and Oil & Gas related taxes^{BG2}

Royalty rates are calculated depending on the value of R-factor (cumulated revenues divided by cumulated costs). Royalty rates are included in each concession agreement, generally at the following rates:

| R-factor | Royalty rate (%) |
|-------------|------------------|
| < 1.50 | 2.5% |
| 1.50 – 1.75 | 5.0% |
| 1.75 – 2.00 | 7.5% |
| 2.00 – 2.50 | 10.0% |
| 2.50 – 3.00 | 12.5% |
| >3.00 | 25.5% |

Indicative oil&gas tax as a percentage of revenues: 7.7%^{BG1/BG3}

Greece

| Quantities (statistics) | Oil | | Gas | |
|-------------------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 10 | 0.46 | 6 | 0.03 |

*Source: EIA

| Avg. Oil & Gas production/ field ^{GR1} | Avg. Oil & Gas production/ well ^{GR1} |
|-------------------------------------------------|------------------------------------------------|
| boe/day | boe/day |
| 666.37 | 66.64 |

Royalty and Oil & Gas related taxes^{GR2}

For existing producing fields, the production sliding scale royalty rates are included in concession agreements as follows:

- 0% up 2,5k boe/day;
- 3% 2,5-5k boe/day;
- 6% 5-10k boe/day;
- 10% >10k boe/day.

The royalty rates from the new concession agreements are calculated depending on the value of R-factor (cumulated revenues divided by cumulated costs), generally as follows:

| R-factor | Royalty rate (%) |
|-----------|------------------|
| < 0.5 | 2 % |
| 0.5 – 1.0 | 5 % |
| 1.0 – 1.5 | 8% |
| 1.5 – 2.0 | 11% |
| 2.0 – 2.5 | 14% |
| 2.5 – 3.0 | 17% |
| >3.00 | 20% |

Indicative oil&gas tax: 0% based on Kavala Oil Concession terms

Country snapshot

Spain & Ireland

Spain

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 150 | 2.68 | 16 | 0.35 |

*Source: EIA

| Avg. Oil & Gas production/ field ^{ES1} | Avg. Oil & Gas production/ well ^{ES1} |
|-------------------------------------------------|------------------------------------------------|
| boe/day | boe/day |
| 1,755.2 | 334.3 |

Royalty and Oil & Gas related taxes

Royalty rate: 5% on profits^{ES2}

Observable effective oil&gas tax: 1.6%^{ES1}

Ireland

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 0 | | 62 | 2.17 |

*Source: EIA

| Avg. Oil & Gas production/ field ^{IR1} | Avg. Oil & Gas production/ well ^{IR1} |
|-------------------------------------------------|------------------------------------------------|
| boe/day | boe/day |
| 975.93 | 390.37 |

Royalty and Oil & Gas related taxes^{IR2/IR3}

❖ 0-12.5% on revenue licenses prior 2007

❖ 0-15% on profits licenses 2007-2014

| R-factor | Special Profit tax rate (%) |
|-----------|-----------------------------|
| < 1.5 | 0 % |
| 1.5 – 3.0 | 5% |
| 3.0 - 4.5 | 10% |
| > 4.5 | 15% |

❖ 0-40% on profits proposed for new licenses starting 2015, but not less than 5% on value of production

| R-factor | Special Profit tax rate (%) |
|-----------|-----------------------------|
| < 1.5 | 0 % |
| 1.5 – 4.5 | 10% -40% linear increase |
| > 4.5 | 40% |

Special profit tax becomes deductible for CIT purposes

Effective royalty as a percentage of revenues: 6.58%^{IR1/IR4/IR5/**}

Country snapshot

Czech Rep. & Slovakia

Czech Rep.

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 15 | 1.10 | 25 | 1.59 |

*Source: EIA

**Avg. Oil & Gas
production/ well^{CZ3}**

boe/day

61.48

Nominal Royalty and Oil & Gas related taxes

Royalty rate^{CZ2}:

- ❖ Oil:
 - 0,5% on revenues, for EOR production (Enhanced Oil Recovery)
 - 5% on revenues for rest of production
- ❖ Gas: 5% on revenues

Slovakia

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 9 | 0.07 | 89 | 0.78 |

*Source: EIA

Nominal Royalty and Oil & Gas related taxes^{SK1}

Royalty rate: Slovakia applies a 5% tax on hydrocarbon extraction

Country snapshot

Estonia & Lithuania

Estonia

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | - | 4.38 | - | - |

*Source: EIA

Nominal Royalty and Oil & Gas related taxes

1.39 EUR per ton oil shale extracted

Lithuania

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 12 | 0.73 | - | - |

*Source: EIA

| Avg. Oil & Gas production/ field ^{LIT1} | Avg. Oil & Gas production/ well ^{LIT1} |
|--------------------------------------------------|-------------------------------------------------|
| boe/day | boe/day |
| 128.34 | 29.95 |

Nominal Royalty and Oil & Gas related taxes

2-20% of revenues^{LIT2}

| Production Th tons/ year | Royalty rate (%) |
|--------------------------|------------------|
| < 10 | 2 % |
| 10 -25 | 4% |
| 25-50 | 6% |
| 50-75 | 8% |
| 75-100 | 10% |
| 100-125 | 12% |
| 125-150 | 14% |
| > 150 | 16% |

For certain fields, a 20% royalty rate applies.

