



REPORT FOR 2016

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Greeting and remarks from D-EITI Special Representative Uwe Beckmeyer

Ladies and gentlemen,

The Extractive Industries Transparency Initiative (EITI) is a voluntary global initiative for financial transparency and accountability. It has been politically and financially supported by the Federal Government for more than 10 years. The decision to implement the EITI in Germany underlines this commitment and provides a political signal for the international strengthening and further dissemination of the initiative.

In March 2015, representatives from business, civil society and the government (Federal States and departments) therefore joined forces at the invitation of the Federal Government to strengthen the dialogue in the domestic extractive sector and to ensure greater transparency. The stakeholders of all three groups have jointly prepared our candidacy in the past two and a half years, and with this first German EITI report have taken a decisive step towards Germany becoming a full member in the EITI. The EITI in Germany (D-EITI) was mainly concerned with the creation of a context report that was as detailed and innovative as possible.

As the special representative of the Federal Government for the implementation of the EITI in Germany, I am delighted to be able to present this '1st D-EITI Report 2016', the first result of the joint work of the D-EITI Multi-Stakeholder Group. The report provides comprehensive information about the national extractive sector and contributes towards creating transparency in the cash flows between companies and government agencies.

From the outset, our main concern was to ensure that the information for the citizens was comprehensible and usable. All the information and data is therefore also explained on the web portal 'www.rohstofftransparenz.de' and made available in the form of open data. Through the D-EITI, the extractive sector will thus become an example for a participatory industrial policy – and we are also making an important contribution to a citizen and business-friendly digital Germany at the same time.

On this occasion, I would like to thank all the members of the Multi-Stakeholder Group and the companies of the extractive sector, which have participated in the voluntary reporting for the successful preparation of the report. At the same time, I invite you to actively participate in the dialogue for the further implementation of the EITI in Germany and to contribute to the further development of the reporting.

An informative D-EITI report is a prerequisite for achieving our common goal – the solid application, further development and strengthening of the EITI standard – supporting the global commitment to transparency and accountability in the context of natural resources business transactions.



Uwe Beckmeyer

Special Representative of the Federal Government for the implementation of EITI in Germany
Parliamentary State Secretary to the Federal Minister of Economic Affairs and Energy

Greeting and remarks from Matthias Wachter for the D-EITI private sector

Ladies and gentlemen,

The strengthening of global transparency and good governance in the extractive sector is a key issue for German industry. The candidacy of Germany in the Extractive Industries Transparency Initiative (EITI) sends an important political signal to countries which are rich in natural resources to join the Transparency Initiative.

German industry has therefore played a constructive role in the implementation process in Germany from the outset.

The voluntary multi-stakeholder approach has proved to be one of the key success factors. By appointing representatives from the government, business and civil society to the Multi-Stakeholder Group, the D-EITI is contributing to a broad social debate about the extraction of natural resources in Germany – because natural resources are the basis for industrial added value. They make an indispensable contribution to everyday life.

Facts are important for the social debate about the extraction of domestic natural resources. In the context report, the economic importance of the domestic natural resources sector becomes clear: Extractive companies in Germany generate sales of around €9.2 billion with 71,000 employees.

Natural resources extraction in Germany is subject to high environmental and social standards. Many projects for the renaturation and recultivation of former extraction sites are models for the rest of the world.

It has always been important for us to make it clear that participation in the D-EITI is voluntary for companies. The initiative lives by this concept. Double burdens for companies were prevented through close links with the Accounting Directive Implementation Law (BilRUG). This pragmatic solution leads to a high data quality standard for payment reconciliation, and also limits the amount of effort and expenditure for the reporting companies.

At this point, I'd like to express my special thanks to all the companies that voluntarily implement the EITI standard. I would also like to thank all the stakeholders from the private sector, the government and civil society – and not least the D-EITI Secretariat for its constructive and substantive cooperation in the Multi-Stakeholder Group. I already look forward today to our cooperation in the future.



Matthias Wachter

Head of the Security and Raw Materials Department
Bundesverband der Deutschen Industrie e.V. (Federation of German Industries)

Greeting and remarks from Prof. Dr. Edda Müller for the D-EITI civil society

Ladies and gentlemen,

It was with great expectations that the civil society became a member of the EITI Multi-Stakeholder Group two years ago – and our mutual interest in strengthening transparency in the natural resources sector has united us in our work. The civil society representatives approached the natural resources sector from different directions: environmental protection, the problems of subsidies, the interests of the employees, the Open Data objectives and the prevention of corruption.

Transparency is not an end in itself for the EITI. The extraction of natural resources is necessary for our modern life, but it is often a great burden for environment, climate and local residents. The aim of this report is to make both sides of the coin transparent. Companies get the opportunity to explain what they do to society. One special challenge for the compilers of the report is the preparation of the payment reconciliation. This requires commitment and work performance – not only from the companies but also from the tax authorities. In this first report, not all cash flows between companies and the state are reconciled; trade tax is still omitted, for instance.

Since tax authority staff can be prosecuted when tax data is passed on to third parties, all the companies must agree to exemption from tax secrecy for the payment reconciliation – and this is a difficult step for companies. Special thanks go to the companies that have so far taken this step.

I am particularly pleased that we have opened up new paths by expanding the envelope of the usual international standard with this context report. Particularly noteworthy here are the chapters dealing with interventions in nature, subsidies, tax concessions and renewable energies, which were prepared on the initiative of the civil society.

All the chapters in the report were agreed by consensus in the MSG. The report could not have been produced in this form without a great deal of willingness to compromise. We will discuss any potential improvements during the compilation of the second report.

I look forward with pleasure to the continued cooperation in the Multi-Stakeholder Group with the representatives of the private sector, the public authorities of the Federal and state governments and my colleagues from the civil society. I would also like to thank the D-EITI Secretariat and the Independent Administrator for their work, which was not always easy.



Prof. Dr. Edda Müller

Chairwoman

Transparency International Deutschland e.V.

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LIST OF ABBREVIATIONS

AO	Abgabenordnung (German fiscal code)
APG	Anpassungsgeld (Adaption payment)
BBergG	Bundesberggesetz (Federal Mining Act)
BiIRUG	Bilanzrichtlinie-Umsetzungsgesetz (German Accounting Directive Implementation Act)
GDP	Gross Domestic Product
BMWi	Bundesministerium für Wirtschaft und Energie (Federal Ministry of Economic Affairs and Energy)
BNatSchG	Bundesnaturschutzgesetz (Federal Nature Conservation Act)
GDR	German Democratic Republic
D-EITI	Deutschland Extractive Industries Transparency Initiative (German Extractive Industries Transparency Initiative)
Destatis	Statistisches Bundesamt (Federal Office of Statistics)
EITI	Extractive Industries Transparency Initiative
EnergieStG	Energiesteuergesetz (Energy Taxation Act)
EnSTransV	Transparenzpflichten im Energiesteuer- und im Stromsteuergesetz (Transparency Obligations for EnergieStG and StromStG)
EnWG	Energiewirtschaftsgesetz (German Energy Act)
HGB	Handelsgesetzbuch (German Commercial Code)
IG BCE	Industriegewerkschaft Bergbau, Chemie, Energie (Mining, Chemical and Energy Industrial Trade Union)
LBP	Landschaftspflegerischer Begleitplan (Landscape Management Plan)
LNatSchG	Landesnaturschutzgesetz (State-level Nature Conservation Law)
MSG	Multi-Stakeholder Group
PStS	Parlamentarischer Staatssekretär (Parliamentary State Secretary)
PublG	Gesetz über die Rechnungslegung von bestimmten Unternehmen und Konzernen – Publizitätsgesetz (Act on the Accounting of Certain Companies and Groups)
RAG AG	RAG Aktiengesellschaft (RAG Corporation)
StromStG	Stromsteuergesetz (Electricity Taxation Act)
UVP	Umweltverträglichkeitsprüfung (Environmental Impact Assessment)
UVP-Bergbau	Umweltverträglichkeitsprüfung bergbaulicher Vorhaben (Environmental Impact Assessment of Mining Projects)
WRRL	Wasserrahmenrichtlinie (EU Water Framework Directive)

1

INTRODUCTION



The 'Extractive Industries Transparency Initiative' (EITI) is a global standard the aim of which is to achieve more financial transparency and accountability in the recording and disclosure of revenue generated by the extractive industry. Through their implementation of the voluntary initiative of the EITI standard, 52 countries around the world are meanwhile contributing to the fight against corruption and mismanagement, and to the promotion of good governance in this important economic sector.

In order to implement the EITI standard in Germany, a national Multi-Stakeholder Group (MSG) consisting of representatives from the government, companies and civil society was established at the beginning of 2015. The MSG is responsible for drawing up the EITI report and for implementing the initiative.

This first German EITI report has been prepared over the past 18 months. It is intended to give citizens the opportunity to obtain comprehensive information about the extractive industry in Germany.

The first D-EITI report was prepared by the German MSG in cooperation with the Independent Administrator, the auditing company Warth & Klein Grant Thornton AG Wirtschaftsprüfungsgesellschaft of Düsseldorf. The report contains extensive contextual information about the German natural resources extractive sector, e.g. about the legal and tax conditions involved in the extraction of natural resources and

important data about the sector. This information was jointly reviewed by members of the MSG and supplemented by various D-EITI special topics, such as subsidies and tax concessions, renewable energies and dealing with interventions in nature, including the topics of making provisions, providing securities and water.

Special topics are those which go beyond the mandatory requirements of the international EITI standard. They were included on the basis of a decision made by the national MSG.

This report also contains a reconciliation of the payments made by extractive companies to government agencies, with the corresponding incoming payments in the agencies' financial administration. The payment reconciliation was carried out by the Independent Administrator appointed by the MSG.

The Independent Administrator also has the task of clarifying discrepancies that occur and making relevant recommendations. Companies participate in the reporting on a voluntary basis.

The D-EITI will publish an annual report, in line with the requirements of the EITI standard. All the information and data here can also be found online on the D-EITI report portal at www.rohstofftransparenz.de.

MSG objectives for D-EITI:

We, the Multi-Stakeholder Group, commit to the principles set forth in the EITI Standard 2013 by setting ourselves the following objectives with respect to EITI implementation in Germany in which we undertake to:

1. Produce timely reports that are understandable and accessible to the general public and based on a transparent, open and innovative EITI process in Germany; and
2. Process contextual information concerning the German extractive sector, with a view to promoting a broad debate on resource policy that includes aspects of sustainability (economic, environmental, and social); and
3. Engage in understandable, commensurate and increasingly comprehensive reporting to the general public in compliance with the EITI Standard and in harmony with the EU Accounting and Transparency Directives. Concomitantly, additional value shall be generated; and
4. Contribute to the further development of the EITI Standard and its implementation and acceptance as a de-facto global standard, to support the global striving for transparency and accountability as well as the fight against corruption in the extractive sector; and
5. Share experience from the multi-stakeholder process, in particular with respect to participatory democracy, citizen engagement and knowledge transfer, and also with regard to EITI implementation in a federal state; and
6. Substantially enhance Germany's credibility as regards its political and financial support for EITI; and
7. Ensure ongoing implementation of the D-EITI with the intended multi-stakeholder model while building capacity for broad-scale public debate.

2

THE EXTRACTIVE INDUSTRY IN GERMANY



a. The sectors of the extractive industry in Germany

i. Crude oil

History

Crude oil has been industrially extracted in Germany for more than 150 years. The successful oil well in Wietze near Celle in 1858/59 is generally recognised as being one of the first in the world. Crude oil production in Germany peaked in 1968 with an annual production of around 8 million tons. Annual production in 2015 amounted to 2.4 million tons. Proven and potential crude oil reserves in Germany are estimated to be around 34 million tons as of 01.01.2016.

Economic importance

Current oil production in Germany amounts to about 2% of the German annual consumption. The value of the extracted petroleum is about €860 million for 2015; in terms of economic importance, this is the third most important source of fossil fuels in Germany, behind natural gas and brown coal. In a 2015 international comparison of crude oil-producing countries, Germany was in 58th place (26th in 1970). In 2015, 3,950 employees were employed in oil and natural gas extraction in Germany.¹

Extraction

There were 50 crude oil fields in Germany in 2015. These fields extract oil by means of some 1,000 production wells in drilling installations (onshore) and production platforms (offshore). In 2015, the oilfields of Schleswig-Holstein and Lower Saxony yielded almost 90% of the total German production. The remaining 10% was mainly produced in the Rhineland-Palatinate, together with very low production levels in Bavaria, Hamburg, Brandenburg and Mecklenburg-Western Pomerania. The largest German crude oil field is the Mittelplate/Dieksand in the Schleswig-Holstein Wadden Sea (Wattenmeer) National Park. It has been developed since 1987 by a drilling and production island and by oil well facilities on the

mainland. This oilfield accounted for more than half of Germany's total crude oil production in 2015.

Crude oil is a fossil energy source. It is primarily used as a fuel for vehicular transportation and to heat buildings. Crude oil is also used in the chemical industry for e.g. the manufacture of plastics.

Interesting facts

- Germany covers about 2% of its crude oil demand with domestic production.
- The Mittelplate/Dieksand oilfield in the Wadden Sea contains some 25 million tons, which amounts to roughly one third of the extractable German crude oil deposits.
- Crude oil and natural gas are created by deposits of large amounts of micro-organisms, mainly algae.
- On average, crude oil deposits are found at a depth of around 1.5 km. Technical progress, however, has made it possible to open up oilfields at a depth of 5000 meters (m) and more.
- More than 22,000 drilling operations have been carried out since crude oil and natural gas production began in Germany.

ii. Natural gas

History

In 1910, natural gas was found in Neuengamme (which is a district of Hamburg today) when drilling for water. The industrial production of natural gas started in 1913. However, natural gas production in Germany remained minimal until the end of the 1960s, with only a 1% share of the primary energy consumption in Germany (West). The oil crises of the 1970s focused increased attention on the consumption of energy and the need for the development of energy sources. Domestic production grew with the discovery of large gas deposits on the German-Dutch border and the increasing conversion of town and coke-oven gas to natural gas. This was accompanied by a steady

¹ This data contains only employment figures for companies subject to mining law.

expansion of the gas infrastructure (from 12 to 20 billion m³(Vn) of raw gas between 1970 and 2005). In 2005, domestic natural gas production covered up to 25% of domestic gas consumption, but production has been declining since then: in 2016, it stood at around 8 billion m³(Vn), some 6% of domestic gas consumption. The proven and probable reserves of natural gas are also in decline, with a total of 74 billion m³ as of January 1st, 2016. This means that the static range of the German natural gas reserves amounts to 8 years. The decline in natural gas reserves and production is mainly due to the increasing depletion of the large deposits and the resulting natural decline in extraction. A legislative process lasting several years was also responsible for the decline in reserves; during this process, the topics discussed included future requirements for the use of fracking technology, which led to new legislation in 2016. There have been no significant new discoveries in recent years.

Economic importance

Germany ranks number 43 in the table of all natural gas-producing countries. The country's share of global gas production amounted to 0.3% in 2015. Natural gas is of relatively significant economic importance in relation to other extracted natural resources such as lignite. The value of the natural gas extracted in 2015 amounted to €2 billion. Natural gas accounts for one-fifth of the total value of the natural resources extracted in Germany. 3.950 persons were employed in the oil and gas sectors in 2015.²

Extraction

95% of German natural gas was extracted in Lower Saxony in 2015. Other Federal States (Saxony-Anhalt, Schleswig-Holstein, Thuringia and Bavaria) contribute only marginally to the total production. 476 production wells extract the natural gas on 77 gas fields. The A6/

B4 gas field in the 'Entenschnabel' (duckbill) – an economic zone in the German Bight (North Sea) – is the only offshore gas field. Like crude oil, natural gas occurs in underground deposits. Seismic surveys and exploration drilling are also used for both crude oil and natural gas exploration. Gas extraction takes place through a borehole stabilised with cement and steel and a riser pipe is then inserted through the hole.

Uses

As a fossil energy source, natural gas is mainly used to heat residential and commercial premises, to supply heat for thermal processes in trade and industry (e.g. in large bakeries, brick factories, cement factories, foundries and smelters) and to generate electrical power; it is used as fuel for ships and motor vehicles. Natural gas also has many other significant uses – as a reactant in chemical processes (e.g. for ammonia synthesis in the Haber-Bosch process (nitrogen fertiliser)), for iron ore reduction in the blast furnace process and in the production of hydrogen.

Interesting facts

- In contrast to coal and oil, natural gas has only been used as an energy source relatively recently.
- Germany has an active offshore gas field in the German Bight.
- Natural gas is extracted on this one-hectare operating facility and supplied to some 15,000 households.
- Natural gas has been extracted from gas fields in Germany for the past 100 years.
- 8% of the demand for natural gas in Germany is covered by domestic production.
- 95% of the natural gas is extracted in Lower Saxony.

² This data contains only employment figures for companies subject to mining law.

iii. Hard coal

History

The hard coal industry in Germany gained in economic importance during the industrial revolution of the 19th and 20th centuries. Production increased steadily, reaching an annual peak of more than 200 million tons at the beginning of the Second World War. After WW2, German hard coal was used in the electricity, steel and heat supply industries. In the mid-1950s, 600,000 employees in 170 mines extracted 150 million tons of hard coal every year. In the late 1950s, however, this situation changed – German hard coal could no longer compete efficiently in the world market since its extraction is carried out exclusively through underground mining. Even today it still needs subsidies from public authorities. Imported coal and – above all – cheaper crude oil replaced the German hard coal.

The current situation in which the German hard coal mining industry finds itself is the result of a continuous adaptation process, one which started with the founding of the Ruhrkohle AG (RAG) – a merger of 51 Ruhr area mines – in 1969.

Outlook

On February 7, 2007, the German Federal Government, the states of North Rhine-Westphalia and Saarland, the RAG AG and the Mining, Chemical and Energy Industrial Union (IG BCE) agreed to end the subsidised production of hard coal in Germany at the end of 2018 in a socially-acceptable manner. The phase-out process is governed by the ‘socially acceptable phasing-out of subsidised hard coal mining in Germany’ framework agreement of August 14, 2007 and by the German Hard Coal Financing Act, which came into force in December 2007. For more on this, please refer to Chapter 7 on subsidies.

Economic importance

In 2015, hard coal accounted for 12.7% of primary energy consumption in Germany and contributed 18.1% to German electricity production. In the same year, power stations accounted for 78% of the total consumption of hard coal, the steel industry and other producing industries accounted for 20% and the domestic heating sector and small consumers accounted for some 2%. 6.2 million tons of German hard coal were extracted in 2015. This is equivalent to a value of some €557 million. 8,500 hard coal industry personnel are currently employed in Germany’s only two remaining hard coal mines, one in Bottrop and the other in Ibbenbüren. In view of this development, imports today cover around 90% of the demand for hard coal and hard coal products (57.5 million tons in 2015).

Interesting facts

- The subsidized coal mining industry in Germany will end by December 31, 2018, with the closure of the last remaining mines in Bottrop and Ibbenbüren.
- The termination will be carried out in a socially acceptable manner and on a legal basis.
- With approx. 6 million tons extracted in 2015, German hard coal covers around 10% of the German requirements.
- Around 90% of the hard coal is imported, mainly from Russia, Colombia, the USA and Australia.
- In an international comparison, German hard coal mining is characterised by difficult geological conditions (extreme mining depths, thin seams, overburden pressure) and an extensive, subterranean infrastructure.

iv. Lignite

History

As early as the 17th century in Germany, lignite was being produced as a replacement fuel for wood, which was becoming increasingly scarce. With increasing industrialisation and the development of new deposits, the 19th century saw an increase in lignite production from 170,000 tons in 1840 to 40 million tons in 1900. This trend continued unabated in the 20th century until production reached an all-time peak in 1985 with 433 million tons produced that year. Much of this increase in overall German lignite production was attributable to the East German lignite coalfields. After the East/West German reunification, lignite production in East German lignite coalfields declined by 67% between 1989 and 1994, caused mainly by a change in the fuel mix. Total German production fell from 410 million tons to 207 million tons during this period.

Extraction

Lignite is mainly extracted in three areas – the Rhenish, Lausitz and Central German regions, where mining is only carried out in opencast mines close to the surface. Annual production in 2015 amounted to approximately 178.1 million tons and has largely remained constant in recent years. The value of the brown coal lignite subsidised in Germany in 2015 amounted to €2.4 billion. This means that brown coal is the most important natural resource in Germany, in terms of the value of production. With the decline in lignite production in the wake of German reunification, the number of persons directly employed in lignite mining fell from 130,000 in 1990 to 15,600 in 2015.

Uses

Around 90% of the lignite Germany produces is used to generate electricity and district heating. The economic advantages in using lignite result from the combination of the opencast mine and power plant being near the location of the lignite deposits. Around 10% of the lignite produced is refined into solid or

pulverised fuels for commercial use and private households (e.g. brown coal briquettes, pulverised lignite, fluidised bed lignite and lignite coke). In 2015, lignite accounted for 11.8% of the primary energy consumption and contributed to 23.8% of electricity generation. The domestic production of lignite covers the country's annual consumption.

Interesting facts

- With production at around 178 million tons in 2015, lignite accounts for almost 12% of primary energy production in Germany.
- Lignite accounts for around 24% of gross electricity generation.
- Lignite is currently mined in 10 active open-cast mining sites on 3 lignite coalfields. The Rhineland is the largest brown coal region in Europe and Germany is the world's largest producer of lignite.
- Germany covers 100% of its lignite requirements from its domestic reserves.
- Recultivation and compensation for land required for mining are important issues for the German lignite mining industry.

v. Salts

History

Germany has large salt deposits, which are mainly concentrated in northern Germany. Over millions of years, deposits of salts resulted in several 100 m thick salt layers. Bavarian and Austrian Alps salt is of a similar age and has been extracted for thousands of years.

The commissioning of the first potash plant in the world in Staßfurt in 1861 founded the almost 150-year tradition of German potash mining. Salt extraction from saline springs and through the mining of salt deposits has a long history. People were digging for salt in the Berchtesgaden area as early as the 12th century and an active salt mine that was established in the 16th century still exists there.

Economic importance

In 2014, the amount produced in Germany was approximately 12.7 million tons of rock salt (including industrial brine) and some 36.6 million tons of crude potassium salt with a material content of K_2O from 3.8 million tons. With a total production of 5.3%, Germany was the fifth largest producer of salt in the world after China, the USA, India and Canada in 2014 – and the fifth largest potash producer with around 9% of the world's total production. In the same year, roughly 8,200 people were employed in potash mining and 2,500 in salt mining in Germany.

Extraction

Extraction takes place in Germany in six potash mines (in Hesse, Lower Saxony, Saxony-Anhalt and Thuringia), seven salt mines (in Baden-Wuerttemberg, Bavaria, Lower Saxony, North Rhine-Westphalia, Saxony-Anhalt and Thuringia) and seven salt works (in Baden-Wuerttemberg, Bavaria, Mecklenburg-Western-Pomerania, Lower Saxony and North Rhine-Westphalia). Salt mining is carried out in the mines by means of drilling, blasting or cutting techniques or by brining out underground deposits. Brining out is done by introducing freshwater or half-brine into the salt deposits through borehole probes, after which the salts dissolve. The brine is then pumped through a probe and processed above ground in salt works, where it eventually becomes salt (and other by-products).

Uses

Rock salt and evaporated salt is used as commercial and industrial salt – we also use it on our food and for de-icing purposes. Salt is an indispensable natural resource for the chemical industry, e.g. in the production of soda, chlorine and caustic soda. Glass, plastic and aluminium could not be produced without salt. It is used as regenerating salt in water softening plants, in the feed industry, in road services, for snow clearing and in the food industry. Sodium chloride meets particularly high purity requirements as an active pharmaceutical ingredient.

Interesting facts

- Salt has been actively extracted by humans for over 5,000 years.
- The importance of salt for many cities is often reflected in their names.
- If saline sources were discovered in a town, the syllable 'Bad' (spa) was added to the town's name – this ushered in the birth of today's spas.
- In the mid-19th century, Justus von Liebig discovered the importance of potassium as an essential plant nutrient.
- When miners coincidentally discovered the world's first known potash deposit while searching for rock salt near Staßfurt in 1856, the first potash mines and works were subsequently established in Germany around 1860.
- In the high-medieval period, the brine pipeline from the Reichenhall mine to Traunstein was one of the first pipelines for natural resources in the world.
- The Werra potash mine is the largest underground mining area in Germany.

The potash crude salts extracted by mining are mainly used in agriculture as fertilisers. However, they are also used as industrial salts in electrolysis and other industrial processes – and there is a demand for these salts in highly-purified form for the food and feed industries and for pharmaceutical purposes.

vi. Quarried natural resources

Quarried natural resources comprise a great number of mineral deposits, in particular gravel and sands, broken natural stone, lime, marl and dolomite stones and gypsum and anhydrite stones, as well as clays and loams. Quarried natural resources are bulk raw materials; due to geological conditions, they are site-bound and not distributed evenly across the country.

History

Quarrying has been handed down since the beginning of human history. According to scientific findings, the oldest known 'stones from human hands', found in ground fortifications in the Near East date back to between the 9th and 8th centuries B.C. Germany also has a very long quarrying tradition. In the past, these raw materials were mainly extracted by hand, but companies today use modern technology. Geophysics, GPS, intelligent machine and plant control and largely automated processes control the extraction of these natural resources.

Extraction

Every year, the building materials and quarrying industry extracts roughly 550 million tons of primary raw materials or uses these materials in production. Gravel and sands, with around 240 million tons, and broken natural stone with some 210 million tons are among the most important raw materials in the extraction natural sources in Germany. The building materials and quarrying industry (earth and stone) in Germany comprises some 1,600 companies operating approximately 3,100 extraction facilities.

Uses

Around 80% of the earth and stone is supplied to the building industry and around 20% is used in the chemical, steel or glass industries. In addition to the extracted primary earth and stone, almost 100 million tons of secondary raw materials (mineral construction waste and by-products from industrial processes) are used in the building industry every year. These result from e.g. the demolition of buildings, the production of pig iron (blast furnace slag) or from electricity generation in conventional power stations (FGD gypsum, fly ash). The use of secondary raw materials contributes to the substitution of primary natural sources. The substitution rate is around 15%.

Interesting facts

- Every year, the building materials and quarrying industry extracts roughly 550 million tons of primary raw materials or uses these materials in production. In addition, almost 100 million tons of secondary raw materials are used every year in the production of building materials to conserve resources.
- Quarried natural resources include a variety of mineral deposits; gravel, sand and natural stone account for the largest proportion of the extracted materials in terms of volume.
- Around 80% of the quarried natural resources is supplied to the building industry and around 20% is used in the chemical, steel or glass industries.
- Quarried natural resources are needed for the manufacture of many products that we use in our daily lives. Stone powder, for example, is the basic ingredient of toothpaste.
- Statistically, each one of us needs 1 kg of plaster, stone dust, sand, gravel or natural stones per hour.

vii. Other natural resources

Industrial minerals

History

Industrial minerals are mineral rocks that can be immediately used in industry due to their special chemical and physical properties, i.e. without any substance conversion. This group includes kaolin (also called porcelain earth), quartz sand, quartzite, feldspar, sticky sand, bentonite, special clay, silicas, fluorite, barite and potash.

Industrial minerals have been extracted in Germany for hundreds of years in very diverse quantities. Volume-wise, the industrial minerals extracted most in Germany are quartz/quartz sands and special clays with 30.9 million tons and 6.4 million tons produced respectively.

Extraction

The extraction of industrial minerals in Germany is extremely regional in structure, due to natural conditions. While, for example, kaolin and silica are mainly extracted in Bavaria, the extraction of special clay is mainly concentrated in Rhineland-Palatinate and Hesse.

Industrial minerals are usually extracted in open pit mines by small and medium-sized companies, but a few industrial minerals such as fluorite and barite are mined underground. In 2014 Germany boasted a total of 627 active production sites, around half of which were dedicated solely to the extraction of quartz and quartz sands.

Uses

Due to their chemical and physical properties, industrial minerals are used primarily in the paper, chemical, glass, ceramics, refractory, and foundry and steel industries; but the pharmaceutical industry, environmental management (waste gas purification, wastewater treatment plants, solar panels and wind power plants) and the automotive industry also exploit the properties of industrial minerals.

