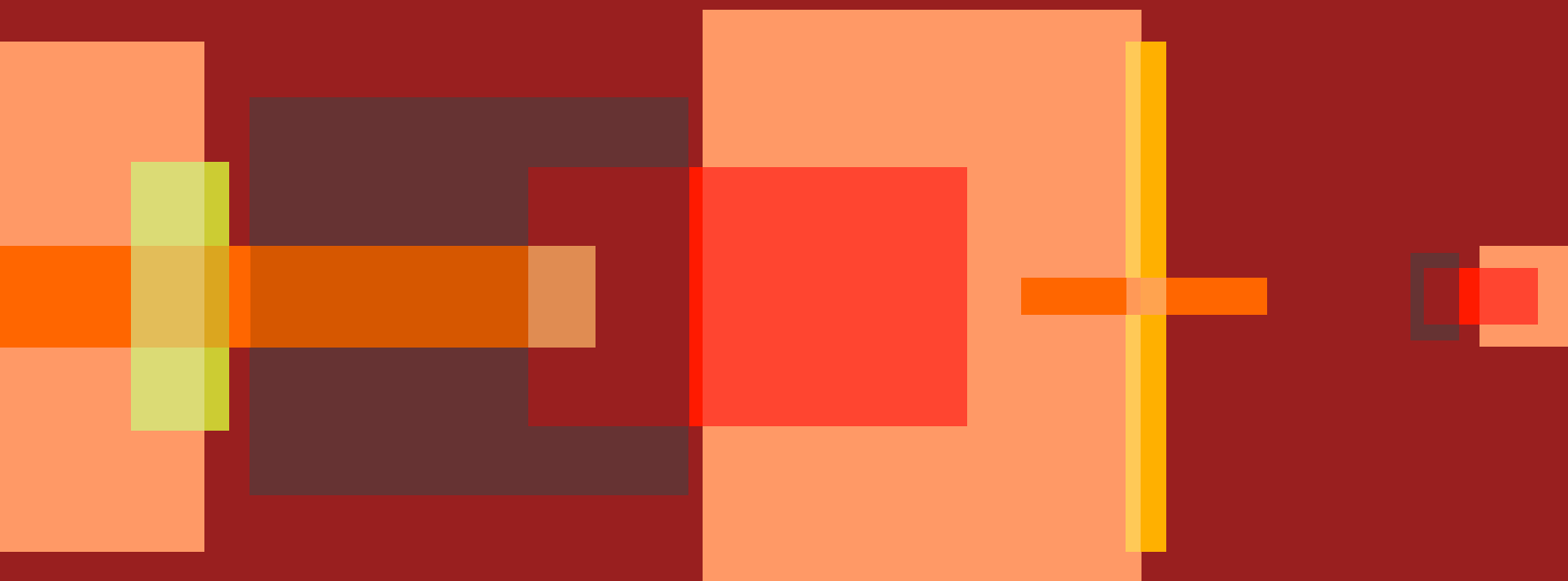


POLAND SHALE: A PLAYBOOK FOR OIL & GAS MAJORS NAVIGATING POLAND'S UPSTREAM ENVIRONMENT



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CURRENT STATE OF PLAY

The upstream energy industry has undergone a dramatic transformation in the last few years. Excess capacity, dwindling demand and low prices of natural gas have put a strain on oil & gas companies as their margins have contracted and competition for high quality gas assets has increased.

Energy policy-related uncertainties, geopolitical complexities and ever-present environmental concerns add further pressure on energy majors. Yet, despite the current turmoil, long-term energy demand is set to grow substantially.

CURRENT STATE OF PLAY

According to Cambridge Research Associates, Inc., global demand for energy will increase an estimated 40% by 2030. Other studies seem to support this conclusion, with ExxonMobil forecasting that natural gas demand will grow by 55% between 2005 and 2030.

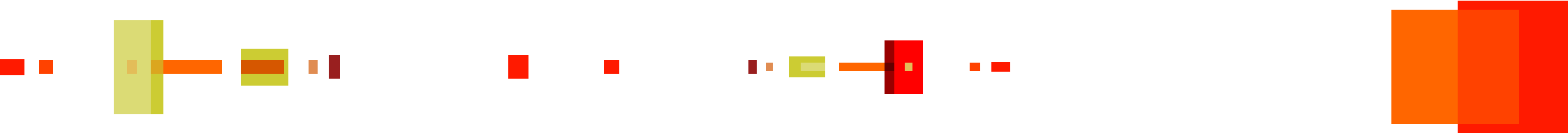
Rapid technological advances and the resultant explosion in shale gas production are partly to blame for the current over-supply. The US Energy Information Administration puts the global technically recoverable shale gas resource estimate at some 188 trillion cubic metres.

