Exchanges of Business Assets within Investment Activities in the Energy Sector: Key Concepts

Occasional Paper

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Abstract

Ensuring adequate global energy supply will require significant and timely investment and international cooperation along the entire supply chain. Many national and international energy companies that operate across the borders develop new tactics and strategies to address challenges and to satisfy complex criteria of energy security for both energy consuming and energy producing countries. Exchange of assets is one of the tools that can be used within their tactics. In the last decade, an increasing number of the assets exchange deals (in fields of geology, geo-science, technology development, field development, well drilling, finance, logistics, safety, health, and the environment) has been concluded between the companies in the energy sector, especially with the involvement of the European companies such as Shell (UK / the Netherlands), StatoilHydro (Norway), ENI (Italy), Wintershall (Germany), Rosneft (Russia) and Gazprom (Russia).

The paper shows that asset exchanges can serve as a mechanism of risk mitigation for (1) investment activities; (2) implementation of energy companies’ internationalisation / globalisation strategies; (3) solving the difficult issues of reciprocity access to market segments.

This paper from the ECS Knowledge Centre Occasional Papers series focuses on the theoretical aspects of asset exchanges and puts them into perspective of companies’ portfolio management activities, as well as countries’ national energy security agenda. This paper is part of a larger project “Exchanges of Business Assets within Investment Activities in the Energy Sector”. Cases of asset exchanges, as well as region-specific challenges associated with those cases will be made public in a separate paper.

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What is an asset exchange?

Asset is “a resource with economic value that an individual, corporation or country owns or controls with the expectation that it will provide future benefit”. In relation to the energy sector, asset is property that can generate cash flow, including oil and gas fields, production and transportation equipment and infrastructure, etc. The most general definition suggests that asset is any form in which wealth can be held. There are three groups of assets identified: current assets, long-term investments and fixed assets. For the purpose of this paper, we will be talking about the third type, because the first two are financial in nature, as opposed to the physical nature of the third one.

Asset diversification is one of the tools utilised by energy companies in their internationalisation strategies and is a part of portfolio management activities aimed at levelling the risks associated with different types of assets. Portfolio of projects needs balance, so that risks in one project are offset by other projects. The principles include combining frontier exploration and known field development (greenfield vs. brownfield); mix of oil and gas projects; getting involved in upstream, midstream and downstream segments of the supply chain; and diversifying geographical locations with the purpose of broadening political risk and accessing different markets.

In order to diversify assets, companies undertake transactions of asset acquisition and asset sale. One of the possibilities to acquire needed assets for companies working in different sectors, especially in the markets where it is extremely hard to enter and develop new assets, is to conduct a deal of an assets exchange.

One of the initial difficulties is defining what a transaction of assets exchange actually is. Basically, there are different types of transactions that are labelled interchangeably with asset swap/exchange term: one comes from banking/accounting, another one is from investment management. In essence the definition can be summarised as follows:

“Asset swap is an acquisition of assets of the company in exchange of cash or shares of acquiring company”.

For this paper, we will need to go in depth of a specific variety of the exchange of assets. Firstly, the topic under discussion must not be an acquisition (there is sufficient literature, as well as regulation in place for the case of M&A). Secondly, we must not deal with the transaction in which the asset is exchanged for cash for the same reason – it is a transaction of asset sale/acquisition/divestment.

We will use the following definition:

Exchange assets is “trading what they [companies] have for what they want – without exchanging money.” Assets exchange, or asset swap, is thus a transaction in which companies agree to mutually transmit ownership rights to previously matched assets.

Asset swaps are highly sophisticated financial and technical transactions that involve evaluation and matching of the assets; these transactions are treated with caution in the context of liberalising markets.

The study intends to give an assessment of the proposal to include promotion of assets exchanges within investment activities in the energy sector into the New Legal Framework for Global Energy Cooperation.

How do exchanges of assets between energy companies correspond to the main principles of already existing legal framework of energy trade, in particular in relation to the principle of open and competitive

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4 Terminological Dictionary of Banking and Finance; investopedia.com; TheFreeDictionary.com; vedomosti.ru/glossary.
energy markets under the ECT regime? In order to answer this question, we need to look at how asset exchanges:

- relate to various measures in the sphere of energy security enhancement;
- contribute to the development of open and competitive markets;
- are treated by anti-trust and national approval processes in different jurisdictions;
- are implemented in light of challenges with business assets and portfolio evaluation;
- relate to investment protection provisions under the ECT regime.

The reasons to study this issue can be summarised as follows. Firstly, in the context of Russia-EU energy dialogue: exchanges of assets fall within the strategy of supporting the internationalisation of Russian energy companies (in fact, this is one of the few tools available for the actual implementation of this strategy), and thus will remain high on the Russian agenda in energy trade discussions and negotiations, including its posture in relation to the Energy Charter Treaty. Secondly, taking into consideration the international context: all major examples of international cooperation in energy are based on (or supported by) exchanging assets. Referring to the latter, the following questions arise: Do exchanges of assets actually simplify international cooperation, and if so, in what way? Should the mechanism be viewed as a way of risk mitigation? Finally, given the fact that it is exclusively used by the companies, what should be the stance of the national governments (in particular, in their negotiations over international treaties in trans-border energy trade) in relation to this particular mechanism?

This paper will focus on the theoretical aspects of asset exchanges and put them into perspective of portfolio management activities of the companies, as well as national energy security agenda. This paper is part of a larger project “Exchanges of Business Assets within Investment Activities in the Energy Sector”, and cases of asset exchanges, as well as region-specific challenges associated with those cases, will be made public in a separate paper.