Iron ore

In Germany, iron ore is mined in North Rhine-Westphalia and Saxony. The iron ore extracted here is not smelted into iron, however, it is used mostly in the form of crushed stone, chippings and brittle sands as a coloured and iron-rich aggregate for the concrete or cement industry.

b. Natural resources extraction totals

A wide range of different mineral resources and energy resources is mined in Germany. The following tables list the natural resources extracted in Germany by quantities and estimated value in 2015.

Table 1: Extraction of natural resources in Germany in 2015 (quantities)

Natural resource	Quantity (2015)
Hard coal*	6.2 million tons ¹
Lignite	178.1 million tons ¹
Crude oil	2.4 million tons ¹
Natural gas**	9,387.6 million m ³ ¹
Potash salt	5.8 million tons ²
Potash and potash salt products	7.3 million tons ²
Special clay	6.4 million tons ¹
Rock salt and industrial brine	13.7 million tons ¹
China clay	1.1 million tons ²
Quartz gravel and sand	9.7 million tons ³
Gravel and sand	239.0 million tons ³
Broken natural stone	210.0 million tons ³
Ashlar	0.4 million tons ⁴
Limestone/marlstone/dolomite	48.9 million tons ⁴

* Useable extracted output

** petroleum gas

¹ [BMWi 2016], for detailed source information see final noteⁱ

² [BGR 2016], for detailed source information see final noteⁱ

³ [MIRO 2016], for detailed source information see final noteⁱ

⁴ [Destatis], for detailed source information see final noteⁱ

Table 2: Extraction of natural resources in Germany in 2015 (value)

Natural resource	Value (2015) in millions of €
Hard coal*	423 ²
Lignite	2,431 ²
Crude oil	859 ²
Natural gas**	2,064 ²
Potash salt	k. A. ⁵
Potash and potash salt products	2,156 ²
Special clay	148 ²
Rock salt and industrial brine	576 ²
China clay	119 ²
Quartz gravel and sand	205.5 ³
Gravel and sand	1,510 ³
Broken natural stone	1,439 ³
Ashlar	52 ⁶
Limestone/marlstone/dolomite	719 ⁴

* Useable extracted output

** Including associated gas

² [BGR 2016], for detailed source information see final note¹

³ [MIRO 2016], for detailed source information see final note¹

⁴ [Destatis], for detailed source information see final note¹

⁵ These values can only be reported for potash and potash salt products.

⁶ [DNV 2016], for detailed source information see "Viewing the data".

3

LEGAL FRAMEWORK FOR THE EXTRACTIVE INDUSTRY



a. Who is responsible?

Laws and the responsibilities of public authorities

The extraction of raw materials is regulated in Germany by the BBergG (German Federal Mining Act, hereinafter BBergG). In 1982, it replaced the old mining laws of the Federal States and the numerous ancillary mining laws of the Federal and state governments. The overall control of the mining law within the Federal Government is the responsibility of the Federal Ministry for Economic Affairs and Energy. The mining authorities of the Federal States implement the BBergG and also bear the responsibility for the authorisation and supervision of mining activities (depending on the natural resources in question). The Federal States have passed some of their own mining regulations in order to meet the specific requirements and characteristics of their own regions. Competent public authorities *see figure to the right*.

Germany differentiates between three groups of natural resources in terms of their legal regulation (also see figure on page 24/25):

- **Free-to-mine natural resources** are not the property of the landowner. The exploration and extraction of these natural resources are subject to the BBergG (German Federal Mining Act) and must be approved by the mining authorities of the Federal States in a two-stage procedure: firstly, the granting of a mining license (public-law concession) and secondly, the site-specific approval of the operating plan procedure.

- **Privately-owned natural resources** are the property of the landowner and are subject to mining law (see § 2(1), No.1 BBergG). The prospecting and extraction of these mineral resources does not require any mining authorisation, but is subject to approval by the mining authorities of the Federal States.

- **Landowners' natural resources** are natural resources that are neither free-to-mine nor privately owned. They are the property of the landowner, but are not subject to mining law and the supervision of the mining authorities. The approval procedure for landowners' natural resources is carried out in accordance with the regulations of the Federal Immission Control Act, or in accordance with legal state regulations (e.g. excavation, water and construction laws).

Depending on the Federal state, the natural resource and the type of extraction involved, middle and lower-management levels of governmental bodies are responsible for the landowners' natural resources category.

Figure 1: Competent public authorities in Germany

 <p>Federal Ministry for Economic Affairs and Energy</p>		
<p>Baden-Wuerttemberg Ministry for the Environment, Climate and Energy</p> <p>Regional Council of Freiburg, State Office for Geology, Natural Resources and Mining</p>	<p>Bavaria State Ministry for Economic Affairs and Media, Energy and Technology</p> <p>Government of Upper Bavaria, Mining Office of Southern Bavaria, Government of Upper Franconia, Mining Office of North Bavaria</p>	<p>Berlin Senate Administration for Economic Affairs, Technology and Research</p> <p>State Office for Mining, for Geology and Natural Resources of Brandenburg</p>
<p>Brandenburg Ministry for Economic Affairs and Energy</p> <p>State Office for Mining, Geology and Natural Resources</p>	<p>Bremen Senator for Economic Affairs, Labour and Ports</p> <p>State Office for Mining, Energy and Geology</p>	<p>Hamburg Department of Economic Affairs, Transport and Innovation</p> <p>State Office for Mining, Energy and Geology</p>
<p>Hesse Ministry for the Environment, Climate Protection, Agriculture and Consumer Protection</p> <p>Regional Council of Darmstadt Department of Occupational Health and the Environment, Wiesbaden</p>	 <p>MINING AUTHORITIES</p>	<p>Mecklenburg-Western-Pomerania Ministry for Energy, Infrastructure and Regional Development</p> <p>Stralsund Mining Office</p>
<p>Lower Saxony Ministry for Economic Affairs, Labour and Transport</p> <p>State Office for Energy and Geology</p>		<p>North Rhine-Westphalia Ministry for Economic Affairs, Innovation, and Energy</p> <p>District Government of Arnsberg Department of Mining and Energy in North-Rhine Westphalia, Dortmund</p>
<p>Rhineland-Palatinate Ministry for Economic Affairs, Climate Protection, Energy and Regional Planning</p> <p>State Office for Geology and Mining</p>		<p>Saxony Ministry for Economic Affairs, Labour, Energy and Transport</p> <p>Upper Mining Office</p>
<p>Saxony-Anhalt Ministry for Sciences and Economic Affairs</p> <p>State Office for Geology and Mining</p>	<p>Schleswig-Holstein Ministry for Energy Transition, Agriculture, the Environment and Rural Areas</p> <p>State Office for Mining, Energy and Geology</p>	<p>Thuringia Ministry for Agriculture, Forests, the Environment and Nature Conservation</p> <p>State Mining Office</p>

Figure 2: Legal division of natural resources in Germany

Legal division	Free-to-mine natural resources (subject to mining law)	
Subject-specific subdivision	<p><i>Energy resources:</i> coals, hydrocarbons, geothermal energy</p> <p><i>Industrial minerals:</i> fluorite, graphite, lithium, phosphorus, all salts that are readily soluble in water, sulphur, barite, strontium, zirconium</p> <p><i>Metal ores:</i> e.g. iron, copper, lead, zinc ores, etc.</p> <p>Also: all natural resources in the area of the continental shelf and coastal waters (including gravel and natural stones)</p>	
Right of disposal over natural resources	These natural resources are ‘free’, viz., they do not belong to the landowner. Their exploitation requires mining rights and the permission of the mining authorities.	
Type of legal regulation	<p>Governed by the Federal Mining Act</p> <p>§ 3. (3)</p> <p>§ 3. (4)</p>	

Own presentation, based on the following source: State Geological Service of the Federal Republic of Germany, Securing of Raw Materials 2008.

b. How are mining projects approved?

The procedures for the approval and supervision of mining projects are not all equally regulated for all natural resources in Germany. They vary depending on the type of natural resource and its legal foundation in Federal and state governments.

Figure 3: Steps for the approval of mining projects according to the type of natural resources

Free-to-mine natural resources	Privately-owned natural resources	
Right to mine: must be granted by the responsible mining authority	Proof of ownership: of the land, e.g. land leasing contract must be submitted to the mining authority.	
Approval of the operating plan by the mining authority (approval of the main operating plans every two years) An operation-relevant approval specifies the technical and legal environmental conditions under which natural resources can be explored and extracted.		
Supervision by the mining authorities of the Federal States The extraction of free-to-mine and privately-owned natural resources is subject to supervision by the relevant mining authority (mining inspection authorities (mining authorities; § 69(1) BBergG). In addition to awarding mining rights and granting operating plan approvals, the third core competence of the mining authorities is the supervision of mining operations. According to the Federal Mining Act, mine inspectors may enter the mines, demand information, visit facilities and carry out tests – and they may also impose requirements in individual cases. The mining entrepreneurs also have obligations, e.g. to report incidents and accidents, to accept the actions of the mining inspection authorities and to accompany the mine inspectors on tours of the mines and mine buildings (inspections).		

	Privately-owned natural resources (subject to mining law)	Landowners' natural resources (not subject to mining law)
	<p><i>Industrial minerals:</i> Bentonite and other montmorillonite clays. Feldspar. Mica. China clay. Diatomaceous earth (diatomite). 'Pegmatite sand'. Quartz (quartz sand and gravel), and quartzite (if suitable for refractory products and ferrosilicon production). Soapstone and talk. Clay (if fireproof and acid-proof).</p> <p><i>Quarried natural resources:</i> basaltic lava (except columnar basalt). Roofing slate. Trass.</p> <p><i>Also:</i> all privately-owned natural resources, which have been extracted underground (incl. gypsum, natural stone, brick clays etc).</p>	<p><i>Quarried resources (in opencast mining):</i> Anhydrite. Gypsum. Limestone, basalt columns and other natural stones. Gravel and sand. Quartz and quartzite (if unsuitable for the manufacture of refractory products and ferrosilicon), in addition to other natural resources not listed in this table</p> <p><i>Also:</i> peat</p>
	These natural resources belong to the landowner, who is entitled to utilise them	
		Governed by other legal jurisdictions, e.g., Construction Law (Excavation Law). Water Resources Act or State Water Act. Federal Immission Control Act. Federal or State Nature Conservation Act

	Landowners' natural resources
	Proof of ownership: of the land e.g. land leasing contract must be available.
	<p>Approval procedures as per the Federal Immission Control Act, the State's Excavation Laws, Building Laws or its Water Resources Legislation (in wet extraction) are carried out.</p> <p>The materials in question are mostly 'bulk materials' from the quarried natural resources sector.</p>

Mining rights

Mining rights constitute the basis for the exploration and extraction of free-to-mine natural resources. Applications are made in the form of a permit, a license or proprietary mining rights.

There are three different types of mining rights:

Permit

The permit is a mining right which grants the right to carry out explorations for free-to-mine natural resources on a specific, permitted minesite. The permit is time-limited to a maximum of 5 years and may be extended for a further three years (see § 16(4) BBergG). A legal entitlement to the granting of a permit exists, unless there are grounds for refusal. The permit may be refused if, for example, no work programme exists or the fixed time period is not taken into account in the planning. The grounds for refusal are fully itemised in § 11 BBergG. If explorations have not started within one year, for reasons for which the permit holder is responsible, the permit will be revoked (§ 18 BBergG).

Licence

The licence is a mining right which grants the right to carry out exploration operations for free-to-mine natural resources on a specific, licensed minesite. The licence defines ‘a reasonable period of time for the implementation of extraction in individual cases’. ‘Fifty years may only be exceeded if this is necessary in view of the investment normally required for the extraction’. A time extension is possible (see § 16(5) BBergG). A legal entitlement to the granting of a license exists, unless there are grounds for refusal.

The licence may be refused if, for example, it cannot be proven that the resources can be extracted, due to their location and nature (see § 12 BBergG). If extraction work has not started within three years, as a rule, the licence must be revoked (§ 18 BBergG). The grounds for refusal are fully itemised in § 12 BBergG.

Proprietary mining rights

Mining may be carried out under these rights. They include the licence with the possibility of eligibility as collateral with the relevant easements and mortgages. The licence expires when proprietary mining rights become valid. The proprietary mining rights details are entered in the Land Register, viz., the name and address of the applicant and details of the minesite. Proprietary mining rights define ‘a reasonable period of time for the implementation of extraction in individual cases’. ‘Fifty years may only be exceeded if this is necessary in view of the investment normally required for the extraction’. A time extension is possible (see § 16(5) BBergG). If regular extraction of the natural resources is interrupted for more than 10 years, as a rule, the proprietary mining rights must be revoked (see § 18 BBergG). To apply for proprietary mining rights, the applicant must already be in possession of a licence for the minesite in question. Proprietary mining rights may also be refused if, for example, evidence cannot be furnished that an economic extraction of the natural resources is to be expected (see § 13 BBergG).

In compliance with § 75 of the BBergG, mining authorisations and mining maps are created to document the mining rights. Information about licences, permits, proprietary mining rights and on the minesites in question is available in these documents.

Special case: Mining rights under the old laws

The various forms of mining rights described above (permit, licence and proprietary mining rights) are also supplemented by older legal mining rights, which are described as old rights. These are mining rights that were granted before the current Federal Mining Act of 1982 came into force, e.g. for the lignite opencast mines in the Rhenish mining region. Under current law, these rights are still valid (see § 149(1), sentence 1 BBergG) if they were shown to the relevant mining authority during a phase-out period of three years after the Mining Law of 1982 came into force and if

they were confirmed by mining inspection authorities. In contrast to mining rights under the new BBergG, rights under the old laws are not time-limited and neither extraction nor minesite royalties have to be paid. In practice, these old rights mainly apply to hard coal and lignite. An operating plan must be approved before these natural resources can be extracted.

Special case: Unique features in the ‘new’ German Federal States

The mining rights system of the GDR only applied to the (communist) state-owned and other mineral resources. The state-owned natural resources mainly comprised free-to-mine and privately-owned resources and were the property of the communist state. Other natural resources primarily comprised landowners’ natural resources and were allocated to the land ownership category. The Bestowal Regulation of 15.08.1990 created the foundation for the

conversion of mining rights for state-owned natural resources into free-to-mine resources, which were subsequently recognised by the legal system of the reunited Germany. The transferred mining rights are deemed to be proprietary mining rights. Like the mining rights under old law, the transferred rights are not time-restricted and are also exempt from minesite and extraction royalties (see § 149 and § 151 BBergG). In contrast to the Federal States of the former West Germany, the validity of the old rights (see section on mining rights under the old laws) in the ‘new’ Federal States does not only extend until 1980, but also applies to deposits explored up to and including 1990. These rights also apply to both free-to-mine and privately-owned natural resources. Exploration and extraction rights for privately-owned natural resources were also governed by GDR laws on state-awarded mining rights.

Figure 4: Overview of old mining laws, mining laws in the GDR and modern mining laws

	Rights under the old mining laws (West Germany)	Rights under GDR mining laws	Rights under the modern mining laws
Description of natural resource	Free-to-mine natural resources	State-owned natural resources	Free-to-mine natural resources
Payment of mine-site and extraction royalties	No	No	Decisions made at Federal state level
Time-limited	No	No	Yes (see notes on mining rights)

Approval of an operating plan

Exploration, extraction and beneficiation operations may only be set up, managed and discontinued if they are based on an operating plan. These plans are drawn up by the prospective mine operator and approved by the responsible authority. However, the approval of such operating plans is tied to conditions that address operational and work safety, the protection of the surface area, the prevention of harmful impacts, the protection of the deposits and the preventive measures regarding the proper restoration of the areas affected by the extraction of the natural resources. For further information see Chapter 6 Managing human intervention in nature.

Operating plans basically include the following:

- A presentation of the scope of the project
- A presentation of the technical implementation of the project
- The duration of the project
- Evidence that the conditions of approval have been met.

The operation of a mine is dynamic in nature due to the mine's continuous adaptation to the deposit's characteristics. This mode of operation also entails specific risks for employees and third parties. Due to these conditions, continuous monitoring of the operation is necessary, at specified intervals. The main operating plan should generally not exceed a period of two years and should be approved by the mining authority. Constant coordination between the entrepreneur and the mining inspection authorities is required to ensure both intensive state control of the mining operations and planning flexibility.

Environmental impact assessment

Under the conditions laid down in the Ordinance on the Environmental Impact Assessment of Mining Projects (UVP-V Bergbau), an environmental impact assessment (UVP) or a preliminary examination of the individual mining law case is necessary. As a rule, the UVP obligation for mining projects depends on the size of the project, measured by extracted volumes or the required excavation area. Mining projects under mining law in Germany are not subject to any UVP obligation if they fulfil the criteria of the UVP-V Bergbau in conjunction with the Law on Environmental Impact Assessment (UVP-G).

If an UVP is necessary, a planning approval procedure must be carried out in accordance with mining law. This procedure includes the affected population by making the plans for the extraction of mineral resources accessible to the affected population so that objections can be submitted. The authorities concerned then address the objections and a public hearing is held, with the participation of all official bodies and persons who have expressed objections. A decision on the objections is made by the competent authority (in this case the mining authorities), and adopted as an administrative act. The planning approval procedure under mining law is also a bound decision, one which is not characterised by planning considerations and discretion. In addition, it not only binds the decisions of other authorities at the horizontal level, it also applies to the following operating plans (vertical concentration) as per § 57a(5) BBergG).

c. Where can information about granted licences be found?

i. Register of licences

Legal base

In Germany, the Federal State in question only grants the right to explore and extract free-to-mine natural resources. The right of disposal over a free-to-mine natural resource is designated as the right to mine, which can be requested from the mining authorities of the Federal States (see Chapter 3.b.).

Pursuant to § 75 of the BBergG (German Federal Mining Act), the mining authorities keep mining authorisation books and mining maps, in which newly-granted mining rights are entered (pursuant to the BBergG) or 'Old Rights and Contracts' are maintained pursuant to § 149 of the BBergG.

Public inspection of these books and maps was initiated within the framework of the implementation of the D-EITI. Since July 21, 2017 and pursuant to § 76(3) of the BBergG, the following information on granted and maintained mining rights can be viewed upon application to the mining authorities, (without evidence of a legitimate interest):

- Owner
- Extraction sites to which the mining right refers
- Date of the application and granting of the right
- Term
- Natural resource(s) to which the mining right refers

The competent authorities may also make this information directly accessible to the public and this has already been taking place for some time now in many

Federal States – several states publish a transparent online licence cadastre (i.e. a land registration licence). Other Federal States are also planning to set up similar systems.

All hydrocarbon-segment mining licences in Germany can also be viewed in the annual publication 'Erdöl und Erdgas in der Bundesrepublik Deutschland' (Crude oil and natural gas in the Federal Republic of Germany).

Example of an online system: the NiBiS map server (Lower Saxony Educational Server)

One good example of the publication of information on mining rights on the Internet is the NiBiS map server of the Lower Saxony State Office for Mining, Energy and Geology (LBEG). On this website, citizens can obtain information about 400 specialist maps on topics such as contaminated sites, mining, soil science, erosion, geology, geothermal energy, geophysics, hydrogeology, geologic engineering, climate and raw materials. With regard to mining rights, the NiBiS regularly makes the following data available for viewing by the public on the map server for the Federal States of Lower Saxony, Bremen, Hamburg and Schleswig-Holstein:

- Information about the licence holder
- Coordinates of the licensed area
- Date the licence was granted and term of the licence.
- Type of natural resource

Other Federal States have also created online sites for inspecting mining authorisation books and maps. Examples here are Baden-Wuerttemberg www.maps.lgrb-bw.de, Berlin and Brandenburg <http://www.geo.brandenburg.de/lbgr/bergbau> and the Saarland www.geoportal.saarland.de.

The question of who is behind a company and who is the 'beneficial owner' has become increasingly important in recent years for combating terrorist financing and eradicating money laundering together with their predicate offenses, such as tax law

violations. The beneficial owners of companies are natural persons who ultimately own a company or control it, and/or natural persons on whose initiative a transaction³ is ultimately carried out or a business relationship is ultimately founded (cf. § 3(11) of the GwG (Money Laundering Act)). Improved accessibility to this information is intended to facilitate the fight against money laundering and terrorist financing.

German Transparency Register

In Germany, the beneficial owner can be found in the information contained in publicly-accessible registers, such as the trade, cooperative, partnership, association or enterprise registers. A Transparency Register was established on June 26, 2017 within the framework of the implementation of the Fourth Money Laundering Directive (EU) 2015/849⁴. This contains beneficial owner data in the form of an Internet portal. In concrete terms, this means that the portal primarily contains information from already-existing, publicly-accessible electronic registers (see above.) Obligatory notification from a beneficial owner to the Transparency Register is demanded only if the identity of the beneficial owner cannot be revealed after perusal. The Transparency Register thus expands and completes the information on beneficial owners. This also applies to trusts and similar legal forms which have hitherto remained unidentified.

The register is electronically accessible on the website at www.transparenzregister.de. Where the obligation to notify the Transparency Register exists because the beneficial owner does not already exist in other registers, such notification must be carried out by October 1, 2017. Information about beneficial owners – and this also concerns companies in the extractive industry – should be available for viewing in the register from December 27, 2017 (for details, see ‘Obtaining information from the Transparency Register’ below).

Information on beneficial owners in the Transparency Register

The first name and surname of the beneficial owner, his or her date of birth, place of residence, and the type and extent of the economic interest are recorded.

Nationality is also recorded in the case of trusts and trust-like legal forms (cf. §§ 19(1), 21 of the GwG).

Management of the Transparency Register

The Transparency Register is managed technically by the Bundesanzeiger Verlag GmbH (Federal Gazette publishing company). In principle, all companies in Germany are obliged to report the current information on the beneficial owner in electronic form to the Transparency Register, if such has not yet been recorded in another register (for details, see § 20(2) GwG).

Obtaining information from the Transparency Register

Access to the information about beneficial owners in the Transparency Register is provided to certain governmental authorities within the scope of their statutory tasks, to persons and bodies legally obliged to combat money laundering in the performance of their due diligence obligations, and any other person or body with a legitimate interest in viewing the Register (e.g. NGOs or journalists) (§ 23(1) of the GwG). Such interest particularly exists when a connection can be established (in a comprehensible manner) to the prevention and combating of terrorist financing and money laundering, as well as their associated predicate offenses such as corruption. On July 2, 2014, the Federal Government decided to initiate the candidacy of Germany with the international ‘Initiative for Transparency in the Extractive Industries Transparency Initiative’ (EITI). With the implementation of the EITI in Germany (D-EITI), the Federal Government is strengthening international

³ The term transaction here means all acts which have the purpose or the effect of a monetary movement or other asset movement.

⁴ Directive (EU) 2015/849 of the European Parliament and of the Council of May 20, 2015 on the prevention of the use of the financial system for the purpose of money laundering and terrorist financing, amending Regulation No. 648/2012 of the European Parliament and of the Council and repealing Directive 2005/60/EC of the European Parliament and of the Council and Directive 2006/70/EC of the Commission (OJ L 141 of June 5, 2015, P.73).

efforts to combat corruption in the context of natural resources business transactions.

This stated objective establishes the D-EITI's legitimate interest in gaining access to the Transparency Register.

iii. Contracts

In some countries, the conditions under which natural resources can be extracted are negotiated directly between the extractive companies and the government agencies and the results of these negotiations are set down in contracts between the parties involved. This is not usually the case in Germany, since the conditions for the exploration and extraction of natural resources are generally validated by law and implemented by the respective competent authorities.

Against this (international) background, the EITI encourages participating countries to promote transparency with regard to these contracts in requirement 2.4 of the EITI standard. The EITI requirement thus requires an understanding of the content and scope of the 'contracts' and/or 'agreements' (between government agencies and extractive companies) in which 'conditions' relating to the extraction of natural resources are specified.

In Germany, the extraction of both free-to-mine and privately-owned natural resources and landowners' natural resources is subject to a procedural, public-law licensing regime, the content, process and scope of which differs according to the type of the natural resource involved and the size of the extraction operation. Relevant legislation can include regulations on

mining law, Federal building law, water law, immission protection and nature conservation laws. The various legal requirements are specified and implemented for the respective mining project through official approvals. The 'conditions' within the meaning of EITI requirement 2.4, under which the extraction of natural resources takes place, are defined as part of the approval by the state. This approval procedure in Germany is based on relevant legal requirements, and as such it differs significantly from the private-law contracts practised in many other countries. These aspects must be accordingly considered in the future specification of the requirements of the EITI standard under 2.4.

Competent authorities are already publishing approvals on their websites today, if the project in question requires an environmental impact assessment. In addition, transparency exists with respect to mining rights where the extraction of free-to-mine natural resources is concerned (see Chapter 3.c.i.). There are currently no statutory requirements for a comparable disclosure of property rights to mining/extraction sites and/or rights of use regarding the extraction of non-free-to-mine natural resources.

In addition, 'agreements' may also be of a private legal nature and may be concluded between extractive companies and government agencies. Further terms and/or conditions relating to the extraction of the resources may also be agreed between the contracting parties. In individual cases, contractual agreements regarding the confidentiality of the contract content may preclude any centrally-controlled recording and/or publication of these agreements. However, the provisions for the preparation of a payment report

provide an obligation for companies extracting natural resources to disclose payments ‘in order to improve infrastructure’ in § 341r No. 3 of the HGB (German Commercial Code). According to the Institute of Chartered Accountants in Germany (Institut der Wirtschaftsprüfer in Deutschland e.V.), such payments include amongst others those for the promotion of municipal investments or educational institutions, which are, for example, set down in private legal agreements. In this respect, it is assumed that the publication of payment reports will also lead to a disclosure of cash flows from private legal agreements between the extractive industry and the State, but not

to a disclosure of the contractual contents of such private agreements. To clarify the exact content-related substance behind this reason for payment, we must await the future analysis of published payment reports and the development of other pertinent legal and/or business issues.

In Germany, the EITI requirement for the promotion of transparency with respect to contracts and agreements between government agencies and extractive companies is currently being addressed and discussed in the MSG.

4

REVENUES GENERATED BY THE EXTRACTIVE INDUSTRY



Companies which extract natural resources in Germany pay various fees, duties and taxes on their activities. A company that extracts free-to-mine natural resources in a Federal state pays specific minesite and extraction royalties to that state as per Federal Mining Act. However, minerals which are extracted on the basis of 'old rights' are excluded (see Chapter 3.b); in this case the owners of the existing old mining rights or the former mining right owner(s) may be entitled to the payment of a so-called extraction royalties interest payment by the companies (e.g. in the case of old crude oil or old natural gas contracts). Regardless of the activity involved, all companies in the natural resources sector – and most other companies – are subject to trade and corporation tax.

a. Who is responsible for revenue collection?

Due to the federal structure of the Federal Republic of Germany, tax administration is split between the Federal Government and the states. Depending on the type of tax, it is levied by the financial authorities of the Federal Government, the states or the local authorities. One exception to this rule is minesite and extraction royalties, which are levied by the mining authorities of the states.

b. What payments are made by the extractive industry?

i. Corporation tax

A company (which extracts natural resources) with the legal form of a limited company (in particular a limited liability company or public limited company) which has its head office or management in Germany is subject to unlimited corporation tax. Limited companies which do not have their head offices and management in Germany are subject to corporation tax on the income generated in Germany. In Germany, corporation tax amounts to 15% of the taxable income. The revenue is shared by the Federal Government and the states.

Corporation tax is levied by the tax authorities of the Federal States.

ii. Minesite and extraction royalties

Companies and persons require a permit to prospect for 'free-to-mine' mineral resources (§ 7 BBergG (German Federal Mining Act)). Owners of this type of permit are required to pay an annual minesite royalty as per § 30 BBergG. Pursuant to § 30(3), first sentence, of the BBergG, this generally amounts to €5 per square kilometre of a minesite in the first year after the permit has been granted; the amount increases by €5 per year to a maximum of €25 per year, whereby the legislation of individual states may provide for differing royalty amounts and even exemptions under certain conditions (see § 32(2), BBergG and the table on page 36 to 45). The expenses incurred for prospecting are set off against the minesite royalties. Minesite royalties must be paid to the state in which the licenced minesite is located.