As a country highly dependent on natural gas imports, Poland faces an unprecedented opportunity to shift its internal gas balance, and by doing so alter its status to that of a major European gas producer. With an estimated 5.3 tcm of technically recoverable shale gas reserves, Poland is rapidly becoming a significant point on the global energy map. And given Polish legislators' intense drive towards achieving greater energy security by increasing the diversity of energy sources, it is becoming clear that Poland's shale plays present an appealing opportunity for IOCs.

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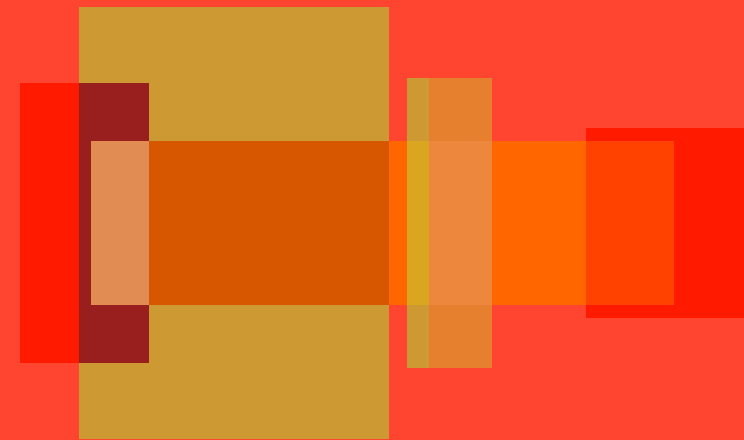
In this document, we take an in-depth look at Poland's upstream environment and recommend an optimal country-facing strategy for new entrants. We examine the regulatory landscape and the potential for community engagement to improve operational efficiency, win support from local stakeholders and drive the value of global shale gas players.

As we write these words, the story of Poland's shale is beginning to unfold. BNK Petroleum Inc. has recently announced that the Leborok S-1 well has logged thick shales. Well completion and first fracture stimulations are expected to take place in the third quarter of 2011. And adding to the already impressive roster of major gas operators present in Poland, Nexen Inc. has just agreed to acquire a 40% working interest in 10 of Marathon Oil Corporation's 11 concessions.



REGULATORY LANDSCAPE

Operating in an unfamiliar environment poses a myriad of challenges for IOCs, the most significant being legal and regulatory considerations. While still in the relatively early stages of development, Poland's legal system does present foreign entrants with a high degree of protection and certainty.



REGULATORY LANDSCAPE

With that said, the recent influx of gas-hungry global operators has exposed Poland's legislative deficiency in areas such as ownership of oil and gas rights, exploration and production licencing, production sharing, land leases, joint operating agreements, asset sales and acquisitions to name a few.

The situation is however dynamic and, given the Polish government's full support for shale exploration, it is fair to say that progress is being made in the right direction. Nearly 90 exploration licences have been issued to date, and prime minister Tusk has recently been quoted as saying that he is determined to see the "exploration and production of shale gas in Poland become reality".

What follows is a brief two-step overview of the major legal considerations for international oil & gas companies entering and operating in the Polish upstream environment.

MARKET ENTRY

Legal setting

The exploration and production of minerals in Poland, including shale gas, is regulated by the Geological and Mining Law (GML) and the Freedom of Business Activity Act (FBAA). In response to recent developments, there is an on-going effort to update existing legislation through the addition of separate hydrocarbon regulations. In fact, the new GML is expected to come into force in January 2012.

Exploration concessions

As mandated by the FBAA and GML, the prospecting and exploration of natural resources is a licenced activity. Separate concessions must be obtained for the exploration and production stages, each requiring the submission of a detailed application to the Minister of Environment, who may issue concessions pursuant to the opinions of relevant local authorities.