Indicative effective tax rate: 9.6%^{LIT1}

New regime announced by authorities in 2014 will have a royalty rate of 12% for conventional oil, while for unconventional gas there will be a 1% rate in the first 3 years and 15% thereafter.

Country snapshot

Albania & Slovenia

Albania

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | 172 | 6.21 | 5 | 0.13 |

Source: EIA

| Avg. Oil & Gas production/ well ^{AL1} | Production cost/boe ^{AL1} |
|------------------------------------------------|------------------------------------|
| boe/day | USD/boe |
| 41.25 | 13.3 |

Nominal Royalty and Oil & Gas related taxes

10% on revenue + profit share depending on agreement^{AL2}

Actual tax : 14.9%^{AL1}

Slovenia

| Period | Oil | | Gas | |
|-------------|-----------|-----------------------|-----------|-----------------------|
| | Reserves* | Production per annum* | Reserves* | Production per annum* |
| | mn boe | mn boe | mn boe | mn boe |
| 31-Dec-2013 | - | - | - | 0.02 |

Nominal Royalty and Oil & Gas related taxes^{SL1}

1% on revenue

Actual tax : 1%

Limitations and Acknowledgements

Limitations and acknowledgments

Methodology:

In compiling information, we have used only publicly available information, as indicated at various places within the analysis and summarized at the end. To keep objectivity, inference has been kept to minimum, in line with the objective of the analysis to present an overview. The extent of publicly available information, especially information from the regulators and other relevant bodies, varies from country to country that creates inherent limitation. Such limitations are highlighted within each country snapshot.

Limitations:

The analysis is not a regulatory advice, assessment of various other regulatory frameworks. It has limited relevance in terms of comparability except highlighting information based on publicly available information that can facilitate a further analysis and debate.

Carrying out such a broad level analysis has inherent limitations due to difference in various countries economic conditions, Oil & Gas industry history and relevant importance to that country, offshore vs. onshore, gas vs. oil, size and age of the field and inability to capture the complexities of all variations in different systems.

Limitations and acknowledgments

No detailed discussions with reporting entities or regulatory bodies were carried out to appreciate broad understanding of the publicly available information. Any reader of this analysis must read this report as an indicative analysis and not as a basis for investment decision, understanding project linked Government take analysis or for management decision making.

Deloitte was commissioned by “Federatia Patronala Petrol si Gaze” (“FPPG”), to perform an overview of the observable effective royalty and similar taxes in Oil & Gas industry across Europe, in order to have a comparative analysis. Any other party should carry out a thorough analysis for their own needs gathering and using the relevant information.

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Deloitte in the process of compiling this analysis, has used publicly available data and makes no representation in respect of independently auditing this information or verifying the completeness of accuracy of this information.

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Conversion table

| Mass Equivalent Conversions | | | | |
|-----------------------------|------------|-------------|------------|---------|
| | Short Tons | Metric Tons | Long Tons | Pounds |
| Short Tons | 1.00000 | 1.10231 | 1.12000 | 0.00050 |
| Metric Tons | 0.90718 | 1.00000 | 1.01605 | 0.00045 |
| Long Tons | 0.89286 | 0.98421 | 1.00000 | 0.00045 |
| Pounds | 2000.00000 | 2204.62272 | 2240.00030 | 1.00000 |

| Volume Equivalent Conversions | | | |
|-------------------------------|---------|------------|--------------|
| | Barrels | Cubic Feet | Cubic Meters |
| Barrels | 1.00000 | 0.17811 | 6.28981 |
| Cubic Feet | 5.61460 | 1.00000 | 35.31478 |
| Cubic Meters | 0.15899 | 0.02832 | 1.00000 |

| Average currency conversion rates 2013* | |
|-----------------------------------------|--------|
| Currency | Value |
| USD/RON | 3.33 |
| EUR/USD | 1.33 |
| PLN/EUR | 4.22 |
| SEK/USD | 8.68 |
| HRK/USD | 0.18 |
| RSD/USD | 83 |
| DKK/USD | 5.6 |
| HUF/USD | 223.64 |
| NOK/USD | 0.16 |
| Kc/EUR | 26 |

Source: EIA (conversion rates indicated by EIA were used unless disclosed in Annual Report of major companies for the respective country)

* Source: As disclosed/derived from annual reports/financial statements of major companies for the respective currency or as disclosed by the authorities reports for the respective currency

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