If natural resources are found, a permit is required for their extraction. However, extraction is only possible if the necessary operating plan permit and any other permits such as water rights permits have already been granted. If the extracted natural resources can be used for financial gain, the permit holder must pay extraction royalties for the extracted free-to-mine natural resources as per § 31 BBergG. The standard rate for extraction royalties is 10% of the market value of the natural resources in question (§ 31(2), sentence 1, BBergG). Here too, individual states may stipulate different regulations in their legislation for the calculation of minesite and extraction royalties under certain conditions (see § 32 BBergG and the table on page 36 to 45). Minesite and extraction royalties only apply to free-to-mine natural resources. While minesite royalties are appropriated into the respective state's budget, the revenue from extraction royalties is used for inter-state financial equalisation. Minesite and extraction royalties are levied by the mining authorities of the Federal States.

Table 3: Federal state law regulations on minesite and extraction royalties*

Federal State	Legal basis	Minesite royalties	
Baden-Wuerttemberg	<ul style="list-style-type: none"> Ordinance (VO) of the Ministry of the Environment on minesite and extraction royalties, December 11, 2006 (Legal Gazette – GBl, Page 395), last amended by the VO of November 11, 2014 (GBl, Page 618) 	<ul style="list-style-type: none"> Crude oil, natural gas, rock salt and brine, €20 for each km² or fraction thereof for the first year Maximum rate crude oil, natural gas: €80 Maximum rate rock salt and brine: €60 	
Bavaria	<ul style="list-style-type: none"> Ordinance (VO) of December 22, 1998 on minesite and extraction royalties, (Legal Gazette – GVBl., 1998 Page 1050), last amended by € rule of 2001 	<ul style="list-style-type: none"> Crude oil, natural gas, €20 for each km² or fraction thereof for the first year¹ Maximum rate: €60 	
Berlin	<ul style="list-style-type: none"> see Brandenburg 		
Brandenburg	<ul style="list-style-type: none"> Ordinance (VO) of December 11, 2015 on minesite and extraction royalties in the state of Brandenburg (Brandenburg Extraction Royalties Ordinance – BbgFördAV) (Law and Ordinance Gazette – GVBl.II/15, No. 69) 	<ul style="list-style-type: none"> Crude oil, natural gas, €20 for each km² or fraction thereof for the first year¹ Maximum rate: €60 	
Bremen	<ul style="list-style-type: none"> Bremen Ordinance (VO) of May 10, 2012 on minesite and extraction royalties (Legal Gazette of the Free Hanseatic City of Bremen, Page 180) 	<ul style="list-style-type: none"> Crude oil, natural gas, €20 for each km² or fraction thereof for the first year¹ Maximum rate: €80 	

* The specified state-specific levy rates are based on the German Federal guidelines for minesite and extraction royalties as per the BBergG.

** All regulations on the amount of the levy rates and all special regulations are time-limited. They are regularly checked and adjusted by updating the state regulations on minesite and extraction royalties (where required).

Extraction royalties**		
	Levy rates	Special regulations
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Crude oil: 19% Rock salt: 5% or 2.5%⁵ Natural gas: 37% of the price obtained⁷ 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Geothermal energy Brine Crude oil and natural gas: site conditioning costs at the levy rate²
	<ul style="list-style-type: none"> 5% of the market value for oil extracted in the Aitingen area 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Crude oil with the exception of the Aitingen area Natural gas with the exception of the Breitbrunn-Eggstätt area
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Crude oil, argillaceous (clayey) rocks: 10% Gravels and sands: 7% Peat, including available organic silt and natural stone: 5% Rock salt and brine: 1% or 0.5%⁵ Natural gas: 10% of the assessed rate⁸ 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Geothermal energy Natural brine and peat, extracted for balneological purposes or as a carrier for geothermal energy Crude oil and natural gas: site conditioning costs at the levy rate²
	<ul style="list-style-type: none"> Natural gas: 36% of the price obtained⁷ Crude oil: 9% of the market value multiplied by the taxable quantity⁶ Sands and gravel sands: 10% of the market value for extraction in coastal waters and continental shelf zones Brine: 1% or 0.5% of the market value⁶ 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Geothermal energy Natural brine, extracted for balneological purposes Sulphur Crude oil and natural gas: site conditioning costs at the levy rate⁴ 75% in the year extraction was started, and in the following 5 calendar years (in the case of extraction from deposit areas with an average effective-permeability below 0.6 millidarcy) <ul style="list-style-type: none"> 40% in the case of extraction from almost depleted deposits with an average extraction rate of less than 4,500 m³/h.

1 Increases by €20 for each subsequent year up to the specified maximum.

2 Upper limit: The total extraction royalties levied on the deposits/fields in question, as per the state ordinance (LVO)

5 Applies to rock salt extracted during the construction of an underground store, but not economically exploited.

6 Applies to crude oil, which is extracted (1) from abandoned deposits which have been re-developed, (2) from drill holes with a depth of more than 4,000 m or (3) (additionally) by means of tertiary processes.

7 In €/kWh including the further transport costs. In the state of Bremen, a reduction in the assessed rate by the actual further transport costs is possible. It applies to natural gas used in purification plants in the amount of €0.002045/m³.

8 The weighted average of the cross-border prices for natural gas as published monthly by Destatis during the levy period in €/kWh.

Federal State	Legal basis	Minesite royalties	
Hamburg	<ul style="list-style-type: none"> Ordinance (VO) of December 24, 1985 on minesite and extraction royalties, (Hamburg Law and Ordinance Gazette – HmbGVBl., Page 389), last amended by the VO of April 22, 2014 (HmbGVBl., Page 142). 	<ul style="list-style-type: none"> Crude oil, natural gas, €20 for each km² or fraction thereof for the first year¹ Maximum rate: €80 	
Hesse	<ul style="list-style-type: none"> Ordinance (VO) of October 6, 2014, amending the Hessian ordinance on minesite and extraction royalties (Law and Ordinance Gazette - GVBl. I, Page 232) (time-limited to December 31, 2019) 	<ul style="list-style-type: none"> Crude oil, natural gas, €20 for each km² or fraction thereof for the first year¹ Maximum rate: €60 	
Mecklenburg-Western-Pomerania	<ul style="list-style-type: none"> Ordinance (VO) of April 8, 2014, on minesite and extraction royalties (FeFördAVO MV) (Law and Ordinance Gazette – GVOBl., M-V, Page 140) 	<ul style="list-style-type: none"> Crude oil, natural gas, €20 for each km² or fraction thereof for the first year¹ Maximum rate: €80 	

** All regulations on the amount of the levy rates and all special regulations are time-limited. They are regularly checked and adjusted by updating the state regulations on minesite and extraction royalties (where required).

Extraction royalties**		
	Levy rates	Special regulations
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Crude oil: 7% Brine: 1% or 0.5%⁵ Natural gas: 37% of the assessed rate⁷ multiplied by the taxable volume. Currently exempted from all duties under an annual renewal clause. 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Geothermal energy Natural brine, extracted for balneological purposes Sulphur Crude oil and natural gas: Natural & petroleum gas: site conditioning costs at the levy rate²
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Non-ferrous metals and barite: 1% Rock salt and brine: 1% or 0.5%⁵ Potash, magnesium and boron salts: 1% of the assessed rate¹⁰ 	<ul style="list-style-type: none"> 100% exemption Geothermal energy <ul style="list-style-type: none"> Natural brine, extracted for balneological purposes Non-ferrous metals and barite: Royalties in the amount of the guaranteed percentage of the processing costs (incurred during the levying period) that are necessary in order to produce the commercial product.
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Crude oil: 21% Gravels, chalk, limestone, gravel, quartz and special sands and clayey rocks: 10% Peat/Organic Silt: 5% Brine: 1% or 0.5%⁵ Natural & petroleum gas: 20% of the assessed rate⁸ 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Geothermal energy Marine pebbles and sands, collected for coastal protection purposes Sulphur

1 Increases by €20 for each subsequent year up to the specified maximum.

2 Upper limit: The total extraction royalties levied on the deposits/fields in question, as per the state ordinance (LVO)

5 Applies to rock salt extracted during the construction of an underground store, but not economically exploited.

7 In €/kWh including the further transport costs. In the state of Bremen, a reduction in the assessed rate by the actual further transport costs is possible. It applies to natural gas used in purification plants in the amount of €0.002045/m³.

8 The weighted average of the cross-border prices for natural gas as published monthly by Destatis during the levy period in €/kWh.

10 Sum of the products of (1) the average content of potassium oxide (K₂O) and magnesium sulphate (MgSO₄) extracted from the crude salts on the licenced site and (2) the amount of €0.75 for potassium oxide (K₂O) and €0.25 for magnesium sulphate (MgSO₄) per ton and percentage point thereof.

Federal State	Legal basis	Minesite royalties	
Lower Saxony	<ul style="list-style-type: none"> Lower Saxony Ordinance (VO) on minesite and extraction royalties, December 11, 2010 (Lower Saxony Legal Gazette – Nds. GBl, Page 395), last amended by the VO of December 15, 2014 (Nds. GBl, Page 273). 	<ul style="list-style-type: none"> Crude oil, natural gas, €20 for each km² or fraction thereof for the first year¹ Maximum rate: €80 	
North Rhine-Westphalia	<ul style="list-style-type: none"> VO of December 14, 1998, on minesite and extraction royalties (FFVO) 	<ul style="list-style-type: none"> Crude oil, natural gas, €20 for each km² or fraction thereof for the first year¹ Maximum rate: €60 	

** All regulations on the amount of the levy rates and all special regulations are time-limited. They are regularly checked and adjusted by updating the state regulations on minesite and extraction royalties (where required).

Extraction royalties**		
	Levy rates	Special regulations
	<ul style="list-style-type: none"> Crude oil: 18% of the market value for crude oil extracted from the Bramberge, Emlichheim, Georgsdorf, Ringe and Rühlermoor Valendis deposits Natural gas: 30% of the assessed rate⁸ multiplied by the taxable volume Brine: 1% or 0.5%⁵ 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Geothermal energy Natural brine, extracted for balneological purposes Sulphur Crude oil: site conditioning costs at the levy rate for the taxable areas², as well as <ul style="list-style-type: none"> 50% in the case of extraction using tertiary procedures Natural gas: site conditioning costs at the levy rate², and <ul style="list-style-type: none"> 50% in the case of extraction from a deposit (1.) in the area of the continental shelf or (2.) in coastal waters using production platforms 75% in the year extraction was started, and in the following 5 calendar years (in the case of extraction from deposit areas with an average effective permeability below 0.6 millidarcy) 40% in the case of extraction from almost depleted deposits with an average extraction rate of less than 4,500 m³/h.
	<ul style="list-style-type: none"> Mine gas 0.3 €cents per m³ of methane¹² Natural gas: 16% of the assessed rate^{9, 12, 13} Rock salt and brine: 1% or 0.5%⁵ of the market value 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Geothermal energy Natural brine, extracted for balneological purposes Natural and mine gas: site conditioning costs at the levy rate³, and <ul style="list-style-type: none"> 50% on gas (1.) additionally extracted by means of processes for opening up low-permeability deposits, (2.) extracted at depths of more than 5,000 metres or (3.) extracted from hard coal seams at the surface 50% for a period of 5 years from the start of extraction in the case of extraction in areas in which development operations were started during the period from January 1, 1999 to December 31, 2005 in whole or in part upon application in individual cases, insofar as any threat to public safety or order caused by the extraction operation is averted.

1 Increases by €20 for each subsequent year up to the specified maximum.

2 Upper limit: The total extraction royalties levied on the deposits/fields in question, as per the state ordinance (LVO)

3 Upper limit: The value of the natural gas extracted in the natural gas field, assessed pursuant to the state ordinance (LVO).

5 Applies to rock salt extracted during the construction of an underground store, but not economically exploited.

8 The weighted average of the cross-border prices for natural gas as published monthly by Destatis during the levy period in €/kWh.

9 The quotient of the cross-border value and the amount of natural gas imported during the levy period in €cents/m³.

12 A reduction of the assessed rate by a flat rate for further transport costs is possible.

13 A reduction of the assessed rate by 0.205 €cents/m³ for natural gas found in refining plants is possible.

Federal State	Legal basis	Minesite royalties	
Rhineland-Palatinate	<ul style="list-style-type: none"> LVO (State Law Ordinance) of September 23, 1986 on minesite and extraction royalties (Rhineland-Palatinate Law and Ordinance Gazette 1986, Page 271), last amended by Art. 1 of the VO of December 3, 2014 (Rhineland-Palatinate Law and Ordinance Gazette 2014, Page 286) 		
Saarland	<ul style="list-style-type: none"> VO of March 5, 1987 on minesite and extraction royalties (Official Gazette, Page 250), last amended by the law of November 7, 2001 (Official Gazette, Page 2158) 		
Sachsen	<ul style="list-style-type: none"> Saxon State Ministry of Economy, Labour and Transport VO of July 21, 1997 on minesite and extraction royalties (FFAVO); legally amended as of January 1, 2009; last amended by VO of June 20, 2012 (Saxon GVBL., Page 442). 		
Saxony-Anhalt	<ul style="list-style-type: none"> VO of Monday, November 18, 1996 on minesite and extraction royalties (Saxony-Anhalt Official Gazette, Page 348), last amended by the VO of February 23, 2016 (Saxony-Anhalt Official Gazette, Page 111). 		

** All regulations on the amount of the levy rates and all special regulations are time-limited. They are regularly checked and adjusted by updating the state regulations on minesite and extraction royalties (where required).

Extraction royalties**		
	Levy rates	Special regulations
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Crude oil: 12%; for the Römerberg-Speyer and Rülzheim deposits 15% and 7% resp. 10% for crude oil extracted from (1.) dead oil deposits, (2.) abandoned deposits which have been re-developed, (3.) depths of more than 4,000 metres, or extracted additionally by means of (4.) tertiary processes or (5.) processes for opening up low-permeability deposits. Brine: 1% or 0.5%⁵ Petroleum gas: 10% of the price obtained^{7, 12} 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Natural brine, extracted for balneological purposes Geothermal energy Natural gas extracted for direct conversion into electricity Crude oil and natural gas: Natural & petroleum gas: site conditioning costs at the levy rate⁴
	<ul style="list-style-type: none"> Natural gas: 10% of the price obtained⁷ 	<ul style="list-style-type: none"> Natural gas: site conditioning costs at the levy rate³
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Fluorite <ul style="list-style-type: none"> > 280 €/ton: 1% > 320 €/ton: 2% > 360 €/ton: 4% > 400 €/ton: 10% Gravels and gravel sands: 8% Natural stone: 4% 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Lignite Geothermal energy Fluorite < 280 €/ton Marble Barite Brine Free-to-mine natural resources extracted together with fluorite
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Gravels, sands, quartz and special sands: 7% Natural stone: 5% Rock salt and brine: 1% or 0.5%⁵ Stone for the production of ashlar and decorative stones from sandstone: 4% of the assessed rate¹¹ 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Lignite

- 3 Upper limit: The value of the natural gas extracted in the natural gas field, assessed pursuant to the state ordinance (LVO).
- 4 Upper limit: Market value or the value of the crude oil and petroleum gas extracted in the oil field, assessed pursuant to § 31(2), 2nd sentence of the BBergG.
- 5 Applies to rock salt extracted during the construction of an underground store, but not economically exploited.
- 7 In €/kWh including the further transport costs. In the state of Bremen, a reduction in the assessed rate by the actual further transport costs is possible. It applies to natural gas used in purification plants in the amount of €0.002045/m³.
- 11 20% of the quotients of the production value and the production volume of the production achieved during the levy period in €/ton, assessed from the data collected by the Destatis.
- 12 A reduction of the assessed rate by a flat rate for further transport costs is possible.

Federal State	Legal basis	Minesite royalties	
Schleswig-Holstein	<ul style="list-style-type: none"> State ordinance (VO) on minesite and extraction royalties, December 11, 2012 (Schl.-H. Law and Ordinance Gazette, Page 776), last amended by the State Law Ordinance (LVO) of December 3, 2014 (Schl.-H. Law and Ordinance Gazette, Page 496). 	<ul style="list-style-type: none"> Crude oil, natural gas, €20 for each km² or fraction thereof for the first year¹ Maximum rate: €80 	
Thuringia	<ul style="list-style-type: none"> Thuringia Ordinance (VO) on minesite and extraction royalties, August 23, 2005, last amended by the VO of November 30, 2015 (Law and Ordinance Gazette – GVBl, Page 210). 		

** All regulations on the amount of the levy rates and all special regulations are time-limited. They are regularly checked and adjusted by updating the state regulations on minesite and extraction royalties (where required).

Extraction royalties**		
	Levy rates	Special regulations
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Crude oil: 40%, multiplied by the taxable amount. In the case of extractions from the Deutsche Nordsee A6/B4 and Heide-Mittelplate I licenced extraction sites, the calculation of the extraction interest is carried out as follows: $Z = 0.0076 * \ddot{O}P^2 - 1.15 * \ddot{O}P + 64.5$ (Z = interest, $\ddot{O}P$ is one thousandth of the market value multiplied by 135), where the minimum extraction interest rate is 21%, with a maximum of 40%. Brine: 1% or 0.5%⁵ Natural gas: 40% of the assessed rate⁸ multiplied by the taxable volume. 18% in the case of extractions from the Deutsche Nordsee A6/B4 and Heide-Mittelplate I authorised deposits 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Natural brine, extracted for balneological purposes Geothermal energy Crude oil and natural gas: Natural gas: site conditioning costs at the levy rate²
	<ul style="list-style-type: none"> Assessed at market value <ul style="list-style-type: none"> Gypsum and anhydrite: 5% Gravels and gravel sands: 8% Natural stone: 5% Peat/Organic Silt 3% Ashlar and decorative stones: 4% of the assessed rate¹¹ 	<ul style="list-style-type: none"> 100% exemption <ul style="list-style-type: none"> Geothermal energy: Prospecting and extraction Rock salt: Extraction

1 Increases by €20 for each subsequent year up to the specified maximum.

2 Upper limit: The total extraction royalties levied on the deposits/fields in question, as per the state ordinance (LVO)

5 Applies to rock salt extracted during the construction of an underground store, but not economically exploited.

8 The weighted average of the cross-border prices for natural gas as published monthly by Destatis during the levy period in €/kWh.

11 20% of the quotients of the production value and the production volume of the production achieved during the levy period in €/ton, assessed from the data collected by the Destatis.

iii. Trade tax

Local authorities are responsible for the administration of trade tax, which is levied by the municipality in which the business is located. The purpose of the trade tax is to tax the objective earning potential of a commercial enterprise. However, unlike corporation tax, trade tax is not linked to economic performance. Additions and deductions correct the income of the commercial enterprise (§§ 8 and 9 GewStG [Trade Tax Act]). To calculate trade tax, the responsible tax office determines the taxable amount, which is 3.5% of the objective earning potential. The responsible municipality sets a uniform tax factor for all companies, which must be at least 200% (§ 16, (4), sentence 2, GewStG) and calculates the trade tax based on the taxable amount and the tax factor.

A company (which extracts natural resources) with the legal form of a partnership or limited company is subject to trade tax. If the operating facility is located in an area belonging to several municipalities or is operated in a number of municipalities, the assessment basis for trade tax is distributed among these individual municipalities (so-called 'reallocation'). Salaries in the individual operating facilities are usually used as a yardstick for reallocation, so each municipality concerned can collect its share of the trade tax paid by a natural resources extractive sector company.

An overview of the trade tax assessment rates (2016) of the municipalities in Germany is available via the Federal Office of Statistics (<https://www.destatis.de/EN/Publications/Specialized/SpecializedPublications.html>). Commercial taxation is the main source of tax for municipalities, followed by land tax. The municipalities must pay a portion of their tax revenue to the Federal and state governments as trade tax apportionments. The remainder of the trade tax for the municipalities flows into their general budgets, thus helping to finance the local infrastructure and to provide education and social services among other things.

iv. Lease payments

In Germany, the extraction of natural resources is governed by the BBergG, if the resources concerned are free-to-mine or privately-owned natural resources. As per § 3(3), BBergG, free-to-mine natural resources include metals, salts and fossil fuels such as hydrocarbons, lignite and hard coal. The ownership of a property does not extend to free-to-mine natural resources, so in this respect the property rights of the landowner are limited. Privately-owned natural resources, however, are the property of the landowner, who may carry out prospecting and extract them if found, without the need for any additional special legal title in addition to the operating permit and other required public-law permits. Its inclusion in the scope of validity of the BBergG aims to make their extraction subject to a uniform legal framework throughout Germany and (in particular) to uniformly regulate natural resource extraction in underground mining and ensure uniformity in the management of mine inspection authorities.

In addition to privately-owned natural resources, there are the so-called 'landowner's natural resources'. These are bulk raw materials, such as gravel and sands, which are predominantly used as building materials and are extracted through opencast mining. Like the privately-owned natural resources, these are also the property of the landowner, but they are neither subject to mining law nor to mining inspection.

A company does not have to own the land to extract privately-owned natural resources and landowners' natural resources. If the owner of the land simply makes it available to the company on the basis of a legal private contract (e.g. through a lease agreement) – and this is often the case – that alone suffices. Such contractual arrangements may include fixed payments or payments that depend on the quantity extracted, or a combination of both variants.

On the Federal state side, official bodies including local authorities (e.g. counties or municipalities) and forestry offices may have the roles of landowners and landlords. The revenues from the leaseholds are therefore transferred to municipal budgets or state budgets, thus making it possible to finance statutory tasks (et alia).

v. Excise duties

Energy and electricity taxes are particularly relevant for companies in the natural resources sector, within the framework of excise duties. Like the other excise duties, energy and electricity taxes are explicitly excluded from the reporting obligation within the framework of the legal commercial (corporation) payment report, as per the EU Accounting Directive and its implementation in § 341r no. 3b of the HGB (German Commercial Code).

The Energy and Electricity Tax Act is based on the harmonised provisions of the EU Energy Tax Directive (Council Directive 2003/96/EC of October 27, 2003, OJ EU No. L 283, p. 51). On April 1, 1999, the electricity tax was introduced in Germany within the framework of the law covering entry into the ecological tax reform, and the tax rates of the energy tax (at that time still called mineral oil tax) were gradually increased. This created incentives to reduce energy consumption and to develop resource-conserving products and production processes.

The Electricity Tax Act and the Electricity Tax Implementing Ordinance constitute the legal basis for levying electricity tax. The Federal Government is entitled to electricity tax revenues, which amounted to €6.6 billion in 2015. The revenue from the electricity tax and the higher taxation of fuels and heating materials obtained in connection with the ecological tax reform contribute to keeping social insurance contributions at a manageable level. Administration and collection tasks are carried out by customs administration.

The electricity tax is levied for consumption, but it is usually levied as an indirect tax on the supplier and passed on to consumers via the electricity price for practical reasons – and this means that companies in the extractive sector must also pay electricity tax. The statutory tax rate is €20.50 per megawatt hour. Reduced tax rates can be considered for various purposes, e.g. railway electricity, whereas the production industry can particularly benefit from tax relief (see Chapter 7).

The energy tax is an excise duty on energy products. It is governed by Federal legislation, and levied to tax the use of energy products as fuels or heating fuels within the German tax territory. The Energy Tax Act defines energy products as being (in particular), petrol, diesel fuel, light and heavy fuel oil, liquefied petroleum gas, natural gas, natural gas and coal as well as bio-diesel, vegetable oil and energy products of a similar nature that are used as motor or heating fuels. The amount of the tax varies according to the energy product and its intended use and is regulated in the Energy Tax Act. Tax concessions are standardised in the Energy Tax Act for certain energy products and intended uses (see Chapter 7). Like the electricity tax, energy tax is levied by the customs administration, and the revenues flow to the Federal Government. In 2015, energy tax revenues amounted to approx. €40.3 billion. The revenue from energy and electricity taxes is the third-largest source of income for the Federal Government, after income tax and VAT.

The sheer financial volume of electricity and energy tax payments by companies in the natural resources extractive sector, and the financial scale of electricity and energy tax concessions (see Chapter 7) cannot be feasibly presented without a disproportionate amount of bureaucratic effort, since no statistics showing the electricity and energy tax payments for individual economic sectors exist yet.⁵

⁵ In the MSG, there was no consensus on the extent to which energy and electricity tax payments were among the most important payment flows, therefore they are not included in the payment reconciliation.

c. How important is tax secrecy in Germany?

Tax secrecy has a high priority in Germany. Since taxpayers must fully disclose their tax details to the financial authorities within the framework of their co-operation obligations, the privacy of their information must be ensured. This is ensured by the Tax Secrecy provisions (§§ 30 et seq.) of the German Tax Code (AO). The provisions of the Code regulate who must protect tax secrecy and under what conditions the disclosure or utilisation of data (which is subject to tax secrecy) is permitted. Tax secrecy thus serves to protect the taxpayer.

A breach of tax secrecy can only be permitted under very strict conditions. Any disclosure of information which is subject to tax secrecy is normally only permitted if expressly authorised by law, if the person concerned agrees to the disclosure, or if there is a compelling public interest in the tax data in question.

This is why the disclosure of data for voluntary reporting initiatives – like the Extractive Industries Transparency Initiative – requires the explicit consent of the companies concerned. Similarly, the implementation of reconciliation regarding tax payments within the framework of the EITI process requires the permission of the taxpayer in the form of a power of attorney for the Independent Administrator to query the relevant tax data.

d. Public reports

i. Statutory reporting obligation for extractive sector companies (BilRUG)

The Accounting Directive Implementation Law (BilRUG) of July 23, 2015, implemented the requirements of the EU Accounting Directive 2013/34/EU of June 26, 2013 into German legislation. Many provisions of

Sections 341q et seq. in the HGB correspond to the requirements of the EITI. All the ‘large’ limited companies and limited liability partnerships involved in the extractive sector or in the logging sector in primary forests are subject to these reporting requirements under commercial law (cf. § 341q, HGB). The term ‘large’ in the legal sense refers to companies that exceed at least two of the following three criteria on two successive reporting dates (§ 267(3), HGB):

1. Balance sheet total of €20 million.
2. Net turnover of €40 million.
3. An annual average of 250 employees.

Within the meaning of § 264d of the HGB, capital market-oriented limited companies, as well as credit institutions and insurance companies in the legal form of limited companies (including limited liability commercial partnerships) are also subject to the reporting obligation, irrespective of their size. Subsidiaries (in corporate group structures) that meet the size criteria and the criterion of activity in combination with their parent companies are also subject to reporting obligations. The size and location of the pertinent subsidiary is not relevant in this case.

The companies subject to the legal provisions are required to disclose all payments (specified in § 341r, No. 3 of the HGB) made to government agencies above a ‘materiality threshold’ of €100,000 per government agency, if these payments fall under one of the reasons for payment specified in § 341r, No. 3. In addition to tax payments, this includes e.g. licenses, concessions and other contractual relationships related to the extraction of natural resources. The data must be allocated to individual projects if more than one project was carried out in the year under review.

ii. Similarities and differences in the reporting obligation as per EITI

In addition to the statutory reporting requirements pursuant to BilRUG, the most important financial flows of the extractive industry are also disclosed via the EITI (see Chapter 9). The reporting requirements under commercial law largely correspond to those of the EITI. However, there are also differences.

One fundamental difference between the BilRUG and the EITI lies in the extent of the reporting. EITI stipulates that the participating companies from the natural resources extractive sector publish all significant payments they make to government agencies. In contrast to BilRUG, the material payments are not exhaustively listed by EITI and must be clarified in the course of the EITI process (see Chapter 9). The EITI standard does not provide for a distinction between payments above or below the limit of at least €100,000 annually. The German D-EITI stakeholders have agreed to adopt the materiality threshold of the BilRUG.

In contrast to BilRUG, EITI relies on the mutual disclosure of the payment flows. The state must also therefore grant an insight into its income from the extractive industry, for the purposes of payment reconciliation. In this context, one of EITI's main concerns is to make the payment flows available in the form of open data, thereby supporting the public debate.

e. How are the revenues of the extractive industry allocated?

The Federal state structure of the Federal Republic of Germany is reflected in the distribution of tax revenues. The level which has the authority for the revenues, i.e. how they are distributed between the Federal Government, the states and the municipalities is regulated by Article 106 of the Basic Law (GG), in which a distinction is made between so-called 'community taxes' and taxes which flow in their entirety to the municipalities,

states or Federal Government. In the case of community taxes, the revenues are shared between the Federal Government and the states.

With regard to the extraction of natural resources, corporation tax and income tax are relevant examples of community taxes. The Federal Government and the states are each allocated 50% of corporation tax revenues.