2012 and beyond

Under the new GML, hydrocarbons are defined as crude oil, natural gas and their derivatives, as well as in most instances coal-bed methane. Concessions for the prospecting, exploration and extraction of hydrocarbons are generally to be awarded through a tender (conducted ex officio). Such tender proceedings should be non-discriminatory in nature and promote best-in-class E&P technology. Prior to announcing the tender, the concession authority obtains an environmental decision and relevant opinions, and makes the arrangements necessary for grant of a concession. The bidder selected then becomes the subject of such rulings and signs an agreement establishing a mining usufruct.

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Concessions are also to be granted following an application submitted by an interested party. In order to allow other interested parties to participate, such applications are announced by the concession authority on the Public Information Bulletin website and in the Official Journal of the European Union.

In some instances defined by the new GML and made public by the concession authority, tender proceedings are not required for grant of concessions.

Typically, a concession application must include:

- Company details
- Type and scope of activity
- Concession period
- Commencement date
- Scope of geological works
- Location
- Environmental impact assessment (depending on the location and scope of the activity)
- Title to land
 - exploration concessions: it is sufficient to indicate the type of title to land the concession holder intends to apply for
 - production concessions: the requirement is to obtain such title prior to filing an application
- Area maps
- Geological works programme

Mining ownership and mining usufruct

Due to the fact that hydrocarbons are state-owned, the right of mining usufruct must be obtained to conduct hydrocarbon-related activities regulated by the GML. A mining usufruct is a disposable right belonging to the mining usufructuary. The sharing of such rights is not addressed in legislation, although the Ministry of Environment, acting on behalf of the State Treasury, has permitted the disposal of shares in mining usufruct, provided that the concession holder for a particular area retains at least a 51% interest. This practice is viewed with interest by entities concluding farm-in, farm-out, concession management and joint operating agreements. Depending on the type of concession area, the right of mining usufruct may be awarded in a tender procedure.

2012 and beyond

As defined in the new GML, the concept of mining ownership covers, amongst others, hydrocarbons including shale gas. Other deposits not addressed under mining ownership are linked to the right of ownership to land. Mining ownership is vested in the State Treasury, which establishes mining usufruct in line with the existing procedure. Under this new legislation, the right of mining usufruct is governed by the provisions of the Civil Code concerning leases rather than usufruct.

Environmental protection

Activities relating to the exploration and production of gas may have a negative impact on the environment. As a result, the Act on Provision of Environmental Information, Public Participation in Environmental Protection and Environmental Impact Assessments defines certain instances in which an environmental assessment and decision on environmental conditions are required prior to the grant of a concession. Any well drilled at more than 1 000 metres is considered as potentially having a major negative impact on the environment. Furthermore, the extraction of gas in excess of certain thresholds is classified as having permanent and significant environmental impact, thus necessitating the requirement to obtain a decision on environmental conditions. The application for issue of such a decision must be accompanied by the applicant company's environmental impact report, or environmental information data sheet in the case of undertakings where negative impact has yet not been determined.

If an environmental assessment is required, the concession application must include an appropriate decision on environmental conditions. Depending on project size and location, the assessment may take up to several months. It is conducted with the participation of local communities and as such requires the accompanying documentation to be drafted with the utmost diligence and observance of the law so as to mitigate the risk of community resistance. Special consideration should be given to Natura 2000 areas and the environmental assessments for operations located in these zones, which are administered by the Regional Environmental Protection Director.

POST-ENTRY CONSIDERATIONS

Geological work may be commenced following the permit acquisition, environmental assessment and land procurement processes. At this stage the principal regulatory body is the Regional Mining Authority, which should be kept apprised of all major developments during exploration.

Geological information

The exploration concession covers activities such as the interpretation of existing geological data, acquisition of seismic data and drilling of exploratory wells. Existing geological data, including core samples, is archived at the Polish Geological Institute and may be obtained for a fee or free of charge following an application submitted to the State Treasury.

The GMA states that geological data is state-owned. However, due to previous inconsistent legislation on this subject, in some cases it is difficult to determine the ownership of certain geological information. Such uncertainty may block access to this data.

2012 and beyond

Under the new GML, geological information is defined as data obtained through geological work, interpretations of data and in particular data presented both in geological documentation and in the form of samples. Following the expiry of a concession, a 5-year exclusivity period exists on the right to use any of the geological information obtained (similar to current regulations). However, such right may be exercised in application for a production concession or where a water use permit must be obtained. If a decision to conduct the above activities is granted within the 5-year period, such exclusivity is extended for an additional 2 years following expiry of the decision.

Title to land

The acquisition of seismic data and drilling of wells require the concession holder to possess sufficient control over land in a manner guaranteeing the future right to conduct further preparatory work and implement production. Several types of agreement may typically be used, such as tenancy or lease. The agreement should regulate future transfer easements and address issues such as landlord rights, compensation, damages and property taxes. Furthermore, appropriate powers of attorney should be granted by property owners and transferability rights should be clearly spelled out.

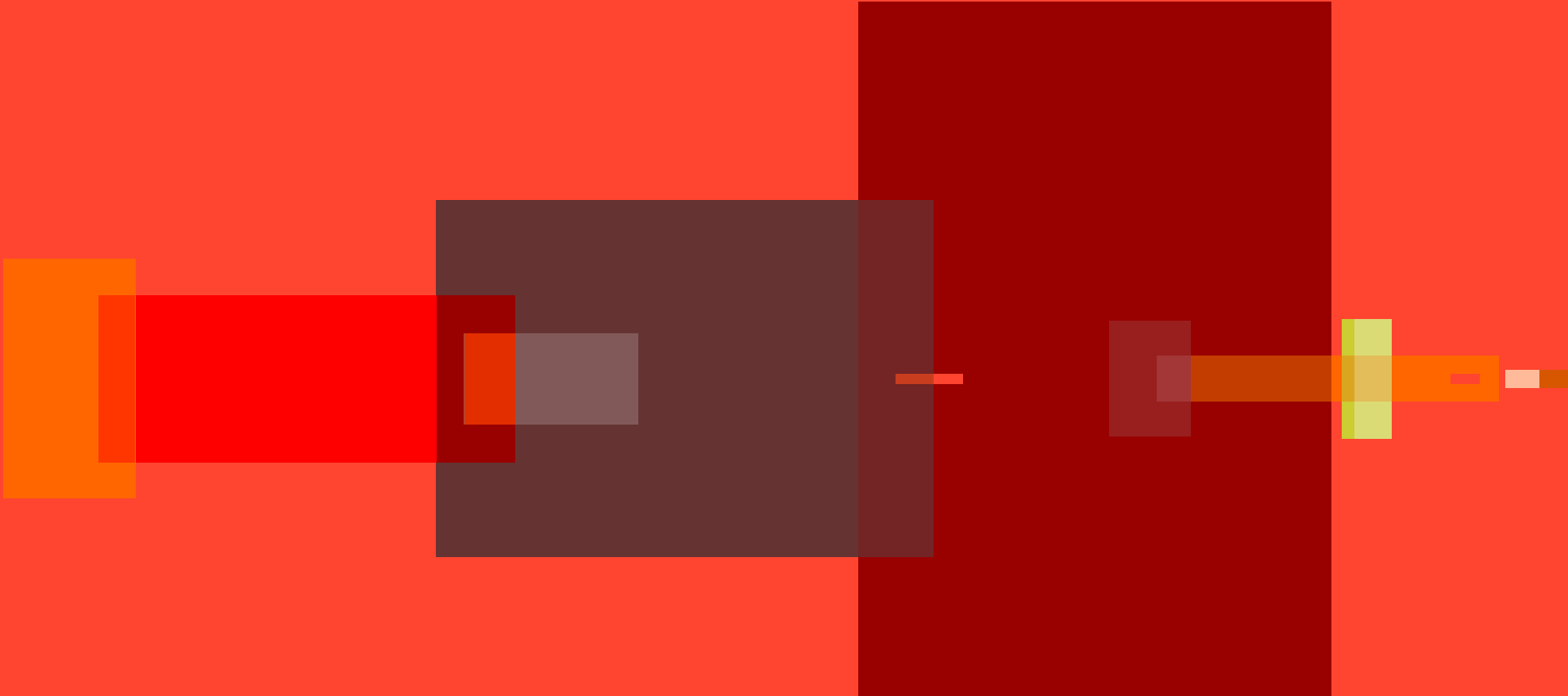
Administrative decisions

Depending on the scope of operations and the technology used, concession activity may require the acquisition of additional permits and administrative decisions. These may include construction permits or notifications, water use permits, waste management and emission-related decisions. Other permits govern environmental issues, periodic reporting, payment of fees and the handling of explosive and radioactive materials.