Trade tax, on the other hand, is purely a community tax, and as the most important source of income of the communities, it is allocated to the individual municipalities in which the relevant operating facilities/factories are situated. The Federal Government and the states' share in the revenues of the trade tax through a specific allocation and redistribution mechanism.

With regard to the revenues from extraction royalties, redistribution between the Federal Government and the states also takes place. The revenues flow into inter-state financial equalisation. The Federal Government is entitled to the revenues from electricity and energy taxes.

As per § 3 of the Tax Code, the tax revenues from the extraction of natural resources are not earmarked for a specific purpose; the persons responsible for the Federal Budget, the state budgets and the municipal budgets decide how they will be used. The amount and use of revenues and expenditure are disclosed in detail every year. To this end, the Federal Government and the states adopt budget laws (the municipalities adopt budget statutes) that include their own budgets. When the budgets are published, all citizens then have free access to the information.

To facilitate public access to information on the use of tax revenues, the BMF publishes information about the Federal Budget on the <https://www.bundeshaushalt-info.de/> web platform. You can also visit the <https://www.offenerhaushalt.de> website for information on other budgets.

5

THE ECONOMIC IMPORTANCE OF THE EXTRACTIVE INDUSTRY IN GERMANY



a. Contribution to the GDP

Germany is the largest economy in Europe and the fourth largest in the world, with a GDP of some €3,032.82 billion in 2015. The gross value added of the 'Mining and Quarrying' economic sector amounted to €4.16 billion in 2015, which accounted for 0.14% of the GDP (for detailed source information see final noteⁱⁱⁱ).

b. Contribution to government revenue

The natural resources sector generates revenue for the State at different Federal levels. The most important revenues are the taxes from general company taxation (corporation tax and income tax, as well as trade tax and the solidarity surcharge), as well as natural resource-specific minesite and extraction royalties. Added together, these revenues from the extractive industry amounted to around €750 million in 2015. This corresponds to a share of 0.06% of the total income of the Germany State. Other payments are also made by the extractive sector to the state, such as leaseholds, energy and electricity taxes (see Chapter 4), as well as payments relating to interventions in nature conservation legislation and water use (see Chapter 6), which are not shown here.

i. Taxes

The sum of the above-mentioned taxes paid by the extractive industry in 2015 amounted to €361 million. This corresponds to a proportion of around 0.03% of the State's total income. The largest amount of tax revenues is generated by trade and corporation taxes. However, tax revenues from the extractive industry have declined in recent years.

The following table shows the estimated revenues from the above taxes of the extractive industry and their share of the total tax revenue (for detailed source information see final noteⁱⁱⁱ). Other payment flows not addressed in the following table are described in Chapters 4 and 6.

Table 4: Tax revenues from the natural resources sector (corporation tax, trade tax, income tax and the solidarity surcharge)

Type of tax	Year					
	2010	2011	2012	2013	2014	2015
	In millions of €					
Corporation tax	132	154	173	154	148	122
Trade tax	155	248	266	236	227	187
Income tax	39	34	60	53	51	42
Solidarity surcharge	9	10	13	11	11	9
Totals	335	446	512	454	438	361
Total income of the State	1,030,908	1,103,862	1,163,357	1,201,058	1,244,589	1,301,816
Proportion of the above taxes on total receipts	0.03%	0.04%	0.04%	0.04%	0.04%	0.03%
for information only:						
Updating factor			7.09%	-11.40%	-3.48%	-17.61%

For detailed source information see final noteⁱⁱⁱ.

ii. Extraction and minesite royalties

Extraction royalties are levied by the mining authorities of the Federal States. They vary greatly, depending on the local mining activity and the fixed tax rates in the individual Federal States. A total of €232.5 million in extractive sector revenues was levied in Germany in 2016. The front runner was by far the state of Lower Saxony, with more than €172 million.

Schleswig-Holstein was ranked second with around €48 million, followed by the Rhineland-Palatinate with around €5 million. In the case of some Federal States, the amount of revenue has been subject to significant fluctuations in the past few years. This may have different reasons, e.g. falling world market prices for raw materials or changes in production quantities (for detailed source information see final note^{iv}).

Table 5: The following table shows the revenue from royalties paid by the extractive sector in 2015 and 2016

Extraction royalties in €	2015	2016
Federal state		
Baden-Wuerttemberg	117,387	128,185
Bavaria	479,125	1,479,828
Berlin	0	0
Bremen	0	0
Hamburg	167,392	86,573
Hesse	455,052	462,929
Lower Saxony	295,865,995	172,075,617
North Rhine-Westphalia	1,451,800	666,541
Rhineland-Palatinate	8,112,789	5,191,731
Saarland	137,667	33,121
Schleswig-Holstein	75,966,953	48,139,515
Brandenburg	528,292	536,917
Mecklenburg-Western-Pomerania	466,322	247,585
Saxony	335,156	523,795
Saxony-Anhalt	1,363,756	1,480,734
Thuringia	1,507,056	1,454,320
Total extraction royalties	386,954,750	232,507,396
Total income of the Federal State in millions of €	1,301,816	1,351,851
Proportion	0.03%	0.02%

For detailed source information see final note¹⁰.

The revenues from minesite royalties of the Federal States are not systematically compiled or published on a nationwide basis. Their amount is significantly

lower than the amount of extractive sector revenues and they are only applicable in some federal States (see the table below):

Table 6: Revenue from minesite royalties paid by the extractive sector in 2015

Minesite royalties in €	2015
Federal state	
Bavaria	45,200
Brandenburg	29,578
Lower Saxony	351,000

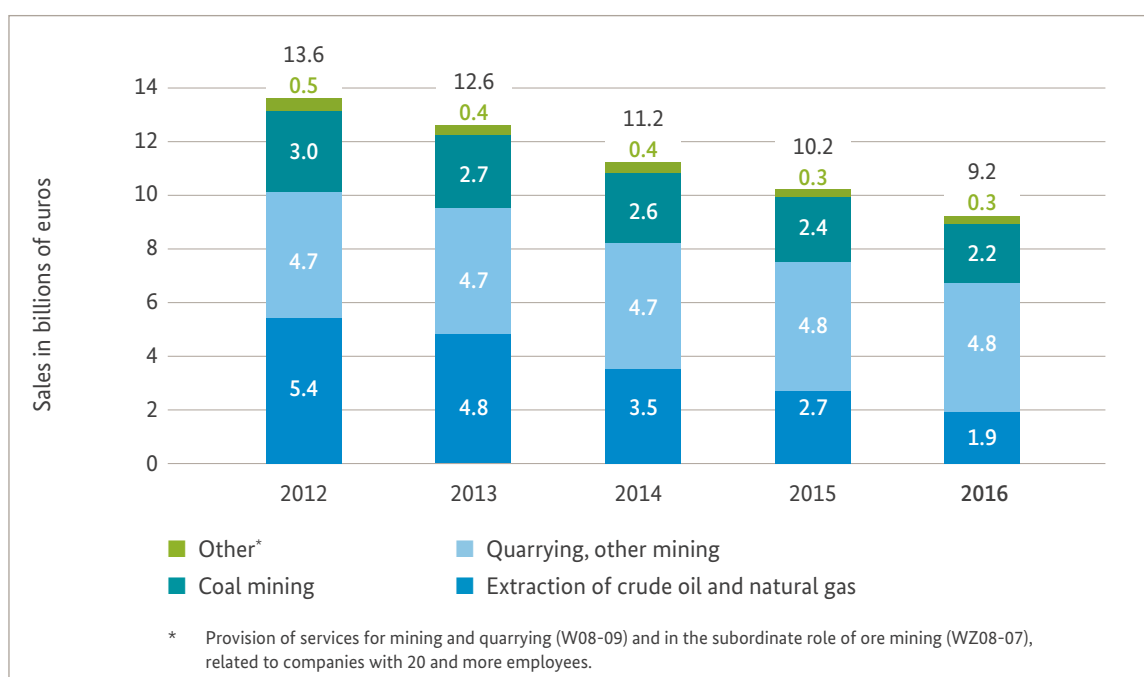
For detailed source information see final note^{iv}.

c. Turnover

‘Mining and Quarrying’ sector companies generated a total turnover of around €9.2 billion in 2016. Around €8.1 billion (about 88%) of this sum was attributable

to domestic sales and €1.1 billion (about 12%) to foreign sales.

Figure 1: Sales in the ‘Mining and Quarrying sector’, 2012 – 2016



For detailed source information see final note^v. Own presentation.

d. Contribution to export

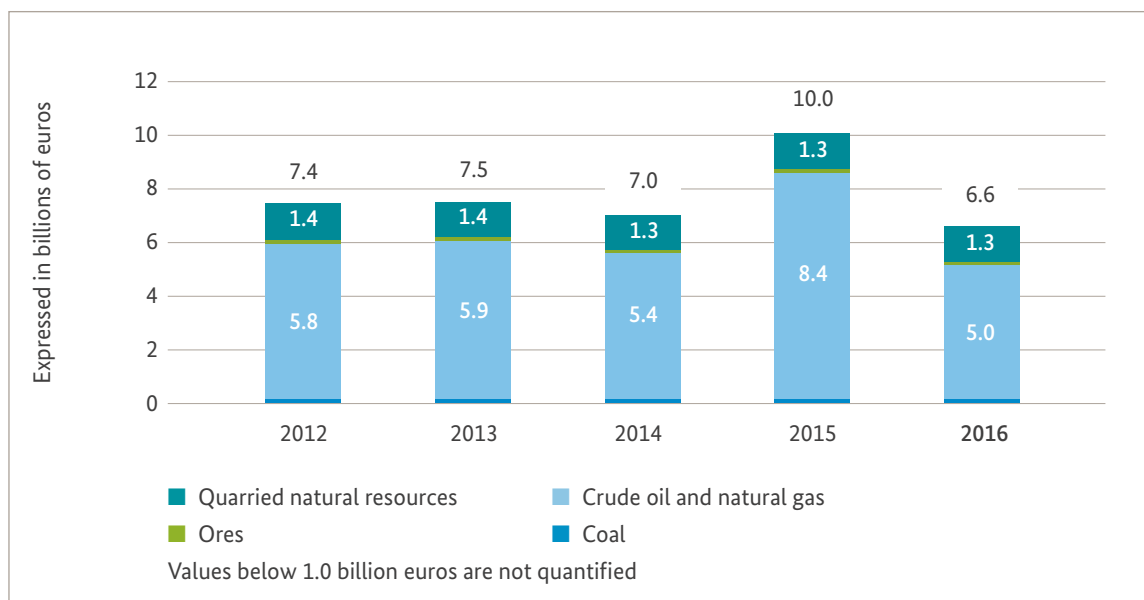
Germany is characterised by a strongly export-oriented and diversified economic structure. In 2016, the country exported goods worth a total of €1,2 trillion.

Products of the extractive industries accounted for some €6.6 billion of this amount, equivalent to 0.54 % of total exports. The crude oil and natural gas sectors

accounted for the largest share of exports at almost €5 billion. However, this mainly involved re-exports of natural gas. Domestically-extracted natural gas is almost completely consumed in Germany. This sector is followed by 'Quarried natural resources, other

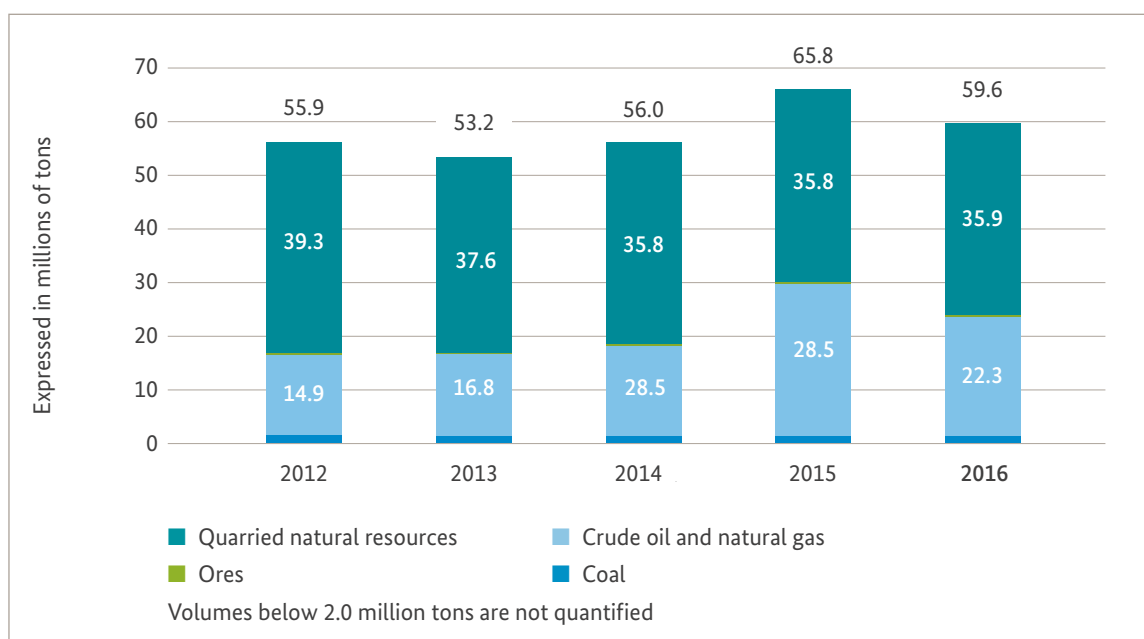
mining products' with €1.3 billion. Exports also included ores (around €130 million) and coals (€125 million). Here too, the figures include re-exports, but to a much lesser extent compared to natural gas.

Figure 2: Exports in the 'Mining & Quarrying sector', 2012 – 2016 (value)



For detailed source information see final note^{vi}. Own presentation.

Figure 3: Exports in the Mining & Quarrying sector', 2012 – 2016 (volume)



For detailed source information see final note^{vi}. Own presentation.

e. Contribution to employment

Employees in the extractive sectors have a great variety of different occupations. Mine surveying engineers, for example, work on the exploration and surveying of resources, natural resources and geotechnical engineers carry out the setup and operation of the technical facilities and mining technologists perform mining operations in surface and underground minesites. The industry also offers qualified apprenticeships, such as industrial and process mechanics or electronics engineers.

As of the reporting date on June 6, 2016, a total of 71,074 were employed under the mandatory social security scheme in extractive sectors in Germany; more than half of all these employees worked in the

‘Quarried natural resources, other mining products’ sector (around 53 %) and more than a fifth worked in the Coal Mining sector (22 %). These figures include a total of 2,373 trainees working in the extractive sectors on the same reporting date. In relation to the total number of employees who pay social security contributions in Germany, this represented a percentage of around 0.23 % in the natural resources extractive sector.

Another important employment factor is the secondary effects of the extractive sector, through which additional jobs and apprenticeships are created. These mainly include the services of the suppliers and subcontractors who are e.g. commissioned with the management of logistical and gastronomic tasks or with the construction and operation of minesites.

Table 7: Employees of the ‘Mining and Quarrying’ sector – 2016

	Persons employed under the mandatory social security scheme as of the reporting date on June 6, 2016	No. of apprentices among these employees
Mining and quarrying in total	71,074	2,373
including:		
Coal mining	15,881	860
Extraction of crude oil and natural gas	3,045	105
Ore mining	860	*
Quarried natural resources, other mining products	37,982	1,068
Provision of Services for Mining	13,306	340

For detailed source information see final note^{vii}.

* For reasons of data protection and statistical confidentiality, numerical values of 1 or 2 and data from which such numerical values can be mathematically deduced are made anonymous.

6

DEALING WITH HUMAN INTERVENTION IN NATURE



a. Rules of intervention under nature conservation law

Every mining activity is associated with interventions in nature and landscape and can result in serious environmental impacts. At the same time, however, a contribution can be made to the conservation of biodiversity on former minesites and on certain areas of operating minesites. Compensatory actions, such as compensatory or substitution measures and compensatory payments are intended to compensate for interventions in nature and landscape and to restore their natural function.

It is estimated that around 1% of Germany's entire area will be necessary to ensure the country's natural resources in the medium to long term. The area currently being mined amounts to 29 km², or 0.008% of the total area of Germany (Federal Institute for Geosciences and Natural Resources 2016, BGR). This corresponds to a daily area utilisation of an average of 8 ha. However, the areas used for the extraction of natural resources differ in their concentrations in the various regions, as a result of which the associated interventions in nature and landscape also evince great regional differences and concentrations.

Legal framework

In the Federal Nature Conservation Act (BNatSchG), the general principle regarding interventions is that major interventions in nature and landscape are to be primarily avoided and minimised by the polluter. Unavoidable interventions are to be compensated by means of compensatory or substitution measures (hereinafter 'compensatory measures') or, if this is not possible, by a compensatory payment in monetary form (§ 13 BNatSchG). This general principle thus forms a processing cascade, which first provides for avoidance, then compensatory measures and, as a

last resort, a compensatory payment. In the case of mining measures, this avoidance rule primarily targets a variant that is as environmentally-friendly as possible, since site alternatives due to the type of natural resource and technical considerations cannot be possible, and zero variances can be eliminated due to the economic priority of natural resources extraction. Unavoidable interventions in nature and landscape must therefore be offset or mitigated, particularly through the promotion of natural succession, re-naturation, near-natural design, rehabilitation or recultivation (§ 1(5), P. 4f. BNatSchG).

Compensatory measures must be maintained and legally secured during the required period of time. The period of maintenance is determined by the approval authority in the certificate of approval. The perpetrator of the intervention (the polluter) or its legal successor is responsible for the execution, maintenance and safeguarding of the compensatory measures.

In accordance with German federal and European regulations, the possible effects of a project on particularly-protected species of animals and plants (special species protection legislation) and on the European protected area network NATURA 2000 must be examined in the approval procedures for nature conservation law interventions.

The BNatSchG contains a full regulation, viz. that the laws and norms of the Federal States on the instrumental design of the intervention regulation may not contradict it. In order to make the regulation more applicable, some Federal States have made supplementary regulations, whereby the practice differs from state to state, e.g. in the concrete assessment of the amount and the use of compensatory payments.

Approval practices in the extraction of natural resources

If a company plans to intervene in nature and landscape by extracting natural resources, the nature conservation legislation on intervention regulation is dealt with at the level of the responsible approval authority. Depending on the respective type of natural resource, these are either the mining authorities of the German states (in the case of free-to-mine and privately-owned natural resources) or the state authorities in charge of the execution of the state-based excavation laws, the building and water resources management laws and the Federal Immission Control Act (in the case of so-called landowners' natural resources). This procedure corresponds to the so-called 'piggy-back' procedure, which stipulates (in § 17 BNatSchG) that the approval of all projects, which nevertheless require approval by an authority due to other legal provisions, will be carried out by the competent authority in conformity with the responsible nature conservation authority. The competent nature conservation authority must therefore be given a voice in the approval procedure, whereby the relevant approval authority is not bound by the recommendations of the nature conservation authority. However, the provisions of the specific species protection are compulsory and are not subject to consideration in this respect. Designations of protected areas must also be observed

As part of the approval procedure, the entrepreneur shall also provide the competent authority with a Landscape Management Plan (LBP), which shall provide information on the location, nature, extent and timing of the intervention, as well as the intended avoidance and compensatory measures and, where required, the amount of the compensatory payment.

In this case, the major part of the necessary compensation is to be regularly provided for renaturation or recultivation (see target definition BNatSchG). Compensatory measures on external surfaces are necessary if certain landscape or biotope structures cannot be restored or if specific measures are necessary for reasons of species protection.

In the case of the extraction of the so-called 'free-to-mine' (e.g. coal, salts, oil and natural gas) and privately-owned resources (e.g. stone, earths and industrial minerals) governed by the German Federal Mining Act (BBergG), the intervention regulation is processed as per the BNatSchG in accordance with the operating plan procedure under mining law, whereby the obligations as per the BNatSchG apply in full. Compensation for interventions can already take place within the scope of the obligation under mining law to rehabilitate the area (§ 55(1), No. 7 BBergG, § 1(5), P. 4, BNatSchG). If this is not possible, compensatory and/or substitution measures or subordinated compensatory payments pursuant to BNatSchG are necessary (see North Rhine-Westphalia (NRW) example below). In the case of procedures which are subject to Federal Mining Act, the legal instruments of the Ordinance are applied, such as (and in particular) regular monitoring based on the main operating plans, which must generally be submitted and re-approved every two years.

Documentation of compensatory measures for interventions in nature

Since the amendment of the BNatSchG in 2010, German Federal States are obliged to create compensation directories for all interventions in nature. However, these take various forms and are not publicly available in all Federal States.

Figure 6: Overview of compensation directories in the Federal States

Federal State	Publicly available	Central for the Federal State	Comprehensive information on the intervention area and the compensation type	
Baden-Wuerttemberg	Yes	No	Yes	
Bavaria	Yes	Yes	Yes	
Berlin	Yes	Yes	No	
Brandenburg	No	Yes	No	
Bremen	Yes	Yes	Yes	
Hamburg	Yes	Yes	No	
Hesse	Yes	Yes	Yes	
Mecklenburg-Western-Pomerania	Yes	Yes	Yes	
Lower Saxony	To some extent	No	To some extent (e.g. the County of Cuxhaven)	
North Rhine-Westphalia	Planned	No	Yes	
Rhineland-Palatinate	Yes	Yes	Yes	
Saarland	No	No	No	
Saxony	No	Yes	No	
Saxony-Anhalt	To some extent: The eco-accounts are publicly available but not the compensation directory.	Yes	No	
Schleswig-Holstein	Yes	No	No	
Thuringia	No	Yes	Yes	

Source: own presentation, as of: May 2017

	Potential compensatory payments recorded	Weblink
	No	http://www4.lubw.baden-wuerttemberg.de/servlet/is/225375/
	No	https://www.lfu.bayern.de/natur/oefka_oeko/oekoflaechenkataster/index.htm
	No	http://fbinter.stadt-berlin.de/fb/index.jsp
	No	Under construction
	No	https://www.gis.umwelt.bremen.de/nisviewer/htm/arcims/viewer.htm
	No	http://www.geoportal-hamburg.de/Geoportal/geo-online/index.html
	No	http://natureg.hessen.de/Main.html
	No	https://www.kompensationsflaechen-mv.de/wiki/index.php/Hauptseite https://www.umweltkarten.mv-regierung.de/atlas/script/index.php
	No	e.g. County of Cuxhaven https://cuxland-gis.landkreis-cuxhaven.de/internet/kompensationsflaechen
	No	–
	No	http://www.naturschutz.rlp.de/?q=kartendienst
	No	–
	No	https://www.umwelt.sachsen.de/umwelt/natur/15205.htm
	No	http://87.191.164.71/ekis_start/index.php
	No	http://www.lksh.de/forst/oekokonto/naturraume-mit-okokonten-in-sh/
	No	–

Example of the transparency of compensation directories in Baden-Wuerttemberg

The basis of the compensation directory in Baden-Wuerttemberg is formed by § 17(6) of the BNatSchG, the compensation directory regulation and the eco-account regulation of the state, which provide for the obligation to make documentation available for the public. The latter two regulations can be downloaded from the website of the Ministry of the Environment of Baden-Wuerttemberg. The Baden-Wuerttemberg compensation directory is divided into the 'eco-account' and the 'intervention compensation' sections.

An eco-account is an instrument for the perpetrators of interventions (polluters). It enables them to temporally and spatially decouple compensation measures from the mining area, making the measures more flexible to manage. Compensatory measures can be stockpiled via so-called 'eco-points', which are accumulated by means of the targeted ecological upgrading of external areas. The corresponding eco-points can be used for later interventions to compensate for the interventions either in whole or in part. Polluters such as natural resource companies and local authorities are involved here as producers, consumers and traders of eco-points.

A central overview of the total number of all interventions in Baden-Wuerttemberg, including their compensatory measures, is not available; however, the legal environmental protection eco-account measures and the compensatory measures already assigned to an intervention under nature conservation law can be accessed via the Internet sites of the responsible nature conservation sub-authorities at city and county levels (<http://www4.lubw.baden-wuerttemberg.de/servlet/is/225385/> or <http://www4.lubw.baden-wuerttemberg.de/servlet/is/225375/>), where the following information on the nature conservation compensatory measures of the counties is available:

- description of the approval authority and the compensatory measure (short description),
- file number and date of the approval certificate,
- type of project causing the intervention,

- project developer,
- location of the compensation area,
- measures for the timely implementation of the compensatory measure and the fixed period of maintenance,
- state of the implementation.

The following information on eco-account measures can also be accessed:

- complex of measures,
- status,
- natural area,
- location of the measure,
- eco-points.

Compensatory measures on intervention areas and substitute areas are documented in the compensation directory of the state of Baden-Wuerttemberg. Measures taken since April 2011 have been listed.

Example of the assessment of compensatory payments in North-Rhine-Westphalia

In the case of an authorised intervention, compensatory money can be levied as an Ultima Ratio if negative impacts on nature are unavoidable, or if they cannot be compensated or replaced within a reasonable period. As per the BNatSchG, the compensatory payment is based on the average costs of the non-feasible compensation measures, including the necessary costs for their planning and maintenance, as well as the provision of the area, which encompasses personnel and other administrative costs. If these cannot be ascertained, the compensatory payment is based on the duration and severity of the intervention, taking into account the advantages accruing to the polluter (§ 15(6), P. 1 et seq., BNatSchG).

The assessment of the amounts of compensatory payment is the exception rather than the rule in the approval of the activities of the extractive industry in North-Rhine-Westphalia. Nevertheless, there are cases in which, for example, the major part of the

compensation takes place in recultivation, but a small computational, compensational deficit still must be implemented on an external area, or the assessment of the compensation through rehabilitation will not be appropriate. If the area in question or the required measure is unavailable, or can neither be implemented nor is expedient at a reasonable cost, a relevant compensatory payment is assessed. In North-Rhine-Westphalia, this assessment is made in accordance with the provisions of the State-level Nature Conservation Law (LNatSchG NRW) in consultation with the relevant higher authority for nature conservation (§ 33(1), LNatSchG NRW).

The beneficiary of the compensatory payment is the regionally-responsible, sub-authority for nature conservation, which must use the compensatory money for measures involving nature conservation and landscape management (§ 4a(4), LNatSchG NRW). If the compensatory payment is to be paid for an intervention in forested areas or to be used for the afforestation of land, the payment will be made available to the forestry administration (§ 31(4) LNatschG NRW).

Examples of the assessments of compensatory payments are the open-cast gravel mines in the open-cast mining zones in front of the lignite mining projects. In three of the open-cast mines, an ecologically-valuable rehabilitation was not indicated because open-cast lignite mining would use the area directly after the gravel or sand extraction operations. In these cases, the local sub-authority for landscapes developed a simplified procedure by means of which an appropriate compensatory payment was assessed. A total of €265,767.90 in compensatory payments was assessed for the three projects mentioned above.

For another open-cast gravel mining project, a small-scale expansion was planned for which a compensatory payment was assessed, if the intended recultivation could not be implemented. The county sub-authority for nature conservation, however, would have to use the compensatory payment of €21,900 it received to implement another equivalent compensatory measure. (This list of examples is not exhaustive).

In the years between 2011 and 2015, a total of around €300,000 in compensatory payments were assessed for the North-Rhine Westphalia mining authorities. So far, there have been no compensatory payments for the lignite mining industry in North-Rhine Westphalia; intervention compensation is mainly carried out in the form of rehabilitation. The ratio of the many open-cast mining projects in NRW (especially lignite mining projects, some of which are on a very large scale) to the few small projects mentioned above shows that the assessment of compensatory payments plays a subordinate role in the procedures carried out under mining law.

Cooperation between stakeholders

Since each extraction of natural resources represents a significant intervention in nature and landscape, an environmentally-friendly extraction development and technology approach should be standard for companies in this sector. Timely renaturation and recultivation can contribute to the promotion of biological diversity; but operating extraction sites are also habitats for rare animals and plants. The cooperation between companies extracting natural resources, the persons working there and local conservationists has already proved its worth, because it enables the management of the extraction operations to be adapted to the local and specific biodiversity requirements. This usually succeeds if the company management and employees are continually involved in dialogue with specialist nature conservation institutions and persons. In the case of expansions or new extraction projects, an early dialogue between the stakeholders can also avoid conflicts before they arise. Information and training materials on the subject help to broaden the impact of initiatives like this, which are supported by strong memberships in the environmental and nature conservation associations, the mining, chemicals, energy and construction-agri-environment industrial trade unions, and economic associations at federal and state levels.

b. Provisions

In Germany, federal legislation stipulates that companies which extract natural resources must carry out recultivation measures. The companies are also obliged to create and maintain long-term accounting provisions ('financing provisions'). These usually include measures which are still necessary after closure of the mine concerned, such as measures for the rehabilitation of the mine area and recultivation measures. Provisions are set aside for these financial obligations under accounting rules.

The amount of the provisions to be set aside is based on the anticipated expenses for various planned measures. Long-term tax provisions with a residual maturity of more than one year are also discounted, using a legally-defined interest rate and taking future cost increases into consideration. The expected dates of fulfilment are essentially dependent on the remaining economic useful life of the extraction sites in question. The obligations of some companies extend far beyond the year 2050.

Provisions for mining are shown on the liabilities side of the balance sheet in the annual financial statements of the extractive sector companies and this is why they are audited by professional auditors as balance sheet items. Provisions made must be in accordance with the relevant regulations; the tax authorities check any related fiscal issues.

Provisions made by companies which must publish their annual financial statements are shown transparently at <http://www.bundesanzeiger.de>. The duty of disclosure applies to all limited companies pursuant to § 325 of the HGB, all commercial partnerships without a natural person as a personally-liable shareholder (e.g. GmbH & Co. KG) and other companies that exceed a certain size.

c. Implementation securities

Implementation securities are an instrument provided in the Federal Republic of Germany to implement the renaturation, safeguarding and rehabilitation measures to be carried out by extractive sector companies. If a company should fail or refuse to carry out the above measures, the authorities ensure that no additional costs will have to be paid by the general public by means of so-called 'substitute performances'.

Implementation securities are expressly provided for under the Federal Mining Act (BBergG) as an official instrument for natural resources extraction projects which are subject to the BBergG. Individual Federal States have introduced similar legislation in their excavation laws (or other subordinate excavation regulations) for the extraction of natural resources which is outside the legal scope of the BBergG. Implementation securities can also be established to ensure the implementation of compensatory and substitution measures for interventions in nature and landscape, pursuant to § 17(5) of the Federal Nature Conservation Act (BNatSchG).

Within the scope of its discretion pursuant to § 56(2) BBergG, the mining authority may make the granting of operating plan permits dependent on an implementation security, if this is necessary to guarantee (in particular) the implementation of measures for risk prevention and rehabilitation in the areas affected by the extraction of the natural resources. This applies to follow-up measures of mining activities such as water drainage, for example, but also to the dismantling of equipment, the removal of water-endangering substances and the securing of former extraction sites by backfilling them or blocking them off completely.

In principle, the mining authority may permit any suitable form of implementation security if it considers that such a security is necessary and if there are no restrictions arising from the relevant statutory provisions; such forms of implementation security include the deposit of cash and bonds, mortgages, special

default insurances, operational provisions, bank or group guarantees and so-called strict letters of comfort.

Operating provisions, bank guarantees or insurance guarantees and, particularly in the case of large companies, corporate guarantees and letters of comfort are customary in the natural resources extractive sector. Cash and bonds are not usually accepted as securities, since the management of these is too complex for the authorities; implementation securities are therefore not payments from companies to state agencies.

The amount of the implementation security to be set is oriented on the estimated cost of a (possibly necessary) substitute performance. If a project is to be carried out in stages, the implementation security is set up in stages on the basis of the actual intervention and is approved on a pro rata basis after successful partial rehabilitation.

d. Abstraction of water for the extraction of natural resources

The abstraction of ground and surface water may be necessary during the course of the extraction and further processing of natural resources. The volumes of water abstracted for the activities of the natural resources extractive sector are published by the relevant statistical authorities of the individual Federal States.⁶ An overview is shown in Figure 4.

The 'Mining and Quarrying' sector abstracted a total of 1,583 million m³ of water in 2013 (mainly groundwater). Coal mining accounted for around 75% of this volume. This corresponds to around 5 % of the total water abstracted⁷ in Germany by industry and private households in 2013. Depending on the regional importance of the natural resources sector – particularly

coal mining – this proportion is higher in some states than in others (up to 30 % in individual cases).

Use of water

During the initial development of a deposit of raw materials, the pumping out of ground water can lead to a lowering of the groundwater level. Water abstractions during extraction of the natural resources may also be necessary e.g. to keep shafts or excavation pits dry. This so-called drainage and mine water is treated, purified and then used as cooling water, provided to the public as drinking and industrial water, used as water for the protection and maintenance of moist biotopes, or introduced into surface water without being used further.

The use of water by the mining industry is associated with consequences for the water balance. Environmental impacts can result from, among other causes, the change in the groundwater level, the flow rate of water bodies and the introduction of drainage and mine water into surface waters.

Example: Use of water in potash and rock salt mining

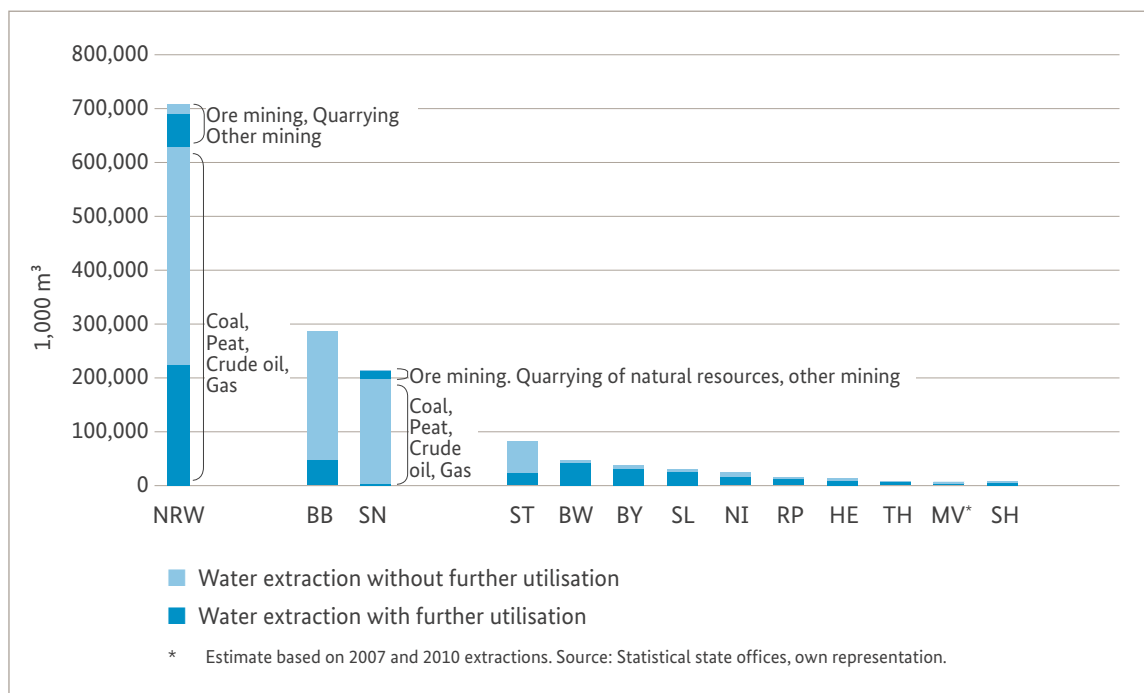
In potash and rock salt mining, water from different origins and of different quality levels including river water, groundwater and drinking water is used in many processes.

Raw salt is generally mined by means of drilling and blasting in the underground mining of potash and rock salt. However, salt can also be obtained in a sol operation during which fresh water is introduced into soluble (salt) rock by means of a borehole, resulting in the creation of chambers filled with salt water. The salt-saturated water (so-called brine) is then conveyed to the surface via another pipeline. The salt is ultimately extracted when the brine evaporates.

⁶ Source: Federal Office of Statistics, National Environmental Accounting <https://www.destatis.de/EN/FactsFigures/NationalEconomyEnvironment/Environment/EnvironmentalEconomicAccounting/MaterialEnergyFlows/MaterialEnergyFlows.html>

⁷ In some Federal States, a distinction is made between the following two sectors: 1. Ores, quarried natural resources, other mining products and 2. Coal, peat, oil and natural gas; e.g. Saxony State Office of Statistics (2013): Water supply and waste water disposal in the operations of the non-public sector in the Free State of Saxony, https://www.statistik.sachsen.de/download/100_Berichte-Q/Q_I_2_3j_13_SN.pdf

Figure 4: Water extraction in the natural resources sector by state in 2013 (in thousands of m³)



Legal framework for water abstraction

The Water Framework Directive (WRRL) created an EU-wide legal framework for the protection of water and groundwater in 2000. The WRRL stipulates (inter alia) that the costs of water services (including certain water abstractions) and environmental and resource-related costs are covered by the polluter-pays principle.⁸ Water abstractions must also be checked for compliance with the general environment targets of the WRRL. If the volume of ground or surface water abstracted exceeds certain thresholds, environmental impact assessments must be carried out for the projects concerned.

The implementation of the WRRL into national law took place in Germany through the Water Resources Act, which regulates the protection and use of surface and groundwater at national level. Water abstraction procedures are subject to the reservation on the granting of permission by the water authorities. The water laws of the Federal States supplement and concretise the federal water laws. They particularly determine the amount of water abstraction fees.

⁸ In its ruling of September 11, 2014 (file ref. C-525/12), the European Court of Justice (ECJ) confirmed that with these federal and state regulations, Germany had sufficiently implemented the principle of cost recovery from the EU Water Framework Directive. The ECJ also expressly points out that in accordance with the provisions of Article 9(4) of this directive, the EU Member States are in any case empowered not to apply the cost-covering principle to certain water uses, while addressing the purposes and objectives of the directive.

Structuring of water abstraction fees

The structuring of fees for water abstraction is carried out by the states that receive these fees. This is why water abstraction fees levied in Germany differ widely in 13 of the 16 states, the three exceptions being Hesse, Bavaria and Thuringia. The total revenue in the 2016 budgetary plans of the states was estimated at around €425 million. These revenues are partly used for water management tasks, or they flow into the general budget of the respective Federal State.⁹

Most Federal States levy consumption-related fees for the abstraction of ground and surface water. Depending on the individual structure, these fees are also intended to reflect the 'value of the public services' for the utilisation of resources and can therefore act as incentive taxes for a sustainable water management programme and for the allocation of environmental and resource costs (§ 1 and § 6a of the Water Resources Act).¹⁰

In most German states, levy rates differ according to the type of abstraction, volume, origin of the water (surface water or ground water) and the purpose for which the water is to be used. There are also various state-specific deviations from the relevant rules through exemptions or discounts, which may also apply to the natural resources sector.

Water abstraction fees in the natural resources sector

Very different rates are levied nationwide for the abstraction of water in the natural resources sector. For example, fees of between 0.3 and 5 €cents/litre for surface water are applied in some Federal States

for certain types of mining operations (e.g. in Baden-Wuerttemberg, Lower Saxony, Mecklenburg-Western Pomerania), while in other states, the fees for groundwater abstraction apply ranging between 5 and 31 €cents/litre.¹¹ In Rhineland-Palatinate and Schleswig-Holstein, however, groundwater exposure is exempt from water abstraction fees. In some Federal States, there are explicit regulations for de-watering operations in mines, or for water that is reintroduced into surface waters without being subsequently used. The various fee levy rates, exemptions and discount rules are published in the individual state water laws. The German Federal Environment Agency provides an overview of the relevant fee levy rates in the natural resources sector.¹² However, a publicly-accessible source of information on the amount of revenue from water abstraction fees paid by the natural resources sector does not exist.

Water abstraction fees represent a flow of cash between companies that extract natural resources and the German State. Due to the different levy rates (inter alia) in individual Federal States, the payments probably lie below the materiality threshold, which is why they are not included for payment reconciliation purposes in the first D-EITI report.

9 IHK Pfalz 2013 Chamber of Industry and Commerce, Palatinate: The water abstraction fees of the German states. A comparison. https://www.ostwestfalen.ihk.de/fileadmin/_migrated/content_uploads/WEE_Wasserentnahmeentgelte_der_Laender_Broschure-1.pdf

10 Gawel/Bretschneider (2016): Water abstraction fees in Baden-Württemberg – Inventory and Evaluation. https://um.baden-wuerttemberg.de/fileadmin/redaktion/m-um/intern/Dateien/Dokumente/3_Umwelt/Schutz_nat%C3%BCrlicher_Lebensgrundlagen/Wasser/Rechtsvorschriften/WEE/160630_Endbericht_WEE_UFZ.pdf

11 German Federal Environment Agency (2017): Table of water abstraction fees in the natural resources sector in German states.

https://www.umweltbundesamt.de/sites/default/files/medien/2466/dokumente/tabelle_wasserentnahmeentgelte_im_rohstoffsektor_uba_neu.docx

12 See <https://www.umweltbundesamt.de/themen/wasser/wasser-bewirtschaften/oekonomische-fragen#textpart-1>

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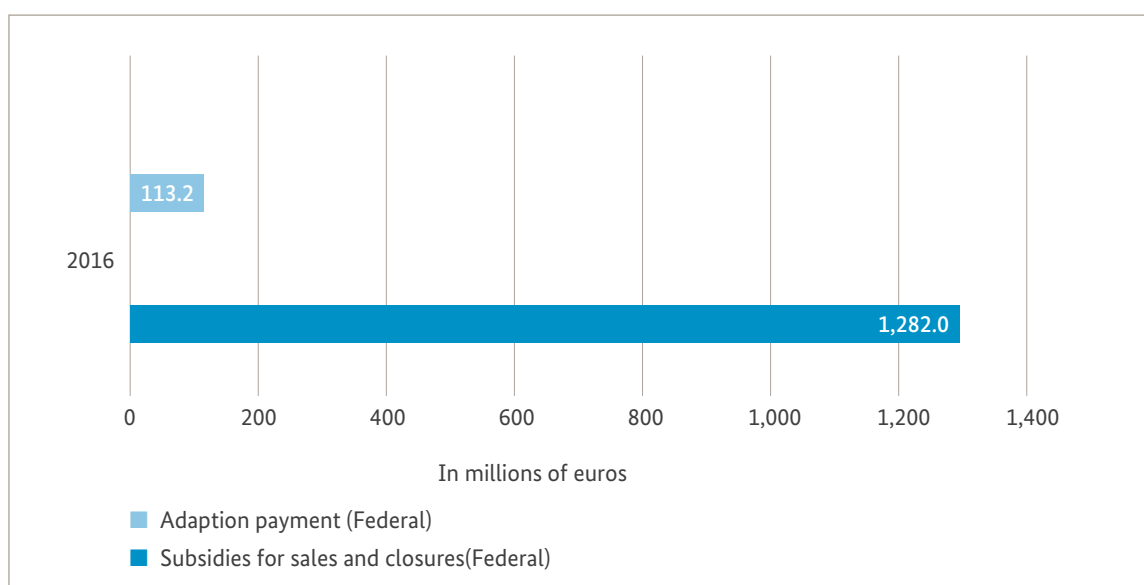
STATE SUBSIDIES AND TAX CONCESSIONS



In addition to the payments which extractive companies make to public authorities, the state also financially supports the sector with subsidies and tax concession programmes. Financial help is provided for the hard coal mining industry, for instance: there are subsidies for the sales of hard coal and compensation for bottlenecks resulting from capacity adjustments, and there are adaption payments for socially-acceptable personnel reductions in the sector. The State also grants concessions for energy and electricity taxes for production industry companies (see Chapter 7.c.).

There are different definitions of the term subsidies at both national and international levels, and several methodological approaches are used to tackle the topic. The below diagram of subsidies for extractive companies is based on the definition of the subsidy report of the Federal Government. According to this report, only directly budget-relevant subsidies of the Federal Government are considered for private companies and economic sectors. Subsidies at Federal state level are available in the subsidy reports of the Federal States (see Annex 5 of the Subsidy Report of the Federal Government).

Figure 5: Subsidies in the German hard coal industry 2016



For detailed source information see final note^{viii}. Own presentation.

a. Subsidies for the sales of hard coal

The German hard coal industry is not competitive, mainly because of geologically-related high production costs. An agreement was therefore reached in 2007 between the Federal Government, the hard coal-producing states of North Rhine-Westphalia and Saarland, the RAG AG (the largest German coal mining corporation based in the Ruhr region) and the Mining, Chemical and Energy Industrial Trade Union (IG BCE) that the subsidised hard coal industry would be terminated in socially-responsible manner by the year 2018. The agreement was based on the Hard Coal Mining Financing Law of December 12, 2007 and on a framework agreement between the Federal Government, the hard coal-producing Federal States, the RAG AG and the IG BCE. The public sector grants temporary aid to promote sales (balancing the difference between domestic production costs and the world market price) and to cope with the necessary decommissioning measures. The subsidies are gradually reduced and ultimately cycled out, a move that also addresses climate protection and resource conservation.

Development

In 2016, the amount of Federal aid for the sales of hard coal amounted to €1,282 million. The state

of North Rhine-Westphalia provided more financial aid. The subsidies pledged to the hard coal mining industry are being reduced over time. Between 1998 and 2005, Federal subsidies were cut by approximately 50% – and they were again reduced by 25% between 2006 and 2014. Deviations from the declining trend of subsidisation are based on the fluctuating world market prices for hard coal (inter alia).

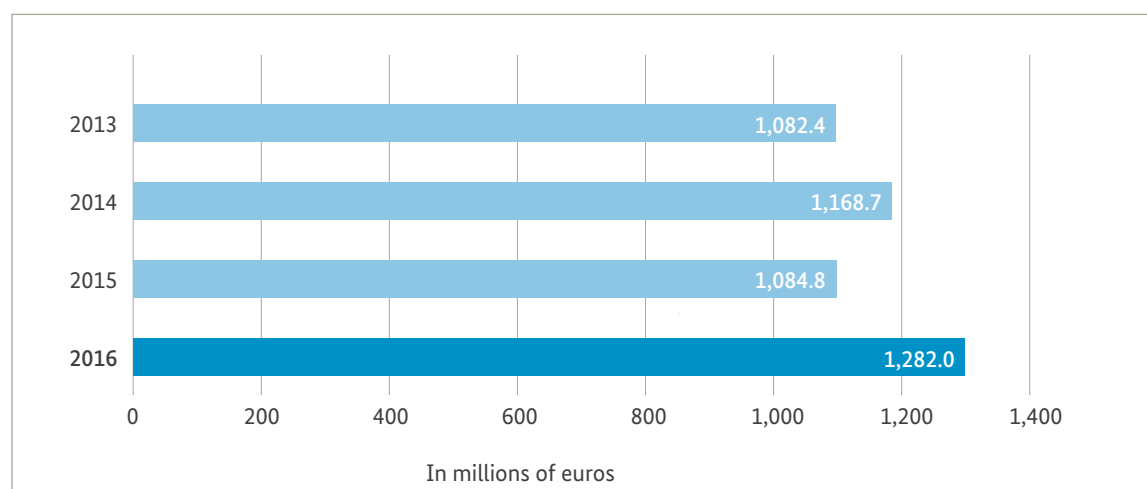
Control measures

The subsidisation of the German hard coal industry is subject to approval by the EU and has been reviewed and approved by the EU Commission. The German Federal Office of Economics and Export Control (in cooperation with auditors) also monitors how these financial subsidies are being used on an annual basis.

Prevention

To cope with the necessary decommissioning activities, the private-law RAG Foundation is making the former investment assets of the RAG AG available to finance the remaining perpetual burdens following the closure of the mines (burdens such as mine water drainage, permanent land subsidence and groundwater purification). If these assets are not sufficient to cover the perpetual burdens, the Federal Government and the hard coal-producing Federal States will provide subsidies at a ratio of one-third to two-thirds respectively.

Figure 6: Subsidies for the sale and closure of German hard coal from 2013 to 2016 (Federal Government amounts)



For detailed source information see final note^{viii}. Own presentation.

b. Adaption payment

Employees who are at least 50 and 57 years old (underground workers and surface employees respectively) and who will lose their jobs before January 1, 2023 due to the closing-down of mines or rationalisation measures, will receive adaption payment as an interim benefit for a maximum of 5 years until their entitlement to pension insurance becomes valid. The adaption payment reflects the social responsibility of the Federal Government and the hard coal-producing Federal States. In 2016, the Federal Government guaranteed adaption payment totalling €113.2 million.

Employees

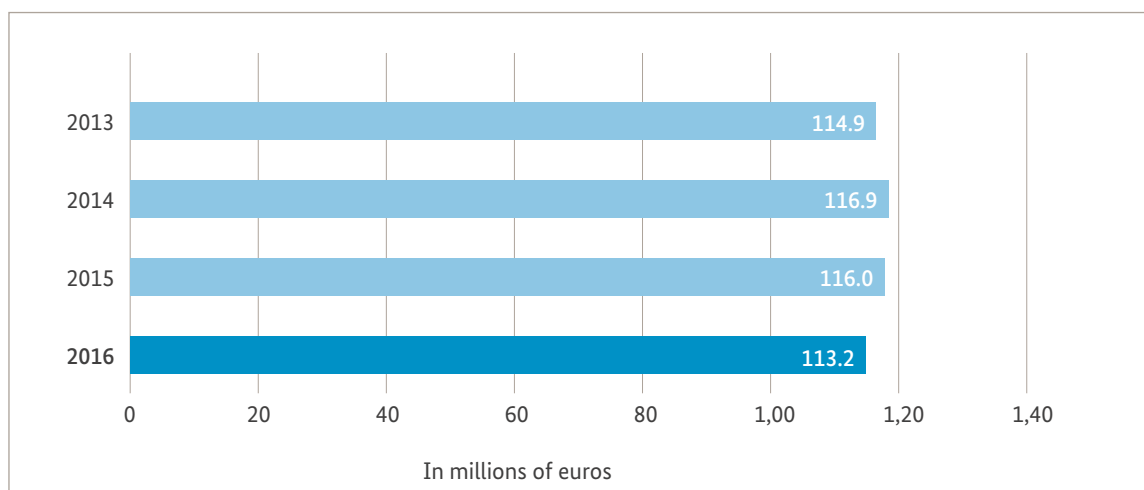
The number of employees is steadily decreasing; at the beginning of 2008, 32,803 persons were employed in hard coal mining.

By the end of 2015 the number of employees had been reduced to 9,640 employees. The number of persons entitled to adaption payment is following this reduction trend, albeit with a time lag. Since more employees will be retiring after the last mine closures at the end of 2018 and a declining number of employees will still be needed after 2018 to complete the closure of mines, the current adaption payment guidelines will still apply until 2027.

Control measures

In addition to the monitoring of the intended use of funds by the German Federal Office of Economics and Export Control in cooperation with external auditors, the German Federal Audit Office also randomly reviews individual adaption payment cases within the framework of the Federal Office's annual budget review.

■ **Figure 7:** Adaption payment 2013 – 16 (Federal Government amounts)



For detailed source information see final note^{viii}. Own presentation.

c. Concessions for electricity and energy taxes

There are various tax concessions for both the electricity and the energy taxes, including tax exemptions, tax reductions and tax relief. The Electricity Taxation Act (StromStG) provides for certain types of use, or electricity generation. The Energy Taxation Act (EnergieStG) also covers uses in which energy products are tax-favoured. Some of these tax concessions are mandatory under the Energy Tax Directive.

As production industry companies, extractive sector enterprises can particularly profit from the different tax relief possibilities provided by energy and electricity tax legislation.

Three regulations are particularly relevant here:

- Tax relief for companies (§ 54 EnergieStG, § 9b StromStG):
If a production industry company applies for electricity and energy tax concessions and its application is approved, it is granted a reduction of 25% of the tax rates on electricity, heating and the fuels used in its production facilities eligible for tax concession.
- Tax relief in the form of 'peak compensation' (§ 55 EnergieStG, § 10 StromStG):
The additional burden of the 'ecological tax reform' on production industry companies is lightened by a reduction in their energy and electricity taxes. Since the increase in revenues generated by the ecological tax reform also served to reduce the factor of 'work' and contributed to companies paying less for employers' contributions to pension insurance schemes in comparison to 1999, a comparative peak compensation calculation is carried out for companies in question. In order to avoid double relief for the employers' pension insurance as well as for the

energy used, saved pension contributions are taken into account in the calculation of the tax relief. The amount of relief is therefore calculated individually depending on the company, and is also capped at a maximum of 90% of the electricity tax paid and 90% of the tax share pursuant to § 55(3) of the EnergieStG. Prerequisites for claiming peak compensation are, among other things, evidence of a certified energy management system and an annual energy intensity reduction (by a statutory value) achieved by all the plants of the production industry company. The comparative value is the average energy intensity value for production industry companies between 2007 and 2012.

- Specific processes and procedures/Manufacturer's Tax Law (§ 9a StromStG, § 51 EnergieStG, §§ 26, 37, 44 and 47 EnergieStG)

Production industry companies can reduce their electricity and energy taxes by 100%, if the energy/electricity is used for precisely determined, energy-intensive purposes (such as electrolysis, metal production, production of glassware, etc.). In addition, companies that produce energy products on their own premises (refineries, gas extraction and coal mining companies) can use these self-produced energy products tax-free (or obtain tax relief) for the purposes of maintaining operations within their own companies.

The subsidy report of the Federal Government contains the total subsidies for the entire production industry, whereas the subsidies in the natural resources industry are shown separately for each sector. The selected tax concessions shown in the table below apply to the entire production industry. Conclusions cannot necessarily be drawn about the proportion of the concessions for the natural resources production sector.

Table 8: Selected energy and electricity tax concessions¹³ for the entire production industry¹⁴

Law or Act	Year	2013	2014	(Target) 2015	(Target) 2016
General tax relief (§ 54 EnergieStG)		€145 million	€153 million	€160 million	€160 million
General tax relief (§ 9b StromStG)		€975 million	€1,038 million	€1,000 million	€1,000 million
Peak balancing (§ 55 EnergieStG)		€167 million	€197 million	€180 million	€180 million
Peak balancing (§ 10 StromStG)		€1,870 million	€1,911 million	€1,900 million	€1,900 million
Manufacturer privilege (§§ 26, 37, 44, 47 EnergieStG)		€350 million	€350 million	€350 million	€350 million

Source: 25th Subsidy Report of the Federal Government 2015.¹⁵

The Member States of the European Union, however, have an obligation to annually publish comprehensive information on the granting of state aid on a detailed aid website; this applies to tax concessions from July 1, 2016 (Transparency Obligations for EnergieStG and StromStG – EnSTransV). Under this regulation,

customs authorities may collect, process, store, transfer and delete data on energy and electricity tax benefits in order to comply with the Commission's requirements; the regulation will come into force for the first time on June 30, 2017.

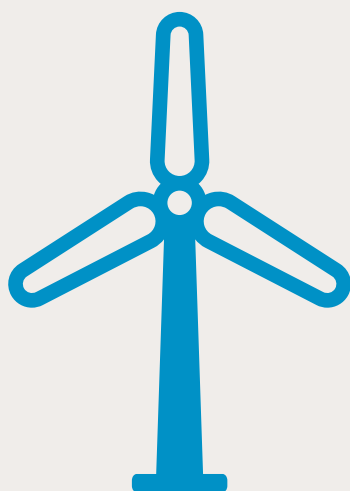
¹³ Only concessions which are also relevant for raw material-producing companies have been included here.

¹⁴ The share of the extractive industry in the gross value added of the production industry amounts to 0.65% percent. Source: Own calculation from GDP data (Chapter 5a) and "<https://www.destatis.de/EN/FactsFigures/NationalEconomyEnvironment/NationalAccounts/DomesticProduct/DomesticProduct.html>" Destatis (accessed on July 3, 2017).

¹⁵ The 26th Subsidy Report of the Federal Government was not yet available by the editorial deadline for the 1st D-EITI Report 2017. For this reason, we refer to the report of 2015. The 26th Subsidy Report is expected to be published in August 2017 at: http://www.bundesfinanzministerium.de/Web/DE/Themen/Oeffentliche_Finzen/Subventionspolitik/subventionspolitik.html;jsessionid=BC1AD98C8F2C22DA5A7ABA7DF6F97E22 veröffentlicht.