Regulated mining professions

Certain activities within the mining sector may be performed exclusively by persons who possess geological qualifications assessed and approved by the State Mining Authority.

COMMUNITY ENGAGEMENT



Very few issues in recent years have spurred such a heated public debate in Poland as the shale gas revolution.

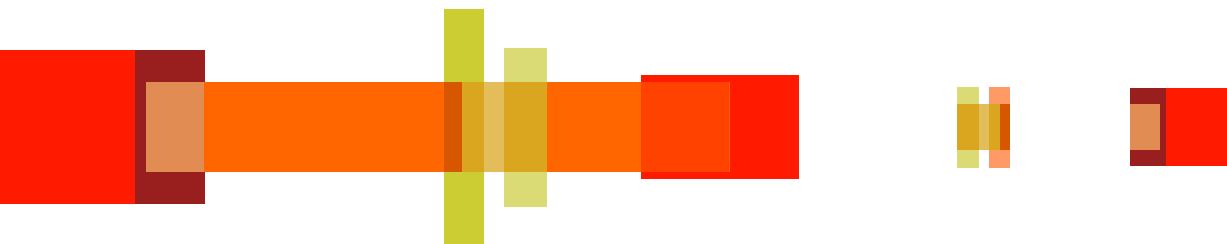
Thousands of metres below the farmlands of the Baltic, Podlasie and Lublin Basins lie reservoirs of natural gas that could propel Poland into energy independence, bring in new government revenue and boost local economies. However, shale critics claim that extraction could contaminate drinking water, disturb communities and increase emissions in a country that has pledged to slash greenhouse gas emissions to 25% of 1990 levels by 2020 in order to meet long-term EC targets.

This document does not aim to make a case for or against shale gas exploration in Poland. Instead, it outlines how local communities can help shape decision making around shale projects as well as the issues surrounding hydraulic fracturing, and in doing so build wider public support for this emergent source of energy.

Guidelines for engaging Poland's local communities

The following guidelines are the product of the collective experience and best thinking of industry experts and stakeholders involved in shale gas initiatives across the world, including academics, project developers, regulators, non-governmental organisations and community groups. The resulting conclusions are intended to serve as Polish guidelines for regulators, local decision makers (including community leaders, members of the public, local advocacy groups and land owners) and project developers as they plan and seek to implement shale gas initiatives. The guidelines presented here also draw on and adapt research by the World Resources Institute on community engagement related to extractive industries in developing countries. The WRI has identified seven key principles for effective community engagement:

1. Prepare communities before engaging.
2. Determine what level of engagement is needed.
3. Integrate community engagement into each phase of the project cycle.
4. Include traditionally excluded stakeholders.
5. Gain free, prior and informed consent.
6. Resolve community grievances through dialogue.
7. Promote participatory monitoring by local communities.



From a local perspective: potential risks and benefits

The controversy surrounding shale gas exploration invariably relates to its potential impact on individuals and the environment. Existing research shows that communities hosting the first wave of shale projects around the world have so far been most interested in the following issues:

- directional drilling risks
- emergency response procedures
- greenhouse gas emissions
- drinking water safety
- noise pollution from drilling
- land reclamation
- disposal of fluids
- impact on property prices

Also of interest to local communities and stakeholders is the range of potential socioeconomic benefits which may arise in connection with shale projects. While one of the key goals of community engagement initiatives is to increase public understanding of the risks and demonstrate appropriate risk mitigation strategies, project developers should also focus on clearly outlining the numerous advantages connected with shale gas development.

These generally include:

- increased local economic activity
- land owner compensation
- local government revenue (i.e. royalties, taxes)
- local workforce development
- educational initiatives

On a national level, shale exploration shows even greater promise in terms of improving Poland's socioeconomic and geopolitical status. By being an early mover in shale gas, Poland could be at the forefront of the changing European energy landscape, furthering its energy independence and bringing sustainable economic benefits to the local market.

Major environmental concerns for Poland

Along with every major development project being implemented throughout the world, whether urban infrastructure, transportation or natural resource extraction, a number of problems are certain to arise. In the end, the benefits must outweigh the costs. This is not an issue of having to discuss the major concerns related to shale projects with local communities, but of making sure that a clear and informative dedication to mitigate risks is properly communicated.