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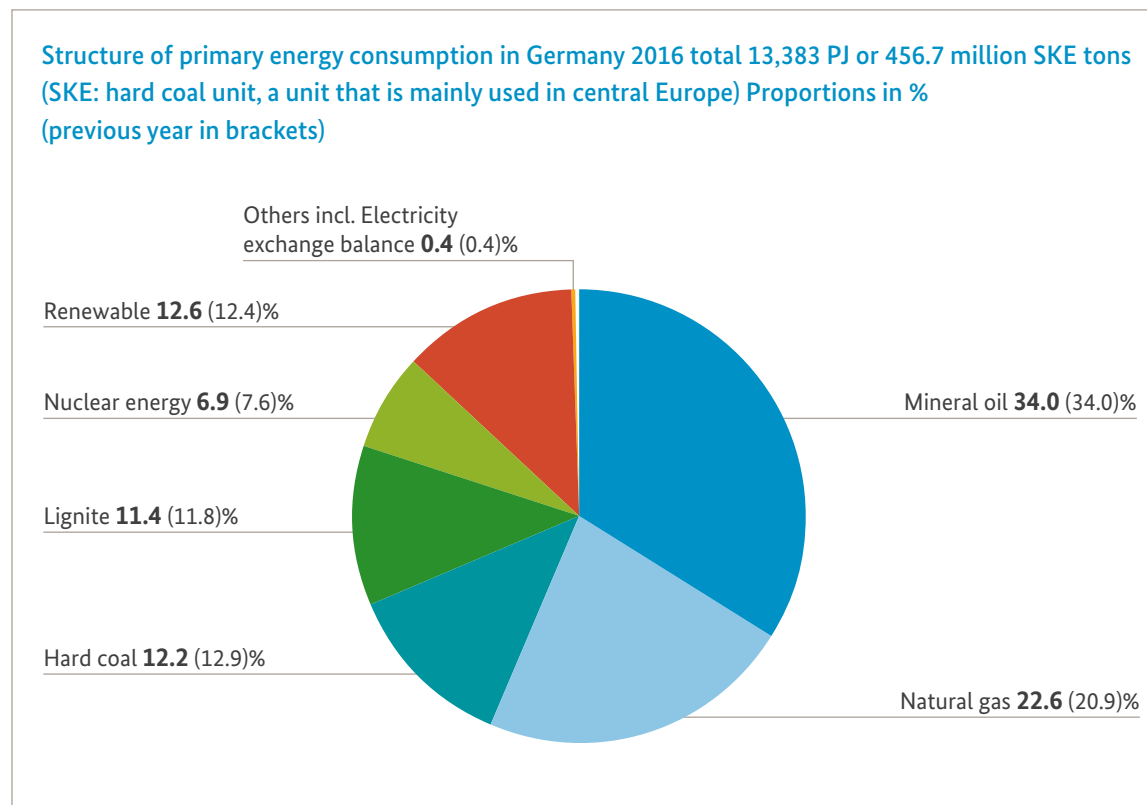
RENEWABLE ENERGIES



Renewable energies¹⁶ make a large and growing contribution to Germany's energy supply. In 2016,

the share of renewable energies amounted to 12 % of the total primary energy consumption.

Figure 8: Structure of the primary energy consumption in Germany in 2016



Source: Energy Balances Consortium – March 2017.

The contribution to the electricity sector is particularly high; more than 30 % of the gross electricity consumption is covered by renewable sources (more than 190,000 GWh). The Federal Government has set itself the goal of decarbonising the energy supply almost completely by 2050, thus reducing greenhouse gas emissions. In 2015, the combustion of fossil energies accounted for more than 80% of greenhouse gas emissions in Germany (752 Mt CO₂ equivalents).¹⁷ Fossil-fuelled power plants are currently needed

(in addition to renewable energies) to meet energy requirements in Germany.

The technologies of renewable energies require steel, cement or petrochemical raw materials as the following example shows: The components of a wind turbine consist of roughly 45% crude oil and petrochemical industry products. One wind turbine blade can be 30 to 50 metres long in large wind turbines and it contains up to 12,000 kg of petrochemical products.

16 Source of the figures stated in the report: BMWi (2016): Erneuerbare Energien in Zahlen (Facts & Figures on Renewables), AGEE-Stat (2016): Entwicklung der erneuerbaren Energien in Deutschland im Jahr 2016 (Development of Renewables in Germany in 2016). https://www.erneuerbare-energien.de/EE/Redaktion/DE/Downloads/entwicklung_der_erneuerbaren_energien_in_deutschland_im_jahr_2016.pdf?__blob=publicationFile&v=16

17 BMWi energy data from March 16, 2017, greenhouse gas emissions are presented by type of gas and source categories.

European energy industry, but also on the German natural resources industry. Natural resources requirements are changing in Germany due to the energy transition – the demand for quarried resources, copper, steel, cobalt, lithium, rare earths, platinum group metals, indium and tellurium is increasing with the construction of renewable energy plants, storage facilities and intelligent networks. We will also experience displacement effects in the demand for natural resources: The change in the electricity production mix will influence the production of secondary raw materials. The decline in coal production, for example, affects the production of FGD gypsum. A decline in production would have to be compensated for by a corresponding increase in primary natural resource extraction (natural gypsum). This shows that a reliable supply of mineral and metallic raw materials and safe access to local deposits of natural resources are prerequisites for the success of the energy transition – and also for smooth-running production processes in the German natural resources industry.

Some of the metals required for the energy transition (e.g. electronic elements such as indium, germanium and gallium) are additional raw materials, i.e. they are obtained as by-products during the extraction of a different metal. In the case of these metals, the regulatory mechanisms for the supply of natural resources only function to a limited extent. In Germany and Europe, potential deposits like this do exist, with the result that import dependencies could be reduced through the targeted development of these deposits and the extraction of their natural resources.

In 2015, investments in renewable energies amounted to €15 billion, while the operation of the existing plants generated €14.7 billion in sales. The expansion of renewable energies can affect employment by increasing demand for the energies' related goods and services. Wind power led the way – in 2015 the sector employed more than 140,000 people. The expansion of renewable energies is financed by feed-in tariffs which are higher than the stock exchange electricity price and this benefits renewable energy

system operators. These feed-in tariffs are paid by the end users in the form of an additional charge on their electricity bills. If renewable energies are to expand further, industrial energy projects must be suitably combined with the development of the renewable energies. This also applies to the German natural resources industry, which has already established a series of wind, biomass, geothermal, solar and hydroelectric power projects in Germany.

Renewable energy sources are used in electricity and heat generation and in the transport sector. The most important renewable energy source in the electricity sector is also wind power: In 2016, 40% of the renewable electricity was generated from wind energy. Wind energy plays a vital role in the expansion of renewable energies, an expansion which will ultimately result in an economically-viable and climate-friendly energy supply at reasonable prices and with a high level of general prosperity. The use of wind energy now accounts for more than 13% of German electricity consumption. Wind turbines have been built on various closed minesites in North Rhine-Westphalia, mainly on now-green colliery slag heaps on which favourable wind conditions exist – and these man-made hills have a 'model character' in Germany. In addition to the further development of suitable land sites and the replacement of older, smaller wind turbines by modern and more powerful models – so-called 'repowering' – the expansion of wind energy at sea is also becoming increasingly important. In 2016 alone, wind energy turbines were installed with a capacity of around 4,500 MW on land and roughly 700 MW at sea. Wind turbines with a total capacity of around 47,000 MW are now operating in Germany; they produced almost 80,000 GWh of electricity in 2016, one sixth of which was generated by wind turbines at sea. The Federal Government is planning to have an offshore wind power of 15,000 MW on the grid by the year 2030. In view of this expansion and the ever-increasing power units (more than 10 MW per wind turbine), the need for mineral and metallic natural resources will also increase. Concrete, for example, is required for the construction of wind turbine foundations. This also

means a correspondingly higher demand for limestone for cement production and for aggregates such as gravel and sand.

Biomass has also become a very relevant energy source for electricity generation. The total capacity of biomass electricity generation plants is around 7,200 MW; electricity generation in 2016 amounted to more than 50,000 GWh (9 % of the total electricity consumption and 23 % of the renewable electricity generation). In addition to biogas (including biomethane and landfill and sewage gas), solid and liquid biomasses and biogenic waste are also used to generate electricity, but biogas is the most important single biogenic energy source for electricity generation with 63 % (2016) of the entire biomass.

Solar energy can also be used to generate electricity. More than 1.5 million photovoltaic plants convert the sun's radiation energy directly into electricity – these plants represented a total of around 40,000 MW of installed capacity in Germany at the end of 2016, and around 1,000 MW of power were added in that year. Electricity generation from photovoltaics continues to rise steadily as a result, attaining approximately 38,000 GWh in 2016. Photovoltaics thus accounted for 6.5% of the total electricity consumption and contributed 20% to the renewable energy supply. German mining companies are also increasingly opting for the use of photovoltaic systems at various mining sites in Germany.

In addition to wind, biomass and photovoltaics, hydropower also contributed to electricity generation with around 22,000 GWh in 2016.

Renewable energy sources are not only used by the electricity sector, they are also being used increasingly in the heating sector. In 2016, a total of 165,000 GWh was produced by renewable heat sources. The most important renewable energy sources for heat generation are biogenic solids with 111,000 GWh, produced mainly by wood in the form of e.g. wood pellets. Biogas, biogenic waste and geothermal energy and

heat harnessed by heat pumps are also relevant renewable heat sources, each of which generated heat in excess of 10,000 GWh in 2016. As a base-load capable form of energy with a high annual production performance (the target for geothermal power plants target is > 8,000 h), deep geothermal energy is an integral part of a meaningful energy mix. Geothermal energy for heating is steadily growing in importance. Solar thermal energy also contributed to the supply of heat with around 7,000 GWh.

In the transport sector, biomass can reduce CO₂ emissions, especially in the form of biofuels such as bioethanol, biodiesel and biogas for cars, trucks, trains, ships and aircraft. Electric vehicles are another option for reducing CO₂ emissions. In 2015, renewable energies accounted for 5.3 % of fuel consumption in Germany.

Thanks to its flexible use in the electricity, heating and transport sectors, biomass is the most important renewable energy source. In 2015, 60 % of the total final energy from renewable energy sources was provided by the various types of biomass used for energy purposes.

The expansion of renewable energies helps to avoid greenhouse gas emissions and reduces the use of fossil energy sources which are mainly imported. Despite the expansion of renewable energies, conventional power plants are still needed. Since fossil fuels such as mineral oil, natural gas and hard coal are mostly imported in Germany, savings in this sector will also lead to a reduction in German energy imports: Renewable energies, as well as electricity generation based on Germany's own energy raw materials can significantly reduce these import dependencies and thus increase energy security.

9

DISCLOSED PAYMENT FLOWS AND PAYMENT RECONCILIATION



a. Which cash flows are reported?

i. Selection of sectors

The EITI standard requires that all the important cash flows of a country's extractive sector are considered. During various meetings, the MSG discussed which sectors of the natural resources extraction industry should be included in the first D-EITI report.

The following individual sectors were addressed:

- Lignite
- Crude oil and natural gas
- Potash and potash salt products
- Quarried natural resources

The mining of hard coal in Germany will be phased out at the end of 2018, so this sector is not considered in the framework of the payment reconciliation (see the general remarks on the mining of hard coal in Germany and on state grants for the hard coal sector in Chapter 2.a.iii and in Chapter 7).

ii. Selection of companies

The EITI standard does not contain any direct guidelines for the process of selecting companies for inclusion in the reporting; on the contrary, the selection of the companies should be oriented on the objective of the EITI initiative (analogue with the selection of the sectors) to make the revenues of a country's extractive industry transparent and to disclose all the significant cash flows between companies and government agencies in this respect. Pursuant to EITI requirement 4.1(a), payments and revenues are deemed to be significant if their non-consideration or misrepresentation could significantly affect the completeness of the EITI report.

With regard to the selection of companies, the MSG has resolved to comply with the requirements of EU Accounting Directive 2013/34 of June 26, 2013. The stated objectives of the EITI initiative and of the cash flows specified by the EITI are also largely congruent with the provisions of the EU Accounting Directive.

Recital 44 and 45 of the Directive even explicitly state that

- the new regulations are intended to help governments in the implementation of the EITI principles and criteria and
- that payments should be recorded which are comparable to those of the EITI.

The EU Directive was implemented into German law by the German Accounting Directive Implementation Act (BilRUG) of July 23, 2015; pursuant to §§ 341q et seq. of the HGB, this directive obliges extractive industry companies to create (consolidated group) payment reports under certain conditions (registered office, legal form, size, activity), cf. the explanations in Chapter 4.

During several meetings, the MSG agreed to carry out the further content-related development formulation of the D-EITI process in accordance with the new provisions of §§ 341q et. seq. of the HGB. This particularly affects:

- the criteria for the identification of the companies that are eligible for reporting,
- the relevant period of reporting
- and the establishment of materiality thresholds for the cash flows which are to be reported.

The link to the statutory provisions of the HGB is intended to create the prerequisites for the widest possible participation of the companies; possible double burdens (for the participating companies), which could result from differences between the legal requirements for the (consolidated group) payment report and the reporting requirements for the EITI should also be avoided (see also Chapter 4.d.ii.).

Pursuant to § 267(3) of the HGB, the criteria for 'large' companies were therefore used as an initial basis for the identification of the companies. In this case, two of the following three criteria for classification as a 'large' company must be fulfilled on at least two successive two successive closing dates:

- Balance sheet total of €20 million
- Sales of more than €40 million
- an annual average of more than 250 employees

With regard to the question whether or not an ‘activity’ exists in the extractive industry, reference was made

to Regulation 1893/2006/EC of December 20, 2006, which regulates the details of the statistical classification of economic activities. Section B of Annex I of this Regulation is divided into sub-sections 05 to 08 as follows:

Table 9: Statistical classification of economic activities

Subsection	WZ 2008 Code	WZ 2008 – description	ISIC Rev. 4
	B	SECTION B – MINING AND QUARRYING	
05		Coal mining	
	05.1	Hard coal mining	
	05.10	Hard coal mining	0510
	05.2	Lignite mining	
	05.20	Lignite mining	0520
06		Extraction of crude oil and natural gas	
	06.1	Extraction of crude oil	
	06.10	Extraction of crude oil	0610
	06.2	Extraction of natural gas	
	06.20	Extraction of natural gas	0620
	06.20.0	Extraction of natural gas	
07		Ore mining	
	07.1	Iron ore mining	
	07.10	Iron ore mining	0710
	07.2	Non-ferrous metal mining	
	07.21	Uranium and thorium ore mining	0721

Subsection	WZ 2008 Code	WZ 2008 – description	ISIC Rev. 4
	07.21.0	Uranium and thorium ore mining	
	07.29	Other non-ferrous metal mining	0729
08		Quarried natural resources, other mining products	
	08.1	Extraction of natural stone, gravel, sand, clay and kaolin	
	08.11	Extraction of ashlar and natural stone, limestone and gypsum, chalk and slate	0810*
	08.12	Extraction of gravel, sand, clay and kaolin	0810*
	08.9	Other mining and quarrying activities not elsewhere specified	
	08.91	Extraction of chemical and fertilizer minerals	0891
	08.92	Peat extraction	0892
	08.93	Extraction of salt	0893
	08.99	Quarrying, other products not elsewhere specified	0899

* Part of

For the purpose of identifying possible companies, companies assigned to one of the sub-sections 05 to 08 are considered to be primarily ‘active’ in the extractive industry. In addition to the statutory duty to draw up payment reports for ‘large’ companies, there is also an obligation for parent companies to prepare group (consolidated) financial statements if at least one subsidiary is active in the extractive industry. The size of this ‘active’ subsidiary is not relevant here (a ‘consolidated tax group infection’), so that even companies which are themselves not classified as being ‘large’ can trigger a reporting obligation simply through being combined with a ‘large’ parent company.

The approach to ‘consolidated tax group infection’ was also addressed for the purpose of identifying extractive industry companies; and the number of

such companies increased accordingly. As a result, the selection is made using a combination of size and activity criteria (cf. the explanations in Chapter 9.b.i.).

In addition to the size of the companies and the economic classification, the MSG also used a substantial coverage of the sectors as a criterion for the selection of companies.

Depending on the natural resource in question, there are significant differences in the number of companies and active employees in the various sectors in Germany’s extractive industry. The coal mining and crude oil and gas production sectors are dominated by a few, large companies, for instance. The quarried natural resources sector, on the other hand, is characterised by a structural mix of few large suppliers and a high

proportion of small and medium-sized enterprises. Hardly any of the companies in the sector are subject to any legal obligation to draw up payment reports and cannot consequently be identified through the criteria intended for the identification of the companies for the first D-EITI report (see also the explanations in Chapter 9.b.ii.).

iii. Selection of cash flows

In accordance with the EITI standard, cash flows from the extractive industry must be taken into account if they are regarded as significant for a complete presentation of the company payments and state revenues. The following cash flows are recorded within the framework of the first D-EITI report or are subject to the payment reconciliation with the revenues of the government agencies (cf. the explanations in Chapter 4.b.).

Taxes

Corporation tax

Corporation tax is the main income tax of limited companies in Germany; it is not a specific tax for extractive industry companies, but is levied on all limited companies that are domiciled in Germany or are active in the country. The assessment basis for corporation tax is the taxable commercial income, which is derived from the annual net profit; any tax modifications that may apply are also considered. If an enterprise is also active in other sectors as well as in the extractive sector, there may be delimitation problems regarding the share of corporation tax attributable to the activities in the extractive sector, since the corporation tax is calculated on the basis of the total taxable income (cf. Chapter 4.b.i.).

For this reason, corporation tax is classified as a non-project-related payment in the payment reports to be prepared under commercial law. Allocation of these

payments to activities within and outside the extractive sector can be selectively carried out by companies if a proper and reliable coding (based on appropriate allocation criteria) is possible. This commercial practice is pursued for the purposes of EITI reporting.

Trade tax

Commercial enterprises in Germany are subject to trade tax. The municipalities in which the company in question has its operating facilities are entitled to levy trade tax; an operating facility may also extend across several municipalities. Payment recipients for trade tax payments are neither the Federal Government nor the Federal States in a central role, but the relevant individual municipalities; this in itself is a reflection of the Federal State structure in Germany (see also Chapter 4.b.iii.) – however, the many municipalities pose special challenges for payment reconciliation in terms of trade tax¹⁸. In addition to this, individual municipalities – unlike the individual tax offices in the case of corporation tax – cannot be centrally addressed via an organisational unit.

Just which government agencies – and how many of them – receive trade tax payments cannot be foreseen. This information can only be provided by the companies themselves within the framework of the data collection process.

Against this background, the MSG has therefore decided to include the trade tax payments of the companies in the data collection framework and to present these in the current EITI report; however, a general payment reconciliation for the first D-EITI report will not be included. The reconciliation of trade tax payments with the revenue of the municipalities as recipients will instead be exemplarily demonstrated by the payment data of one company that participates in the reporting process and which represents all the other participating companies. Esco – european salt company GmbH & Co. KG, Hanover, a company of the

18 According to the Federal Office of Statistics, there are 11,192 municipalities.

K+S Group headquartered in Kassel, was willing to represent this exemplary trade tax payments reconciliation. For further details and the results of this payment reconciliation of the trade tax payments, please see the explanations in Chapter 9.c.iii.

Particularities with regard to the recording of tax payments in certain parent-subsidiary constellations

Business partnerships such as the GmbH & Co. KG traditionally play a leading role in Germany's small and medium-sized enterprises, in contrast to many other jurisdictions. They are subject to trade tax, but not to corporation tax. Corporation tax is first levied at shareholder level, but only if the shareholder is a limited company. In this respect, one special feature of the German tax law should be noted, according to which business partnerships are not themselves the subject of taxes in terms of income tax; the income generated by the company is subject to taxation at the level of the shareholders, together with the income they have earned from other sources.

In the subsidiary-partnership constellation of a parent limited company, consequences may arise for the recording of the tax payments (trade tax and corporation tax) within the framework of data collection for the EITI report; examples of such consequences are shown below. In each case, it is assumed that a company has voluntarily participated in the data collection for the EITI report if it is active in the extractive industry.

If both the parent limited company and the subsidiary business partnership are active in the extractive industry, all the relevant tax payments (trade tax of the subsidiary and the parent company as well as corporation tax at the parent company level) are recorded in the EITI report. If, on the other hand, the subsidiary or parent company is not active in the natural resources sector, either not all or too many tax payments to government agencies are recorded. If, for example, the parent limited company is active in the extractive

industry, but the subsidiary-business partnership is not, the reported corporation tax payments of the parent company also include the financial results of the subsidiary. From the viewpoint of commercial law, it is possible (but not obligatory) to allocate corporate tax payments to activities both within the extractive sector and outside of it. If, on the other hand, the subsidiary-business partnership is active in the extractive industry, but the parent limited company is not, trade tax payments are only recorded for the subsidiary through the subsidiary's (sole) participation in the data collection, but not, the corporation tax paid by the parent limited company (on a pro rata basis) for the financial results of the subsidiary.

This handling of corporation tax is due to the German tax system. The MSG has decided to pursue this legal, tax-related standpoint, also for EITI purposes.

Particularities with regard to recording the tax payments of consolidated tax groups

German tax law has specific special arrangements in the case of trade tax and corporation tax for corporate groups. Under certain conditions, a so-called 'consolidated tax group' may exist.

In constellations like this, the incorporated companies (subsidiary organisations), which are themselves limited companies do not usually pay tax; the payment of taxes levied on the financial result of all the companies incorporated in the consolidated tax group is carried out entirely and exclusively by the parent company. The parent company in turn pays taxes on its own income and on the income of its subsidiaries, which may not exclusively result from activities related to the extraction of natural resources.

For the purposes of the (consolidated group) payment report under German commercial law, the following differentiations are made at the level of the parent company:

- If the consolidated tax group is mainly active in the extractive industry pursuant to § 341r No. 1 of the HGB, reporting can be carried out for the total amount of the taxes paid by the parent company. There is no obligation to allocate the tax payments to activities within or outside the scope of § 341r No. 1 of the HGB.
- If, on the other hand, the consolidated tax group is not mainly active in the extractive industry as set down in § 341r No. 1 of the HGB, the tax payments made by the parent company may be allocated on a voluntary basis. Otherwise, details of the tax payments made by the parent company will be omitted.

The results of the payment reconciliation substantiate the major practical importance of consolidated tax groups in the taxation of groups of companies. In various cases concerning the companies participating in the payment reconciliation, details of the taxes paid by the parent company are consequently omitted (cf. the figures on the results of the payment reconciliation in Chapter 9.c.).

With regard to the recording of tax payments within the framework of consolidated tax groups, the MSG has also opted to pursue the viewpoint according to German commercial law for EITI purposes.

Minesite and extraction royalties pursuant to the BBergG

Minesite and extraction royalties are levied as a specific tax on extractive companies for free-to-mine natural resources, based on the German Federal Mining Act (§§ 30, 31 BBergG) (for further details see Chapter 4.b.ii.).

The MSG has decided to include minesite and extraction royalties in the EITI report as a cash flow and (in addition to corporation tax) to make these royalties subject to payment reconciliation.

Lease payments

Minesite and extraction royalties are the only taxes that are levied for the exploration and extraction of free-to-mine natural resources in Germany. However, lease payments may have to be made to government agencies in connection with the extraction of non-free-to-mine natural resources, particularly in the quarried natural resources sector, and this is indeed the case when government agencies (as owners) conclude contracts for the extraction of natural resources with extractive sector companies. Such contractual arrangements may include fixed payments or payments that depend on the quantity extracted, or a combination of both variants.

The recipients of the lease payments are the government agencies that have concluded the contractual arrangements with the company (e.g. municipalities, forestry offices, as well as state property administration and moor management authorities). The content and the number of contracts are not centrally documented (cf. Chapter 4.b.iv.). In addition, the individual government agencies which have concluded lease contracts – unlike the individual tax offices in the case of corporation tax – cannot be centrally addressed via an organisational unit. As in the case of trade tax, this leads to particular difficulties in payment reconciliation.

Just which government agencies – and how many of them – receive lease payments cannot be foreseen. This information can only be provided by the participating companies themselves within the framework of the data collection process.

The MSG has therefore decided to record payments made to government agencies by the companies within the framework of the data collection process,

but to exclude them from payment reconciliation. By way of example, and in keeping with the trade tax payments, the MSG originally intended to have the Independent Administrator reconcile the leasing payments made by one participating company as a representative example for all other participating companies. However, this exemplary reconciliation has not yet come to fruition.

Figure 7: Disclosed payment flows and payment reconciliation

Cash flow	Reporting by companies	Payment reconciliation
Corporation tax	yes	yes
Minesite and extraction royalties	yes	yes
Trade tax/lease payments	yes	no

iv. Project level reporting

The EITI standard generally requires reporting at project levels (EITI Requirement 4.7). The MSG has decided to implement the content and scope of the project concept by the analogous application of legal regulation § 341r, No. 5 of the HGB. Payments to government agencies must therefore be detailed for each project if the reporting company has carried out more than one project during the reporting period. The concept of the project is concretised in § 341r No. 5 of the HGB in the form of a summary of operational activities which form the foundation for payment obligations to a government agency and which are based on a contract, license, lease agreement, concession or similar legal agreement.

As a rule, no project-related reporting is provided for ‘corporation tax’ and ‘trade tax’ cash flows, since these are flows that are based on a legal regulation and not on one of the legal agreements set down in § 341r No. 5 of the HGB.

In the case of the ‘minesite and extraction royalties’ cash flow, specifying the relevant permit/extraction site within the scope of the data report ensures the sufficient determinability of the project in question. With regard to lease payments, the data collection templates provide for the allocation of project-related payments to government agencies.

v. Materiality of payments

The commercial regulations for the preparation of (consolidated group) payment reports stipulate that the companies concerned must report payments of €100,000 and upwards made to individual government agencies per reporting year (cf. § 341t(4) of the HGB). A government agency to which less than €100,000 has been paid during the reporting period does not have to be included.

The MSG has decided to adopt these rules for the first D-EITI report. If payments made during reporting year 2016 amounted to less than €100,000 per government agency, the data collection templates require relevant proof of the existence of payments, but without mentioning any specific amounts.

b. Procedure for payment reconciliation

i. Explanation of the nature and extent of the work of the Independent Administrator

The work of the Independent Administrator encompasses the performance of investigative measures as per the International Standard on Related Services (ISRS) 4400, 'Engagements to Perform Agreed-Upon Procedures'. The nature and scope of the work of the Independent Administrator has been particularly described and/or explained within the scope of the following chapters of the EITI report:

- Chapter 9.b.ii.: Identification of companies eligible for participation in the EITI process,
- Chapter 9.b.v.: Measures for safeguarding confidential data,
- Chapter 9.b.vi.: Development of data collection templates and notes on data collection,
- Chapter 9.c.: Implementation of the payment reconciliation and the presentation of its results.

The investigative measures carried out by the Independent Administrator do not constitute a (final) examination or auditor's examination in accordance with the professional standards accepted in Germany or recognised internationally, therefore the Independent Administrator did not submit an overall judgment (neither with sufficient nor with limited judicial certainty) in terms of the subject of the investigation measures. The Independent Administrator did not undertake any specific investigations to verify the correctness, completeness and reliability of the payment data, in particular with regard to the data notifications of the participating companies and/or of the government agencies. In addition, the objectives of the investigative measures carried out were neither to uncover errors nor to detect violations on the part of the participating companies or government agencies.

ii. Identification of companies

The first step was to identify the companies that were relevant for the first D-EITI report. Here the Independent Administrator used a database analysis¹⁹ to select all the companies which are mainly active in the extractive industry and which are allocated to the lignite, crude oil/natural gas and quarried natural resources (including potash & salts) sectors. The classification criterion was the allocation of the companies to sub-sections 05 to 08 pursuant to Regulation 1893/2006/EC of December 20, 2006 (cf. Chapter 9.a.ii.). In the second step, these companies were filtered according to the size criteria stipulated by the HGB for 'large' companies.

The Independent Administrator manually expanded the group of these provisionally-identified companies by including groups of companies in which a potential 'consolidated tax group infection' caused by 'active' subsidiaries existed (for details, cf. Chapter 9.a.ii.). The results were subsequently subjected to an analysis by the MSG members. The following knowledge and/or results were obtained:

19 Orbis Europe Database of the Provider Bureau van Dijk (www.bvdinfo.com) retrieved on February 2, 3 and 28, 2017

- Companies the main activities of which are allocated to the storage (e.g. construction and operation of cavern storage facilities for the storage of natural gas) of natural resources underground are not considered, since the extraction of natural resources is not their primary activity, despite their being allocated to sub-sections 05 to 08.
- All the companies identified and allocated to sub-section 07 (ore mining) do not actively engage in extractive mining in Germany and are therefore not considered.

On the basis of the above-described selection process, a total of 48 companies and/or groups of companies were identified for possible participation in the D-EITI process and were requested to take part. Due to the difficult data situation, however, this number (48) cannot be described as being clear or conclusive.

It is evident that the selection criteria specified by the MSG ensure a prominent level of coverage for the lignite, crude oil and/or natural gas, potash and salts/ industrial brine sectors (cf. Chapter 9.c.). These are solely free-to-mine natural resources and these particular sectors contain comparatively few, but relatively large business units. On the other hand, quarried natural resources are extracted by a very high number of business operations with many extraction facilities and/or mines. One key reason for the purely regional production and marketing of these natural resources is the prohibitive cost of their transport. According to estimates by the German Building Materials Association – Quarried Natural Resources (BBS), the 25 largest quarried natural resources suppliers would account for only about 1.6% of the total number of companies in the industry and around 22% of the total number of the industry's extraction sites. It must also be assumed that a number of companies and/or consolidated companies (which are already among the 25 largest providers in this sector) do not fulfil the size criteria in Chapter 9.a.ii. and are therefore not identified by the selection criteria screen adopted by

the MSG. As a result of the high number of non-identified small and medium-sized enterprises in the quarried natural resources sector, the coverage of this sector clearly lags behind that of the other sectors.

iii. Identification of government agencies

The total number of government bodies that generate revenues from the extractive industry in Germany stem directly from the cash flows that were defined for this first D-EITI report. No central recording of the relevant cash flows is possible, however, due to the federal structure of the administration in Germany.

The following individual government agencies are responsible for:

- Corporation tax: the responsible tax offices at the respective headquarters of the companies
- Mining and extraction royalties: the responsible mining authorities of the Federal States in which the approved/licenced site is located
- Trade tax: the municipalities in the territory of which the taxable operating facilities are located (no payment reconciliation)
- Lease payments: The government agencies which generate revenues from extractive companies on the basis of individual contractual arrangements (no payment reconciliation)

iv. Managing tax secrecy

Both the EITI reporting and the payment reconciliation processes encompass tax data, viz. cash flows relating to corporation tax and trade tax, which are subject to tax secrecy pursuant to §§ 30 et seq. of the AO (German Tax Code, cf. the comments in Chapter 4.c.). The following aspects are particularly significant in the context of tax secrecy:

1. In the course of the preparation of the EITI report, the cash flows reported by the companies and received by government agencies are prepared and disclosed. This also affects tax payments, i.e. data that is subject to tax secrecy. This usage of tax-relevant data is only permissible if the taxpayer, i.e. the respective company, expressly agrees (§ 30(4), No. 3 of the AO). The data collection templates ensure that this consent is obtained from each company for the purpose of publishing the data in the context of EITI reporting.
2. As part of the payment reconciliation to be carried out, the tax payments reported by a company must be reconciled with the data reported by the tax authorities, which are the recipients of the payments. Due to tax secrecy, the respective financial authority may not make this data available for the purposes of payment reconciliation; this requires the taxpayer's express authorisation for the Independent Administrator to act.

The form and the content of this power of attorney were examined by the competent departments of the Federal Ministry of Finance and the Federal States and were also approved by a joint Federal-State committee. When the approval of the MSG and the mining

authorities had been given, the approved power of attorney for submission to the respective tax authorities was also used as a model for a corresponding power of attorney for submission to the responsible mining authorities for the purpose of reconciling mining and extraction royalties.

v. Measures for safeguarding confidential data

All project-related communication via e-mail and all other project-related data is stored in an ISO 27001 and ISO 9001-certified data centre in Germany. A platform has been specifically made available for the exchange of project-related data, and companies can use this to upload data (several times where required). Uploaded data cannot be changed for security reasons. Measures have been taken to prevent any company from gaining access to the data of other participants. The administration of the data exchange, storage and e-mail service is the responsibility of the D-EITI Secretariat in Berlin.

vi. Templates and notes on data collection

In accordance with the decisions made by the MSG regarding the shaping of the contents of the D-EITI reporting process, the Independent Administrator has developed an Excel-based template for the collection of relevant payment reconciliation data. In addition to the data collection templates, the Independent Administrator has also created further 'Notes on data collection within the framework of the D-EITI process'. These notes will give companies practical tips and help them to understand and use the data collection templates.

vii. Quality of data provided by companies and government agencies

Companies in Germany are subject to comprehensive, legally-regulated

- accounting,
- disclosure and
- auditing obligations.

These obligations depend on the company's size, legal form and activity. Limited companies and limited liability partnerships within the meaning of § 264a of the HGB must draw up an annual financial statement with notes and (where required) a management report at the end of each fiscal year. The obligation to carry out the annual audit is regulated (inter alia) in the HGB (§§ 316 et seq. HGB) and in § 6 of the Act on the Accounting of Certain Companies and Groups (PublG). The HGB stipulates a statutory audit obligation (inter alia) for 'medium-sized' and/or 'large' companies, whereby two of three criteria for grouping into the size classes must be met within a given period of time (for further details, cf. § 267 of the HGB).

The statutory audit must at least include the annual accounts (balance sheet, profit and loss account and notes), plus the management report and the accounting records. The auditor must determine whether or not the accounting is consistent with the underlying accounting principles and with any other legal basis such as the Articles of Association or the deed of partnership (compliance/regularity audit). It must also be determined whether or not the respective annual financial statement provides an accurate picture of the situation of the company as a whole. An assessment of whether or not the opportunities and risks of future development are presented in an accurate manner must also be carried out. The (consolidated group) payment reports pursuant to §§ 341q et seq. of the HGB, however, are not yet subject to statutory audit obligations. However, the EU Commission

reserves the right to address the question of a future statutory audit obligation as part of a previously-announced review of the new regulations on the (consolidated group) payment report²⁰.

Due to the Federal State structure in Germany, there are independent, state-owned audit offices to control the budgetary economy at both Federal and state levels. The jurisdiction of the German Federal Audit Office is restricted to the sphere of the Federal Government's financial practices; it has no legal supervisory rights or right of direction over the states' audit offices. The audit offices are independent, highest-level authorities of the Federation and the states; they act independently of the executive and legislative bodies. Their tasks are defined by the constitution and/or the state constitutions, which are defined in detail by Federal and state budgetary regulations.

The audit offices also assume the task of external financial auditing (the 'supra-local audit') at local territorial authority level (municipalities and associations), depending on the Federal State in question. Internal administrative control ('local audit') is carried out by municipal audit offices and/or reviewing offices.

The following principles apply as a standard of review for the auditing of state and municipal budgetary and economic administration:

- the regularity of the execution of the law and administrative action, as well as
- economic efficiency and economical practices in budgetary and economic administration

The principle of regularity includes (inter alia) the accounting correctness (proper and legal calculation, justification and booking) of the individual invoice amounts. The respective audit office is solely responsible for the content, scope and frequency of the auditing procedures.

20 cf. recitals to EU Directive 2013/34/EU of June 26, 2013, sub-para. 52

The results of the audit offices' work are made known to the relevant government agencies in the form of audit reports. The audit office may communicate the audit result to agencies other than those reviewed if it considers this action necessary for particular reasons. Selected audit results are nevertheless summarised in annual reports that are accessible to the public.

In addition to external control processes carried out by the audit offices, internal administrative control processes are also of key importance for assessing government agencies' data quality. These essentially consist of internal rules for the allocation of responsibilities (separation of functions) between the (notification-) issuing authority and the agency receiving the payment. In addition, control mechanisms involving the '4-eyes principle' are also set up within the authorities in the context of the drafting of the relevant communications.

c. Data collection and payment reconciliation

i. Participating companies and coverage of the sectors

Of the 48 companies and/or consolidated group companies identified by the Independent Administrator in accordance with the requirements of the MSG, a total of 12 companies or groups of companies have participated in the reporting process during the preparation of this EITI report.

We would like to point out that the majority of the companies identified as being subject to the legal regulations for the preparation of (consolidated group) payment reports may now prepare and disclose their payment reports by December 31, 2017, a timeframe which exceeds the data collection period originally planned for this EITI report. Only capital market-oriented companies must submit the (consolidated group) payment report by June 30, 2017 if their fiscal year corresponds to the calendar year. The MSG has therefore decided to give extractive companies the opportunity to participate in the EITI reporting process until the beginning of 2018. This decision was based on the statutory deadlines for the preparation and disclosure of (consolidated group) payment reports. It is planned to process and/or publish the data of other companies that will possibly issue reports in the context of a supplementary report to the existing EITI report.

The following overview shows the distribution of the participating companies and/or consolidated companies in the various sectors, taken from the first data collection phase:

Figure 8: Participating companies and/or group of companies

		Sector
1	BEB Erdgas und Erdöl GmbH & Co. KG, Hanover	Crude oil and natural gas
2	DEA Deutsche Erdoel AG, Hamburg	Crude oil and natural gas
3	Dyckerhoff-Gruppe, Wiesbaden	Quarried natural resources
4	ENGIE E&P Deutschland GmbH, Lingen	Crude oil and natural gas
5	ExxonMobil Production Deutschland GmbH, Hanover	Crude oil and natural gas
6	Heidelberger Sand und Kies GmbH, Heidelberg	Quarried natural resources
7	K+S-Gruppe esco – european salt company GmbH & Co. KG, Hanover K+S Kali GmbH, Kassel	Potash and salt products Potash and salt products
8	LafargeHolcim-Gruppe Buss Basalt GmbH & Co. KG, Münzenberg Holcim (Deutschland) GmbH, Hamburg Holcim Beton und Zuschlagstoffe GmbH, Hamburg Holcim Kieswerk Zeithain GmbH & Co. KG, Dresden Holcim West Zement GmbH, Beckum Kalksteinwerke Medenbach GmbH, Breitscheid Kieswerk Leinetal GmbH & Co. KG, Diekholzen Kieswerk Hermann GmbH & Co. KG, Kirchhain Kieswerke Borsberg GmbH & Co. KG, Pirna	Quarried natural resources Quarried natural resources Quarried natural resources Quarried natural resources Quarried natural resources Quarried natural resources Quarried natural resources Quarried natural resources Quarried natural resources
9	Lausitz Energie Bergbau AG, Cottbus	Lignite
10	RWE-Gruppe Rheinische Baustoffwerke GmbH, Bergheim RWE Power AG, Essen	Quarried natural resources Lignite
11	Vermillion Energy Germany GmbH & Co. KG, Schönefeld	Crude oil and natural gas
12	Wintershall Holding GmbH, Celle	Crude oil and natural gas

The following overview shows the coverage of the respective sectors by the group of identified companies and the companies actually participating in

the reporting process, with their respective reference values upon which the determination procedure was based:

Table 10: Coverage of sectors

Sectors*	Estimated coverage of all identified companies	
Lignite	100.0%	
Crude oil	96.0%	
Natural gas	99.7%	
Potash	97.8%	
Salts (including industrial brine)	83.4%	

* Against the background of the small-scale nature of the sector, the determination of a degree of coverage of the quarried natural resources sector was dispensed with, cf. Chapter 9.b.ii.

** Coverage details have been omitted to ensure the protection of competition-relevant data.

The following overview shows the 2016 payments made by the participating companies to government

agencies for the corporation tax, trade tax, lease payments, minesite and extraction royalties cash flows:

Table 11: Overall overview of reported company data

Reported company data		Corporation tax	
		Euro	
1	BEB Erdgas und Erdöl GmbH & Co. KG, Hanover	– ¹	
2	DEA Deutsche Erdoel AG, Hamburg	0.00	
3	Dyckerhoff – Gruppe, Wiesbaden	1,456,787.64	
4	ENGIE E&P Deutschland GmbH, Lingen	12,819,700.00 ²	
5	ExxonMobil Production Deutschland GmbH, Hanover	55,301,318.00 ²	
6	Heidelberger Sand und Kies GmbH, Heidelberg	1,127,213.66	

¹ No payments have been made due to the legal form of the company.

² Payments are made by the parent company.

	Estimated coverage of all participating companies	Reference value – Determination – Coverage
	89.0%	Quantity extracted in 2016
	96.0%	Quantity extracted in 2016
	99.7%	Quantity extracted in 2016
	97.8%	usable quantity in 2015
	no details available**	usable quantity in 2015

	Trade tax Euro	Minesite/extraction royalties Euro	Lease payments Euro	Total reported payments Euro
	37,089,446.37	65,116,685.09	0.00	102,206,131.46
	4,325,138.00 ²	72,117,540.42	0.00	76,442,678.42
	1,903,953.04	0.00	0.00	3,360,740.68
	6,536,606.01	9,432,090.97	0.00	28,788,396.98
	44,496,333.10	41,190,853.28	0.00	140,988,504.38
	1,609.00	0.00	0.00	1,128,822.66

Reported company data		Corporation tax	
		Euro	
7	K+S – Gruppe esco – european salt company GmbH & Co. KG, Hanover K+S Kali GmbH, Kassel	– ¹ No information available ³	
8	LafargeHolcim – Gruppe Buss Basalt GmbH & Co. KG, Münzenberg Holcim (Deutschland) GmbH, Hamburg Holcim Beton und Zuschlagstoffe GmbH, Hamburg Holcim Kieswerk Zeithain GmbH & Co. KG, Dresden Holcim West Zement GmbH, Beckum Kalksteinwerke Medenbach GmbH, Breitscheid Kieswerk Leinetal GmbH & Co. KG, Diekholzen Kieswerk Hermann GmbH & Co. KG, Kirchhain Kieswerke Borsberg GmbH & Co. KG, Pirna	– ¹ No information available ³ No information available ³ – ¹ No information available ⁴ 288,082.52 – ¹ – ¹ – ¹	
9	Lausitz Energie Bergbau AG, Cottbus	0.00	
10	RWE – Gruppe Rheinische Baustoffwerke GmbH, Bergheim RWE Power AG, Essen	No information available ³ No information available ³	
11	Vermillion Energy Germany GmbH & Co. KG, Schönefeld	– ¹	
12	Wintershall Holding GmbH, Celle	No information available ³	
Total reported company payments		70,993,101.82	

¹ No payments have been made due to the legal form of the company.

⁴ Payments have been made, but in total less than €100,000.00.

³ No payment information available due to the existence of a consolidated tax group.

The reports on the cash flows of corporation tax and trade tax illustrate the high relevance of consolidated tax groups in Germany. In these cases, if the main activity of the consolidated tax group does not involve the extraction of natural resources, the details of the taxes paid by the parent company can be omitted

(cf. footnote 3 table 11). On the other hand, if the consolidated tax group is mainly active in the extractive industry, a report (on a pro rata basis and/or complete) of the taxes paid by the parent company is required (cf. footnote 2 in table 11; see also Chapter 9.a.iii).

	Trade tax Euro	Minesite/extraction royalties Euro	Lease payments Euro	Total reported payments Euro
	3,766,118.87	0.00	0.00	3,766,118.87
	No information available ³	1,007,841.68	0.00	1,007,841.68
	No information available ⁴	0.00	0.00	0.00
	No information available ³	0.00	219,510.00	219,510.00
	No information available ³	0.00	No information available ⁴	0.00
	109,566.00	0.00	0.00	109,566.00
	No information available ⁴	0.00	0.00	0.00
	216,174.00	0.00	0.00	504,256.52
	No information available ⁴	0.00	0.00	0.00
	No information available ⁴	0.00	0.00	0.00
	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00
	No information available ³	0.00	140,945.06	140,945.06
	No information available ³	0.00	0.00	0.00
	0.00	2,114,465.01	0.00	2,114,465.01
	No information available ³	40,832,665.00	0.00	40,832,665.00
	98,444,944.39	231,812,141.45	360,455.06	401,610,642.72

ii. Payment reconciliation for corporation tax and minesite and extraction royalties

Comparisons of the corporation taxes and/or mining and extraction royalties reported by the participating

companies for the year 2016 with the corresponding revenues of the government agencies have led to the following provisional and/or final differences:

Table 12: Overview of the reconciliation of corporation tax and minesite/extraction royalty payments

	Total payments according to the company Euro	Total payments according to the public authorities Euro	Provisional differences Euro	
Corporation tax	70,993,101.82	70,993,101.82	0.00	
Minesite and extraction royalties	231,812,141.45	231,384,155.84	427,985.61	
	302,805,243.27	302,377,257.66	427,985.61	

The payments and differences in the cash flow of corporation tax are shown as follows for each company:

Table 13: Results of the reconciliation of corporation tax payments

Corporation tax		Amount according to the company Euro	
1	BEB Erdgas und Erdöl GmbH & Co. KG, Hanover	– ¹	
2	DEA Deutsche Erdoel AG, Hamburg	0.00	
3	Dyckerhoff – Gruppe, Wiesbaden Dyckerhoff GmbH, Wiesbaden Dyckerhoff Kieswerk Trebur GmbH, Trebur-Geinsheim	1,447,779.00 ² 9,008.64	
4	ENGIE E&P Deutschland GmbH, Lingen	12,819,700.00 ²	
5	ExxonMobil Production Deutschland GmbH, Hanover	55,301,318.00 ²	
6	Heidelberger Sand und Kies GmbH, Heidelberg	1,127,213.66	
7	K+S – Gruppe esco – european salt company GmbH & Co. KG, Hanover K+S Kali GmbH, Kassel	– ¹ No information available ³	

¹ No payments have been made due to the legal form of the company.

⁴ Payments have been made, but in total less than €100,000.00.

³ No payment information available due to the existence of a consolidated tax group.

	Provisional differences	Differences to be explained	Unexplained differences	Unexplained differences
	%	Euro	Euro	%
	0.0	0.00	0.00	0.0
	0.2	-427,985.64	-0.03	0.0
		-427,985.64	-0.03	

	Amount according to the public authorities Euro	Provisional differences Euro	Provisional differences %	Differences to be explained Euro	Unexplained differences Euro	Unexplained differences %
	0.00	0.00	0.0	0.00	0.00	0.0
	1,447,779.00	0.00	0.0	0.00	0.00	0.0
	9,008.64	0.00	0.0	0.00	0.00	0.0
	12,819,700.00	0.00	0.0	0.00	0.00	0.0
	55,301,318.00	0.00	0.0	0.00	0.00	0.0
	1,127,213.66	0.00	0.0	0.00	0.00	0.0

Corporation tax		Amount according to the company	
		Euro	
8	LafargeHolcim – Gruppe		
	Buss Basalt GmbH & Co. KG, Müenzenberg	– ¹	
	Holcim (Deutschland) GmbH, Hamburg	No information available ³	
	Holcim Beton und Zuschlagstoffe GmbH, Hamburg	No information available ³	
	Holcim Kieswerk Zeithain GmbH & Co. KG, Dresden	– ¹	
	Holcim West Zement GmbH, Beckum	No information available ⁴	
	Kalksteinwerke Medenbach GmbH, Breitscheid	288,082.52	
	Kieswerk Leinetal GmbH & Co. KG, Diekholzen	– ¹	
	Kieswerk Hermann GmbH & Co. KG, Kirchhain	– ¹	
	Kieswerke Borsberg GmbH & Co. KG, Pirna	– ¹	
9	Lausitz Energie Bergbau AG, Cottbus	0.00	
10	RWE – Gruppe		
	Rheinische Baustoffwerke GmbH, Bergheim	No information available ³	
	RWE Power AG, Essen	No information available ³	
11	Vermillion Energy Germany GmbH & Co. KG, Schönefeld	– ¹	
12	Wintershall Holding GmbH, Celle	No information available ³	
		70,993,101.82	

¹ No payments have been made due to the legal form of the company.

⁴ Payments have been made, but in total less than €100,000.00.

³ No payment information available due to the existence of a consolidated tax group.

	Amount according to the public authorities Euro	Provisional differences Euro	Provisional differences %	Differences to be explained Euro	Unexplained differences Euro	Unexplained differences %
	288,082.52	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	70,993,101.82	0.00	0.0	0.00	0.00	0.0

The payments and differences in the cash flow of minesite and extraction royalties are shown as follows for each company:

Table 14: Results of the reconciliation of minesite/extraction royalties

Minesite and extraction royalties by company		Sector	Amount according to the company*	Euro
1	BEB Erdgas und Erdöl GmbH & Co. KG, Hanover	Crude oil and natural gas	65,116,685.09	
2	DEA Deutsche Erdoel AG, Hamburg	Crude oil and natural gas	72,117,540.42	
3	Dyckerhoff – Gruppe, Wiesbaden	Quarried natural resources	0.00	
4	ENGIE E&P Deutschland GmbH, Lingen	Crude oil and natural gas	9,432,090.97	
5	ExxonMobil Production Deutschland GmbH, Hanover	Crude oil and natural gas	41,190,853.28	
6	Heidelberger Sand und Kies GmbH, Heidelberg	Quarried natural resources	0.00	
7	K+S – Gruppe			
	esco – european salt company GmbH & Co. KG, Hanover	Potash and potash salt	0.00	
	K+S Kali GmbH, Kassel	Potash and potash salt	1,007,841.68	
8	LafargeHolcim – Gruppe			
	Buss Basalt GmbH & Co. KG, Münzenberg	Quarried natural resources	0.00	
	Holcim (Deutschland) GmbH, Hamburg	Quarried natural resources	0.00	
	Holcim Beton und Zuschlagstoffe GmbH, Hamburg	Quarried natural resources	0.00	
	Holcim Kieswerk Zeithain GmbH & Co. KG, Dresden	Quarried natural resources	0.00	
	Holcim West Zement GmbH, Beckum	Quarried natural resources	0.00	
	Kalksteinwerke Medenbach GmbH, Breitscheid	Quarried natural resources	0.00	
	Kieswerk Leinetal GmbH & Co. KG, Diekhofen	Quarried natural resources	0.00	
	Kieswerk Hermann GmbH & Co. KG, Kirchhain	Quarried natural resources	0.00	
	Kieswerke Borsberg GmbH & Co. KG, Pirna	Quarried natural resources	0.00	

* Payments made in the crude oil and natural gas sector relate to the own production share from the economic exploitation of the respective mining rights.

	Amount according to the public authorities Euro	Provisional differences Euro	Provisional differences %	Differences to be explained Euro	Unexplained differences Euro	Unexplained differences %
	64,987,248.76	129,436.33	0.2	-129,436.12 ³	0.21	0.0
	72,058,852.01	58,688.41	0.1	-58,688.98 ¹	-0.57	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	9,432,090.97	0.00	0.0	0.00	0.00	0.0
	41,190,853.13	0.15	0.0	0.00	0.15	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	1,007,841.68	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0

¹ Corrections due to duplicate entries

³ Correction for other fees, etc.

Minesite and extraction royalties by company		Sector	Amount according to the company*	
			Euro	
9	Lausitz Energie Bergbau AG, Cottbus	Lignite	0.00	
10	RWE – Gruppe			
	Rheinische Baustoffwerke GmbH, Bergheim	Quarried natural	0.00	
	RWE Power AG, Essen	Lignite	0.00	
11	Vermillion Energy Germany GmbH & Co. KG, Schönefeld	Crude oil and natural gas	2,114,465.01	
12	Wintershall Holding GmbH, Celle	Crude oil and natural gas	40,832,665.00	
			231,812,141.45	

* Payments made in the crude oil and natural gas sector relate to the own production share from the economic exploitation of the respective mining rights.

The payments and differences for minesite/extraction royalties are attributable to the following mining authorities:

Table 15: Results of the reconciliation of minesite/extraction royalties by mining authority

Minesite and extraction royalties by mining authority	Amount according to the company	Amount according to the public authorities	
	Euro	Euro	
State Office for Mining, Energy and Geology, Hanover (LBEG)	177,293,644.24	176,934,011.78	
LBEG on behalf of: Fiscal Administration of Schleswig-Holstein, Kiel	49,415,226.88	49,354,265.90	
LBEG on behalf of: State Treasury of Bremen, Bremen	23,726.00	23,725.80	
State Office for Geology and Mining, Mainz-Hechtsheim	2,787,291.19	2,779,898.98	
Government of Upper Bavaria, Mining Office of Southern Bavaria, Munich	1,284,411.46	1,284,411.70	
Regional Council of Darmstadt, Wiesbaden	1,007,841.68	1,007,841.68	
	231,812,141.45	231,384,155.84	

	Amount according to the public authorities Euro	Provisional differences Euro	Provisional differences %	Differences to be explained Euro	Unexplained differences Euro	Unexplained differences %
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	0.00	0.00	0.0	0.00	0.00	0.0
	2,011,648.60	102,816.41	4.9	-102,816.41 ²	0.00	0.0
	40,695,620.69	137,044.31	0.3	-137,044.13 ³	0.18	0.0
	231,384,155.84	427,985.61	0.2	-427,985.64	-0.03	0.0

² Adjustments due to the different timing of certain booking entries

³ Correction for other fees, etc.

	Provisional differences Euro	Provisional differences %	Differences to be explained Euro	Unexplained differences Euro	Unexplained differences %
	359,632.46	0.2	-359,632.45	0.01	0.0
	60,960.98	0.1	-60,960.98	0.00	0.0
	0.20	0.0	0.00	0.20	0.0
	7,392.21	0.3	-7,392.21	0.00	0.0
	-0.24	0.0	0.00	-0.24	0.0
	0.00	0.0	0.00	0.00	0.0
	427,985.61	0.2	-427,985.64	-0.03	0.0

iii. Exemplary trade tax payments reconciliation

With regard to the reconciliation of payments for trade taxation, the MSG has refrained from a general

payment reconciliation of the reported trade taxes, against the background of the federal system in Germany and the many municipalities which can be considered as payment recipients (cf. the explanations in Chapter 9.a.iii.). The implementation of an

Table 16: Results of the reconciliation of trade tax payments made by esco

Trade tax reconciliation for esco – european salt company GmbH & Co. KG, Hanover	Amount according to the company Euro	Amount according to the public authorities Euro	
State Capital Hanover, Johannssenstraße 10, 30159 Hanover	355,164.11	355,164.11	
Bernburg, Schlossgartenstraße 16, 06406 Bernburg	1,452,246.19	1,452,246.19	
Integrated municipality Grasleben, Bahnhofstraße 4, 38368 Grasleben	591,734.75	591,734.75	
Rheinberg, Kirchplatz 10, 47495 Rheinberg	1,366,973.82	1,366,973.82	
	3,766,118.87	3,766,118.87	

exemplary payment reconciliation of trade tax payments was resolved, for which esco – european salt company GmbH & Co. KG of Hanover volunteered to make itself available. The following overview shows the results of this payment reconciliation:

	Provisional differences	Provisional differences	Differences to be explained	Unexplained differences	Unexplained differences
	Euro	%	Euro	Euro	%
	0.00	0.0	0.00	0.00	0.0
	0.00	0.0	0.00	0.00	0.0
	0.00	0.0	0.00	0.00	0.0
	0.00	0.0	0.00	0.00	0.0
	0.00		0.00	0.00	

10

RECOMMENDATIONS OF THE INDEPENDENT ADMINISTRATOR



Identification of companies

The MSG agreed to carry out the content-related development of the EITI process in Germany, in accordance with the legal provisions of §§ 341q et. seq. of the HGB. The identification of potential participating companies was carried out accordingly (inter alia) by a selection process based on the size criteria of the HGB and the existence of an 'activity' in the extractive industry (cf. Chapter 9.a.ii. and 9.b.ii.). This meant that the selection procedure was not primarily based on the type and extent of actual payments made to government agencies. For the D-EITI reports from 2018 on, the published (consolidated group) payment reports can act as a reference for the identification of companies.

■ Recommendations of the Independent Administrator

- Analysis of the published (consolidated group) payment reports with regard to the nature and extent of the declared payments to government agencies and, where appropriate, the adjustment of the payments to be reported for future D-EITI reports
- Reconciliation of the group of published (consolidated group) payment reports with the identified companies for the present EITI report
- Targeted contacting of companies that publish a (consolidated group) payment report, but have not yet participated in the EITI process

Contacting of the identified companies

Feedback from the identified companies responding to the request for participation in the EITI process was not forthcoming in a number of cases. Furthermore, it was not always possible to get in touch with the companies in order to present details of the EITI process and/or to ask for a decision from the company management regarding the intention to participate.