Drinking water contamination

One of the main concerns relating to shale gas is the possibility of water contamination from drilling by means of hydraulic fracturing.

Although there is a slight risk that the water table may be contaminated as a result of drilling, industry experts note that hydraulic fracturing in Poland will be performed at depths of 3 000 metres, whereas groundwater is located only 100 – 200 metres below the surface. Due to rigorous oversight, not a single water contamination incident has been reported in over 7 000 deep wells drilled in Poland to date.



Greenhouse gas emissions

While the industry presents natural gas as a cleaner alternative to other sources of energy such as oil or coal, a recent study from Cornell University concludes that, due to significant methane leakage, the accepted environmental benefit of natural gas is questionable.

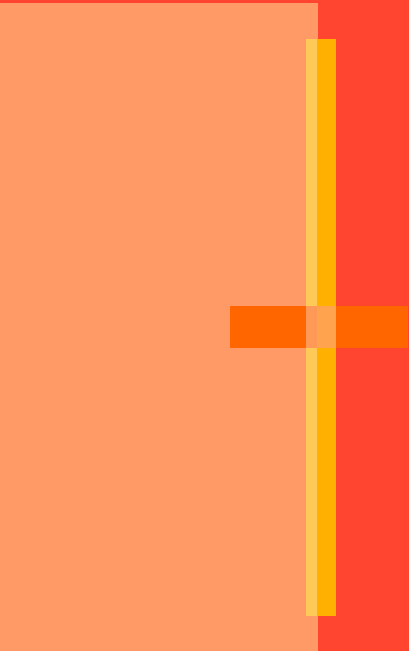
At the present time, natural gas is used to meet 40% of Poland's energy needs. Therefore, given the strict long-term emission targets adopted by the EC, the climate-related consequences of shale drilling are a major concern. Poland's Directorate-General for Environmental Protection closely monitors developments and works with other organisations to increase understanding of the impact drilling has on the environment.

Generating community buy-in

As significant as the above issues are, the main reason for local community resistance to shale exploration in Poland is the public's lack of knowledge. Whether attributed to the fact that exploration is in its early stages or to intentional misinformation by special interest groups, this is a major factor in determining national energy policy and the future course of shale development.

It is therefore imperative that IOCs engage in meaningful dialogue with local communities and the general public at an early stage in the project. Gaining community buy-in requires firm commitment to demonstrating transparency, educating the public and ensuring that all stakeholder groups understand each aspect of the project.

DOCUMENT MANAGEMENT



DOCUMENT MANAGEMENT

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MARKET ENTRY TOOLKIT

To successfully navigate the Polish upstream environment, integrated energy companies need to adopt a clearly defined and structured approach to developing and managing local documentation. At the present time regulatory, political, cultural and linguistic differences exist which can create significant, costly challenges for new entrants. Thus when it comes to operating within the Polish regulatory and political environment it is particularly important to develop a detailed road map for addressing the various potential threats. One way of doing so is to create what we call a market entry toolkit. This is a significant step towards developing a genuinely local operation. The three main sections of the toolkit deal with regulatory compliance, "localising" CSR and community engagement activities, and drafting and maintaining high quality technical documentation for use in exploration and production.

Having a thorough understanding of the local regulatory framework is paramount. Navigating the Polish upstream environment requires that IOCs develop a structured approach to managing mission-critical documentation which is in line with government expectations in terms of quality, relevance of content and the language used.

Regulatory repository

The regulatory compliance element is a dynamic document repository aimed at familiarising foreign entrants with the Polish regulatory environment and facilitating communication with the various government agencies involved in exploration and production efforts. Aimed at increasing the transparency and clarity of the Polish market, the repository comprises a tailored set of localised templates for the various types of permits necessary – environmental, health and safety, water management, etc., together with regulations, standards and template licence applications. Also included are standardised contracts localised from English and aligned with Polish legislation by the firm's legal advisors, as well as a market intelligence element comprising a stakeholder map and the profiles of major licencing authorities and regulators, along with up-to-date English summaries of emerging legislation and regulations. To round it off, a set of custom terminology glossaries and a corporate style guide are developed to ensure consistency and accuracy across all relevant documentation.