■ Recommendations of the Independent Administrator

- Introduction of additional process steps involving the various MSG stakeholder groups in order to contact companies which have not yet replied to the request for participation in the EITI process

Increased involvement of companies in the work of the EITI

The latest developments and results of the international and national EITI process should be communicated directly and promptly to extractive industry companies, in order to promote a more comprehensive understanding of the process and to give companies the opportunity to request further information and/or to give their opinions.

■ Recommendations of the Independent Administrator

- Establishment of a direct information exchange mechanism between extractive companies and the D-EITI Secretariat

Implementation of the payment reconciliation

The deadlines for the issuance of the EITI report are currently not fully compatible with the statutory deadlines for the publication of (consolidated group) payment reports when the fiscal year is the same as the calendar year. This particularly applies to companies which are not subject to § 264d of the HGB (non-capital market-oriented companies). Against this background, the MSG has decided to provide companies with the opportunity to participate in the D-EITI by extending the data report submission deadline until January 31, 2018.

■ Recommendations of the Independent Administrator

- The deadlines for the submission of future EITI reports should be harmonised with the statutory time limits for the publication of (consolidated group) payment reports in consultation with the international EITI Secretariat.

For future reporting processes, possibilities should be investigated which would allow the submission of the data report for the EITI to be carried out near to the date for the publication of the (consolidated group) payment reports – this would allow companies more temporal flexibility in dealing with their submissions. The government agencies identified by means of the reported data could then prepare the necessary documentation immediately (if the relevant authorisations were available) and subsequently make it available via the existing data transmission routes.

■ Recommendations of the Independent Administrator

- Examination of the possibilities to create temporal flexibility for companies regarding the data submission and for government agencies, and of the subsequent data reconciliation by the Independent Administrator, e.g. through the establishment and/or use of a relevant data memory base which would be permanently available to all involved in the payment reconciliation process.

Composition of the MSG

■ Recommendations of the Independent Administrator

- Inclusion of municipal representatives in the MSG, also against the background of the importance of trade tax revenues in Germany and the Federal State system and/or the federal administrative structures

Integration of expert knowledge into the work of the MSG

■ Recommendations of the Independent Administrator

- Continuation and/or intensification of the use of expert knowledge for the adequate analysis of complex topics and the efficient preparation of the MSG's decision-making process. It may be advisable to integrate experts into the further discussion of subjects such as contractual transparency and ensuring data quality on the part of the public authorities.

Documentation of the activities of working groups (WGs)

■ Recommendations of the Independent Administrator

- In addition to an overview of the current WGs and their members, the results of the WGs meetings should also be centrally documented by the EITI Secretariat and made available to the public.

The future of the payment reconciliation

Given the present results of the payment reconciliation and the expected transfer of the data collection and data delivery procedures in routine processes, the perspective today is that there will be no significant differences in future payment reconciliation procedures for cash flows (corporation tax and mining/extraction royalties). This may lead to more stringent questioning of the justification of the payment reconciliation procedure, also with regard to the associated added value for the EITI process.

■ Recommendations of the Independent Administrator

- The German EITI Secretariat should introduce the future results from the national EITI process into the discussion begun at international level on the possibilities of the transition to unilateral reporting of cash flows without subsequent payment reconciliation. If new payment flows are added to the process, obligatory, time-limited implementation of the payment reconciliation may be a solution. Depending on the results of the payment reconciliation, the individual payment flows could then be transferred to a unilateral system for reporting by companies.
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ANNEX

a. Presentation of further EITI requirements

i. Requirement 4.1 b) (revenue flows to be included)

1. The host government's production entitlement (such as oil profit)

Such claims made by government agencies do not exist in Germany, so this requirement does not have to be taken into consideration.

2. State enterprises' production entitlement

State holdings in extractive companies play only a subordinate role in Germany. Of the 48 companies and/or consolidated companies identified, there is only one case in which a government agency is financially involved. The state is also indirectly involved in the RWE AG through its shares in the RWEB GmbH, Dortmund. Various government agencies hold 100% of the RWEB GmbH shares. With 14.18%, the RWEB GmbH is the largest individual shareholder of the RWE AG, the subsidiary of which is the RWE Power AG (cf. RWE AG Annual Report 2016, Page 60).

State holdings in extractive companies do not therefore lead to substantial revenues for the German state and these cash payments need not be considered for D-EITI purposes.

3. Dividends

As already mentioned under point 2, state holdings in extractive industries in Germany do not result in any substantial income for the state, therefore these cash flows need not be considered for D-EITI purposes.

4. Bonuses (such as signature, discovery and production bonuses)

Such payments are not levied in Germany, therefore recording them for EITI purposes is unnecessary.

5. All other significant payments and substantial advantages for the government

a) Income tax on wages and salaries

This is a form of income tax levied on income from persons who are not self-employed. Payment is made by the company as an employer, but for and on behalf of the employees. As in the case of the legal commercial regulations for the (consolidated company) payment report, this need not be considered for D-EITI purposes.

b) Social security contributions

As in the case of income tax on wages and salaries, social security contributions (= employers' contributions to the social security of the employees) are paid by the employer for the employees. Depending on the type of contribution, however, the employer contributes up to half of this social security payment. In essence, these contributions are for pension, health, unemployment and long-term care insurance. However, social security contributions are not a specific tax for the extractive industry and they are also expressly excluded from reporting in terms of commercial law. For this reason, these contributions are not included in the German EITI report.

c) VAT

As a rule, VAT does not affect the net income of companies, it is the end user who must pay this tax. In general, this is an indirect tax, since taxpayers (those obliged to pay) and the economically-burdened (end-users) are not identical. The exchange of services performed by an entrepreneur within the framework of his or her company in Germany is taxed. Since VAT is not a corporation tax, it should not be included in the EITI report.

d) Compensatory payments

Requirements imposed upon an extractive company to compensate for its interventions in nature and the landscape are an expression of the “polluter pays” principle. These requirements can also include compensatory payments to government agencies in the form of an ‘ultima ratio’ if interventions in nature are unavoidable, or if they cannot be compensated or replaced within a reasonable period of time.

For reasons of immateriality, the MSG considers it justifiable to refrain from including compensatory payments for interventions in nature and landscape in the EITI report, cf. also the explanations in Chapter 6.a.

e) Implementation securities

Implementation securities are an instrument which (through so-called substitute performance by the authorities) ensures that no additional costs will have to be paid by the general public if an extractive sector company should fail or refuse to implement its obligatory renaturation, safeguarding and rehabilitation measures.

The BBergG expressly provides for optional implementation securities as an official instrument for natural resources extraction projects which are subject to the BBergG. Individual Federal States have introduced similar legislation in their excavation laws (or other subordinate excavation regulations) for the extraction of natural resources which is outside the legal scope of the BBergG. Implementation securities can also be established to ensure the implementation of compensatory and substitution measures for interventions in nature and landscape, pursuant to § 17(5) of the Federal Nature Conservation Act (BNatSchG).

In principle, any suitable form of implementation security is permitted. The depositing of cash, however, is not customary in the industry, because the management of such funds is too complex for the competent authorities. The MSG has therefore resolved not to consider implementation securities as cash flows within the framework of the D-EITI process.

ii. Requirement 4.2

(Revenues from the sale of the state’s share of production or other revenues collected in kind)

As already mentioned in Section i. (on Requirement 4.1b), state ownership of companies in the extractive industry plays a subordinate role in Germany. Revenues from the sale of the state’s share of production are therefore not considered within the context of the D-EITI.

Revenues in kind paid to government agencies by the extractive industry are not known.

iii. Requirement 4.3

(Infrastructure provisions and barter arrangements)

No knowledge exists of agreements that provide for the direct exchange of goods or services against the granting of oil, gas or mining exploration/extraction licenses.

iv. Requirement 4.4 (Transport revenues)

The EITI standard requires the disclosure of state revenues from the transport of oil, gas and mineral resources, if these revenues are included among the main cash inflows in the extractive sector.

In Germany, highly-developed transmission networks are operated for energy (electricity, crude oil and natural gas) and these networks serve to secure the supply of the economy and of private households. The operation of supply networks for electricity and gas is governed by the Electricity and Gas Supply Act (German Energy Act, EnWG). Pursuant to § 1(1) of the EnWG, “the most secure, cost-effective, consumer-friendly, efficient and environmentally-friendly, grid-bound supply to the general public...” is paramount in this regard. The separation of the activities of transport network operators and companies which actually extract natural gas is ensured in most cases due to relevant unbundling regulations in the EnWG.

In Germany, specific revenue streams for grid-bound supply with electricity and gas and for the use of oil pipelines are not levied by government agencies. The operators of these networks are thus subject to general company taxation.

The use of state land may result in payments for line rights and rights of way. However, pursuant to the Ordinance on Concession Fees, these charges may only be levied for the granting of the right to use public transport routes for the laying and operation of lines which supply electricity and gas directly to ultimate consumers in municipal areas. In contrast, long-distance operators do not supply the ultimate consumers; they deliver from extractive companies and/or electricity-generating companies (or the national transfer stations) to transfer stations for the distribution network operators in Germany.

In addition, transport companies wholly or partly owned by the state, such as the Deutsche Bahn Group, are only subject to general company taxation. There are no special charges for the transport of natural gas and crude oil and/or mineral resources. The same applies to the collection of truck tolls for the use of motorways and selected federal roads.

v. Requirement 4.5 (Transactions related to state-owned enterprises)

We refer to our explanations in Section i. re Requirement 4.1 (b). Due to the subordinate importance of state ownership in extractive companies, a more detailed analysis of transactions relating to state-owned enterprises appears to be unnecessary.

vi. Requirement 4.6 (Payments to sub-national authorities)

Payments for trade tax (and, where applicable, for leases) go directly to government agencies at the municipal level in the sense of a ‘subnational level’ (for further explanations regarding trade tax and lease payments, cf. Chapter 4.b.). There are no other significant cash flows from the extractive industry to (in this sense) ‘sub-national’ agencies.

b. Information sheet for the calculation of tax relief pursuant to § 10 of the Electricity Tax Act and § 55 of the Energy Tax Act

The Information sheet is available in German online under <https://www.detmold.ihk.de/datei/doc/9716> (Last access 11.10.2017). For an english translation please contact the D-EITI Secretariat under sekretariat@d-eiti.de.

GLOSSARY

Excavation laws

In Bavaria and North Rhine-Westphalia, the above-ground excavation of non-energetic, ground-based natural resources in the context of dry excavations is determined at state level by the existing excavation laws (AbgrG). For the excavation of solid rock (limestone, basalt, etc.) in quarries where blasting does not occur, the AbgrG applies to sites with an area of up to 10 ha. In the event that this area is exceeded, or if water bodies are formed after completion of the extraction operations, the German Federal Immission Control Act (BImSchG) and/or Water Resources Act (WHG) are applicable. In the other Federal States, this type of natural resources extraction is regulated by the respective state building regulations or by the state-level nature conservation laws.

In general, the AbgrG applies to those raw materials the excavation of which is not directly subject to mining law or the mining authorities. These raw materials include (in particular) gravel, sand, clay, loam, limestone, dolomite and other rocks, bog mud and clays. However, the jurisdiction between AbgrG and mining law can vary from case to case in the case of certain raw materials, such as quartz gravels. The requested authority must always verify its own jurisdiction in each case. The AbgrG also encompasses surface area usage and the subsequent rehabilitation of the area.

Building Regulations

In Federal States in which legislation does not include an excavation law and the State-level Nature Conservation Law does not apply to the extraction of non-energetic, ground-based natural resources in the context of dry excavations, this type of natural resource extraction falls within the scope of the relevant state building regulations.

Legal limitations also exist: State building regulations apply to the excavation of solid rock (limestone, basalt, etc.), for example, in quarries with an area of up to

10 hectares (ha) in which no blasting is carried out.

In the event that this area is exceeded, or if water bodies are formed after completion of the extraction operations, the German Federal Immission Control Act (BImSchG) and/or Water Resources Act (WHG) are applicable.

Planning approval procedure under mining law

The planning approval procedure under mining law is used for the approval procedure of a general operating plan for projects which require an environmental impact assessment (§§ 52(2a), in conjunction with 57a of the BBergG).

GDP

The GDP measures the value of goods and services produced domestically (creation of value) within a given period (quarter, year). The Federal Office of Statistics calculates the GDP as follows: production value minus intermediate consumption = the gross value added; plus taxes on products and minus subsidies = GDP

Gross value added

The gross value added is calculated by deducting intermediate consumption from the production values, so it only includes the value added created during the production process. The gross value added is valued at manufacturing prices, i.e. without the taxes due (product taxes), but including the product subsidies received.

During the transition from gross value added (at manufacturing prices) to GDP, the net taxes (product taxes less product subsidies) are added globally to arrive at an assessment of the GDP at market prices'. Source: <https://www.destatis.de/EN/FactsFigures/NationalEconomyEnvironment/NationalAccounts/NationalAccounts.html;jsessionid=D9A651D8259452745F5392BAC808D13B.cae4>

Federal Immission Control Act

The German Federal Immission Control Act (BImSchG) is the most important and practice-relevant law in the field of environmental law. It constitutes the basis for the approval of industrial and commercial installations. In the natural resources extraction industry, quarrying companies must have approval to extract stones and earth. Every quarrying area of 10 hectares or more must undergo a full approval procedure, including public participation and UVP (environmental impact assessment). A more simplified approval procedure is used for quarrying areas of less than 10 hectares.

The sphere of responsibility for the legal immission control approval procedure is fully specified in the Immission Control Acts of the Federal States. The Federal States are tasked with the administrative enforcement of the approval procedure. Each individual state's Environment Ministry – the highest local immission protection authority – usually bears the responsibility for this procedure. Subordinate authorities include regional councils, district authorities and lower-level administrative authorities. Administrative jurisdiction generally lies with the lower-level administrative authorities.

Water Resources Act

In compliance with § 68(1), Water Resources Act (WHG), the excavation of landowners' natural resources such as gravel, sand, marl, clay, loam, peat and stone in wet extraction operations requires a planning approval procedure. The reason for this is that groundwater is exposed in wet extraction, resulting in above-ground water. The planning approval procedure is implemented by lower-level water authorities.

The procedural steps of the planning approval procedure are governed by the general provisions of §§ 72 to 78 of the Administrative Procedures Act (VerwVfG). Within the meaning of § 68(3), nos. 1 and 2 of the WHG, the plan may only be established or approved if an impairment of the common good is not to be expected and other requirements of the WHG as well as other public-law provisions are fulfilled.

FINAL NOTES

ⁱ The production quantities (Chapter 2.b.) of hard coal, lignite, crude oil, natural gas, potash salt, special clay, rock salt and industrial brine are based on the information in 'Der Bergbau in der Bundesrepublik Deutschland 2015 (Mining in the Federal Republic of Germany in 2015)' published by the BMWi (German Federal Ministry for Economic Affairs and Energy). It is an annual publication, which includes information about the extraction of natural resources in Germany.

The data on the extraction of the natural resources stems from mining authorities and includes all usable natural resources extracted under the supervision of the responsible mining authority in accordance with the regulations of the BBergG (German Federal Mining Act) and products created or manufactured by processing the above natural resources. This means that the statistics do not provide a comprehensive picture in the case of natural resources that are only partially covered by mining law. The data on the production quantities of quartz gravel and quartz sand [Federal Association of Mineral Resources – MIRO 2016], gravel and sand [MIRO 2016], broken natural stone [MIRO 2016], limestone, marl and dolomite stone [Federal Association of the German Lime Industry – BVK] and on ashlar [German Natural Stone Association – DNV] was therefore obtained from the respective industry associations. The data on china clay is based on the estimation of the Federal Institute for Geosciences and Natural Resources [BGR 2016], since the value of 3.7 million tons [BMW 2016] does not refer to the products available on the market.

Furthermore, the data on the value of the associated production volumes is not included in the official statistics. Data is therefore taken from other sources, such as the associations' annual reports or from various publications of the Federal Office of Statistics. In detail, the production values of hard coal, lignite, crude oil and natural gas are based on estimates from the 2015 average cross-border prices [BGR 2016]. The values for potash and potash salt products, special

clays (values according to Destatis), rock salt and industrial brine (values according to Destatis) and china clay (values according to IM 2016 (Industrial Materials)) are also taken from the same publication.

The values for the production of quartz sand and gravel, gravel and sand and broken natural stone are taken from MIRO 2016. The values for the production of natural stone [DNV 2016] and of limestone, marl and dolomite stone are taken from the data provided by the Federal Office of Statistics.

The data was not subjected to any specific verification procedure.

Hard coal

Plans are in the pipeline to end German hard coal extraction in a socially-acceptable manner by 2018, since the industry has been steadily declining for years. 6.2 million tons of usable output were extracted in 2015. An approximate value of €423 million for this quantity can be estimated from the average 2015 cross-border prices for power station coal.

Lignite

At 178.1 million tons, lignite extraction remained around the previous year's level. According to the estimate of the BGR, this corresponds to a value of €2,431 million.

Crude oil

German crude oil production in 2015 was 2.41 million tons. As in the case of hard coal, the BGR again used the average 2015 cross-border prices as a basis for estimating the value of crude oil production at €859 million.

Natural gas

2015 saw 9,387.62 m³ of natural gas (incl. petroleum gas) extracted from sites in nine German Federal States. As in the case of crude oil, the BGR again used the average 2015 cross-border prices as a basis

for estimating the value of natural gas production at €2,064 million.

Potash salt

Two companies in Germany extract potash salt and magnesium salt. The usable extracted output in 2015 amounted to 5.7 million tons in the form of potash products [BMW 2016]. 1.5 million tons from other by-products of potash production must be added to that figure [BMW 2016]. The BGR calculated that the total quantity has a value of roughly €2,156 million.

Special clay

According to the German mining authorities, 6.40 million usable tons of special clay were extracted in Germany in 2015. The clay in question is high-quality material for the ceramic industry and refractory use. According to the Federal Office of Statistics, the BGR calculated the value of this amount at €148 million.

Rock salt and industrial brine

13.7 million tons of rock salt and industrial brine (NaCl content) were extracted in Germany in 2015, according to the German mining authorities. The BGR calculated the value of that quantity to be €566 million, based on value information from the Federal Office of Statistics.

China clay

China clay or kaolin is used mainly in the paper industry and in the production of fine ceramics. According to information provided by the German mining authorities, 5.3 million tons of kaolin-bearing raw material were extracted in 2015, of which 3.8 million tons were usable [BMW 2016]. Around 1.1 million tons of saleable kaolin products remained after treatment and this quantity was valued at €119 million.

Quartz gravel and sand

In 2015, 9.7 million tons of quartz gravel and quartz sands* were extracted in 2015, valued at €205.5 million. Among its other uses, the raw material is used as vitreous sand, foundry sand and as a filler in chemical and building chemical products.

Gravel, sand and broken natural stone

Around 95% of the gravel, sand and broken natural stone extracted today is used in the building and building materials industries [BGR 2016], where they are used in underground engineering and in the manufacture of concrete amongst others. In 2015, 239 million tons of gravels and sands (with a value of €1,510 million) and 210 million tons of broken natural stone (valued at €1,439 million) were extracted.**

Ashlar

Ashlar is first extracted in raw blocks and then sawn into plates of different formats, which are e.g. for facade cladding, wall and floor coverings, window sills, stair steps and gravestones. In 2015, 0.44 million tons of this natural resource were extracted, with an estimated value of €52 million.

Limestone, marlstone and dolomite

48.9 million tons of limestone, marlstone and dolomite valued at €719 million were extracted in 2015. Limestone is used in many sectors, including home and road construction and in iron, steel, cement, glass and foodstuffs production.

[BMW 2016] – Bundesministerium für Wirtschaft und Energie (2016): “Der Bergbau in der Bundesrepublik Deutschland 2015”

* In [BMW 2016], a different classification is considered, namely that of quartz and quartz sand. Of these quartz sand and quartz gravel are only a sub-group, which is not specifically designated according to mining law. The data from [MIRO 2016] is therefore used to estimate the value.

** All data taken from [MIRO 2016]. The amount of extracted gravels and gravel sands indicated in [BMW 2016] is significantly less, since only very few of the companies are subject to mining law.

[BGR 2016] – Bundesanstalt für Geowissenschaften und Rohstoffe (2016): “Deutschland – Rohstoffsituation 2015”

[Destatis] – Statistisches Bundesamt (versch. Jg. a): Erhebungsportal. – URL: <https://erhebungsportal.estatistik.de/Erhebungsportal> sowie (versch. Jg. b): Produzierendes Gewerbe. – URL: <https://www.destatis.de/EN/FactsFigures/EconomicSectors/Industry-Manufacturing/IndustryManufacturing.html>

[DNV 2016] – Deutscher Naturwerkstein-Verband e.V. (2016): URL: <https://www.natursteinverband.de/>

[IM 2016] – Industrial Materials (2016): IM Price Database

[MIRO 2016] – Bundesverband Mineralische Rohstoffe e.V. (2016): “Die deutsche Gesteinsindustrie. – Bericht der Geschäftsführung 2015/2016”

ii The data was taken from the current national accounts of the Federal Office of Statistics. The ‘Mining and Quarrying’ economic sector includes the extraction of naturally-occurring solid mineral resources (coal, salt, ores, quarried natural resources), liquid mineral resources (crude oil) and gaseous mineral resources (natural gas).

In the statistical classification of the economic sectors (WZ 2008), the ‘Mining and Quarrying’ segment encompasses the entire section B with the following sub-sectors: coal mining (WZ08-05); crude oil and natural gas extraction (WZ08-06); ore mining (WZ08-07); Quarried natural resources, other mining products (WZ08-08), and the performance of services for mining and for quarrying (WZ08-09). A detailed list of these sub-sectors can be found in the publication ‘Klassifikation der Wirtschaftszweige’ (Classification of Economic Activities) of the Federal Office of Statistics, pages 175 to 185. It should be noted that section B

(‘Mining and Quarrying’) includes the sub-sector ‘Provision of Services for Mining and Quarrying’ (WZ08-09). This, however, does not include classical extraction activities.

In addition, there are other companies which extract natural resources; however, these are allocated to a different economic sector due to their main activities and are therefore not included in the following.

iii Preliminary note

The tax amounts shown in the table are based on special evaluations of the corporation tax statistics from 2010 to 2012, the trade tax statistics of 2010 and 2011 and the statistics on the partnerships and communities from 2010 to 2012, as well as estimates and updates of the Federal Ministry of Finance.

Only the ‘Mining and Quarrying’ economic sector was addressed.

The ‘Mining and Quarrying’ sector includes the extraction of the following naturally-occurring mineral resources: solids (such as coal, salt and ores), liquids (crude oil) and gaseous resources (natural gas). A detailed list of these sub-sectors can be found in the publication ‘Klassifikation der Wirtschaftszweige’ (Classification of Economic Activities) of the Federal Office of Statistics, pages 175 to 185.

As the most recent statistical data concerns the years 2011 and 2012, the subsequent years have been updated until 2015. The rate of change in gross value added by the economic sector B, ‘Mining and Quarrying’ as stated in the national accounts was used for the purpose of the update (source: ‘VGR – Wichtige Zusammenhänge im Überblick’ (National Accounts – An Overview of Key Facts), page 20 f.). The gross value added by the economic sector B, ‘Mining and Quarrying’ in 2016 is not yet available.

The tax amounts reported for the natural resources sector are amounts that had to be paid by the companies for the respective year (so-called assessment year). The statistical time frame is therefore different from that of the total income of the state which is recorded in the year of the inflow (cash year).

The total reported income of the state is taken from the Federal Government's cash statistics (total public budget – ÖGH). The state's total income includes not only income from taxes, but social security contributions, proceeds from the disposal of assets or investments (government bonds) as well as fees, administrative income and profits from state enterprises. Detailed explanations and definitions of the total public budget can be found on the website of the Federal Office of Statistics:

<https://www.destatis.de/EN/Publications/Specialized/SpecializedPublications.html>

Corporation tax

Statistical data from the years 2010 to 2012 was assessed. For the purposes of the assessment, the corporation tax amounts imposed on unlimited and limited corporation taxpayers before the deduction of capital gains tax or the like were taken into account. The update for the years 2013 to 2015 was made on the basis of the development of the gross value added of the economic sector B, 'Mining and Quarrying.'

Trade tax

Trade tax in Germany is collected by more than 11,000 municipalities according to individually determined and thus differing rates. The basis for the calculation of the trade tax is trade income. This is the profit determined pursuant to the income tax law or the corporation tax law. The amount of trade tax may be increased or reduced by additions and reductions as per the German Trade Tax Act. On the basis of the business income, a taxable amount is calculated

uniformly throughout Germany and the trade tax to be paid by the company is determined by applying the respective tax factor of the municipality to the taxable amount. Trade tax is levied on corporations, partnerships and natural persons with their commercial income.

Only the taxable amounts determined during the assessment procedure are included in the trade tax statistics. The Federal Office of Statistics used the results of a special evaluation of statistics for the years 2010 and 2011 to assign the positive taxable amounts of the companies in question to the relevant tax rates charged by the respective municipalities. This enabled the trade tax to be determined in an approximate manner.

Income tax

Natural persons, as individual entrepreneurs or members of a partnership, can also make profits in the natural resources extractive sector – and are therefore subject to trade and income tax. However, income tax statistics do not include any breakdown by economic sectors, therefore this statistic could not be used for the present study. The statistics on partnerships, however, are broken down into economic sectors, but they are only used to determine the earned income, which is subject either to corporation tax or income tax imposed on the parties involved (co-entrepreneurs).

Due to the above-mentioned problems, the income tax attributable to the natural resources extractive sector was estimated by means of the following procedures, using the trade tax statistics and the statistics on partnerships and communities:

An approximate profit was determined for the individual entrepreneurs, by means of retroactive calculation, using the positive taxable amounts assessed in the trade tax statistics for this group of persons. The sum

of the income of partnerships, which, in the relevant industry, is attributable to natural persons as participants, was assessed from the statistics on partnerships and communities.

An average tax rate of 28.6% was applied to this profit or to this sum of earnings. This average tax rate was calculated using a microsimulation model for persons with commercial incomes who pay income tax. With the trade tax offset against the income tax, the results in the table show the approximate income tax amounts.

Solidarity surcharge

A solidarity surcharge is levied as a supplementary tax to income tax and corporation tax. It generally amounts to 5.5% of the established corporation tax and income tax (see previous explanations).

Income tax and the solidarity surcharge are not part of the D-EITI payment reconciliation.

^{iv} The Federal States' revenues from extraction royalties are made available to the Federal Ministry of Finance (BMF) by the states for purposes related to the national financial equalisation mechanism within the framework of monthly reporting on tax revenues. They are published in the settlements of the financial equalisation of the Federal States on the website of the BMF.

Only few Federal States publish their revenues from minesite royalties in their budgets. A summarised overview of the minesite royalties is not available. Most Federal States publish accumulated minesite and extraction revenues in their individual budgets. The revenue from the 2015 minesite royalties is only available for three Federal States: Bavaria, Brandenburg, and, Lower Saxony.

^v The data has been extracted from the 'Annual Report for Business Operations for 2016' (Jahresbericht für Betriebe 2016) issued by the Federal Office of Statistics. This report refers to companies with at least 20 employees. As this statistical data is not the same as the statistical data on employees covered by the mandatory social security scheme, the data in the report does not cover all extractive business operations.

^{vi} The German natural resources export data is based on information on the goods divisions of the goods catalogue for production statistics, Federal Office of Statistics. These calculations include 'coal' (GP09-05), 'crude oil and natural gas' (GP09-06), 'ores' (GP09-07) and 'quarried natural resources, other mining products' (GP09-08).

The data on the exports between 2012 and 2016 was taken from the Genesis Online Database by Destatis on May 26, 2017. The data for 2015 can be found on the website of the German Federal Office of Statistics. The information on the re-exports of natural gas is taken from the German Federal Institute for Geosciences and Natural Resources (BGR) 2016, Tables 5, 28 and 29.

^{vii} Data on the employees was taken from the database of the Federal Employment Agency (Bundesagentur für Arbeit).

^{viii} The data on the amounts of the subsidies was taken from the current subsidies report of the Federal Government. This report is published every two years.

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