A typical set of summarised acts and regulations may include:

1. The Geological and Mining Law
2. The Ordinance on Mining Facility Operational Plans
3. The Freedom of Business Activity Act

Sample government agency and regulator profiles:

1. State Mining Authority 
2. Ministry of Environment 
3. Energy Regulatory Office 



Localised CSR

Since one of the fundamental issues for global energy companies is achievement of appropriate local stakeholder buy-in, it is vital to localise universal corporate and social policies and procedures and adapt the CSR effort to the new operating environment.

This toolkit element comprises Poland-specific documentation relating to local community engagement drafted in collaboration with the IOC's corporate communications department and public affairs advisors. As with most unfamiliar markets, adapting global CSR initiatives to the Polish environment requires a custom strategy. To maintain standardised global practices, the local CSR and community engagement function – and local documentation in particular – must be developed in accordance with globally-accepted standards, such as the Environmental, Social and Governance (ESG) format and the Oil & Gas Industry Guidance on Voluntary Sustainability Reporting drafted by the International Petroleum Industry Environmental Conservation Association and the American Petroleum Institute. At the same time, such documentation must adhere to local practices and address the expectations of various audiences including local communities, land owners, local authorities, suppliers and so on.

Developing local CSR documentation is a crucial step in the process of initiating and conducting meaningful dialogue with local communities and other stakeholder groups over the life of a project.

Exploration & production documentation

Another key challenge faced by energy majors entering CEE markets is Europe's E&P technology lag. According to data from Baker Hughes Rotary Rig Counts, Europe currently has some 110 drilling rigs in operation, compared with around 1 850 rigs in the US alone.

Included in the E&P repository is localised documentation relating to the operation, inspection and maintenance of E&P equipment, processes, hazards, management systems and emergency response procedures. With the impending transfer of US shale-drilling technology, there is increased need for technical documentation which is accurate and consistent with both US standards and local practices. Without a clearly defined local document strategy, global gas majors face efficiency losses and rising operating costs, as well as a substantial escalation of health and safety threats.

The local document strategy as regards E&P, environmental protection and HSE must take into account US industry best practices. When localising and authoring technical documentation, particular emphasis should be placed on applying globally-accepted terminology, such as that found in API standards and specifications, ISO standards for the oil & gas industry and the Gold Book. Over time, the E&P repository develops into a comprehensive technical resource tailored to the Polish market, enabling safe and smooth upstream operations, efficient collaboration with local oilfield services companies and suppliers, as well as streamlining of local workforce development and training efforts.

Quality of information and documentation

Enabling efficient cross-border communication in such a highly specialised industry as energy is no easy feat. As is the case with other emerging markets, the Polish upstream environment covers a variety of stakeholder groups.

Each audience requires a different type of content, thus necessitating the adoption of a customised approach, both with regard to translating, localising and creating documents and to addressing stakeholders in general. Whether handled internally or outsourced, the document management function must include a fool-proof quality assurance procedure, preferably based on ISO 9001, to ensure that information is transparent, consistent and easily understood by various audiences. A sound document strategy encompasses regulatory, CSR and E&P activity areas and satisfies stringent global data security, archiving and quality standards.

Given the relative obscurity of Polish energy industry standards as a whole, and technical documents and terminology in particular, producing and localising high quality technical documentation may prove a truly daunting task without significant involvement from a local partner with deep energy industry expertise and well-established connections with experts from organisations such as Poland's Oil and Gas Institute, the Polish Geological Institute and the Central Mining Institute.

In any event, having a properly defined document strategy and access to local expert knowledge enables IOCs to focus on core operations, increases productivity and drives performance.


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Exen is the premier CEE document management and localisation consultancy. We work closely with our clients to develop customised solutions for their cross-border communications challenges. With a novel approach to facilitating new market entry and transnational deal-making, Exen provides a range of industry-specific solutions to create and sustain value over the lifetime of energy projects. Exen is involved in more European shale gas plays than any other documentation solutions provider.

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SSW's Energy & Natural Resources experts provide value-added advice on a wide range of legal issues relating to energy, geology and natural resource extraction. SSW's ENR practice covers both traditional and renewable energy sources. Legal advisory in geology and mining law focuses on proceedings concerning every major aspect of exploration and production throughout the life of energy projects. In 2011 Piotr Spaczyński was the only lawyer in Poland recommended by Global Law Experts as a specialist in the field of energy law.

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