**Exchanges of assets within energy security and business strategies**

Business transactions in the energy sector (including exchange of assets) always have a projection on the energy security of the state. Stable energy supplies are essential for national economy and development, while energy security is at the core of national energy policies in many countries. There are three key elements that constitute energy security of a state: ample, uninterrupted and affordable supplies of energy resources. Thus, the three main aspects of energy security are access to energy resources, reliable transport (and transit) routes, and reasonable pricing (see Figure 1). For meeting the requirements of energy security, it is essential that the following conditions are complied with:

- Sufficient and timely investment ensures adequate development of recourse base and delivery infrastructure;
- Market structures and institutions ensure balance of interests between various participants;
- Government and regulation adjust the first two processes, as well as the impact on environment, and consumer protection.

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Energy security can be characterised as a stable flow of energy and capital. For this, the key conditions are balance of interests between producer and consumer (in the form of a pricing mechanism and resulting price that is sufficient for the producer to justify further investment, and reasonable and affordable for the consumer) and timely development of export/supply infrastructure. Investment is essential for the latter. The interests of producers and consumers coincide: they both need to be assured, in case of producer – in predictable and stable demand, and in case of consumer – in ample and uninterrupted supplies. In other words, both sides need to mitigate volume risk and price risk, as well as other risks, such as interrupted flow of energy resources, non-payment upon delivery, environmental threat, non-performance of companies, project non-performance.

Investment protection is any type of insurance or guarantee that investment made will not be lost. Asset acquisition (which is a part of an assets exchange) can be classified itself as investment, and is eligible for investment protection measures. The simultaneous transaction of mutual acquisition of a partner company’s asset could theoretically ensure safety of this operation, depending on the type of assets and the initial goals of each company. This is why it is important to consider specific objectives pursued by the companies when engaging in an assets exchange transaction.

Portfolio management includes activities involving company’s assets and securities with the purpose of achieving specific investment goals. In the oil and gas industry, portfolio management is based on the understanding of risk and uncertainty inherent for this industry and grows out of risk analysis, risk management and portfolio analysis. A key part of portfolio management is mergers, acquisitions and divestment (MA&D) of assets. “Acquisitions have the potential to achieve growth more rapidly than can be achieved organically through exploration and exploit synergies with an existing portfolio. Divestments

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10 Source: Irina Mironova.
have the potential to monetise non-core assets, reduce overhead, and improve focus on material assets. Mergers have the potential to achieve step changes in size, economies of scale, and benefits from regional synergies.”\textsuperscript{12} Therefore, MA&D activity is an essential part of portfolio management.

The fundamental purpose of portfolio management is increasing capitalisation and levelling the risks of one group of projects with other group of projects. Two fundamental principles of portfolio management are balance and diversification. “Diversifying by going from one to two independent projects reduces risk significantly.”\textsuperscript{13} In order to balance the risks, companies need:

- A mix of frontier exploration and known field development (greenfield vs. brownfield);
- A mix of oil, gas, and, increasingly often, renewable energy;
- A mix of upstream, midstream and downstream;
- A mix of geographical locations to broaden political risk and to access different markets.\textsuperscript{14}

This explains why, firstly, gas share in the production of the supermajors increases up to as much as 40%,\textsuperscript{15} and secondly, why NOCs are so eager to develop assets in other countries dealing both with other segments of the supply chain as well as learn from the supermajors.

Figure 2 shows that there can be various objectives of assets swap operations, including geographic diversification, vertical integration, horizontal integration, and business diversification. Exchanging assets is a way for a company to achieve the goal of entering a new segment in the supply chain without losing its position in the initial market, which is often already monopolistic. This is why the use of this mechanism raises some concerns. While exchanging assets may not aim at reducing or strengthening the role of a monopolistic supplier per se, this measure does go in line with the energy security imperative to mitigate various risks. When the possibilities for decreasing the influence of a monopoly supplier by means of supply sources diversification are exhausted, joint participation in projects and/or companies along the supply chain may be a possible way of mitigating risks. Exporters in their turn try to become co-owners of the companies, which are in charge of trunk pipelines, distribution networks, terminals, refineries, etc.\textsuperscript{16}

In this context, assets exchange means strategic cooperation between states and/or companies. The key idea is to create an integrated supply chain, when the companies from different countries jointly own assets both upstream and downstream in the networks that are technologically linked. In such a scheme, the importer has the guarantees of supplies, and exporter has the guarantees of demand, thus the risks of energy dependency and discriminatory access are mitigated despite the remaining concentration of suppliers and consumers. Besides, although the supply chain “is part of a complex system that must be balanced and managed, it is still possible to have competition”.\textsuperscript{17}


\textsuperscript{14} Mitrova Tatiana. Investment and export opportunities for Russian companies in oil and gas projects abroad: asset swaps as a method of developing direct foreign investment. RPGC 2013. 25 June 2013.


Overall, exchanges of assets play an important role in portfolio management, because this transaction provides relatively secure environment to diversify business portfolio in different market segments and geographic locations.

The first case, in which a transaction of exchange of assets can be interpreted as an investment protection tool, is when both parties are looking for a strategic partner. Energy sector is characterised by high degree of investment specificity (firstly, assets have fixed location and cannot be moved; secondly, equipment is engineered for a specific project; thirdly, the infrastructure is constructed in order to connect a fixed set of participants), which might lead to opportunistic behaviour by one of the business parties. Thus, measures that help to establish strategic partnership relations between companies are useful in these circumstances. Asset exchanges are one option available to the company; other options with assets include establishment of joint ventures, shared assets, and consortia.

In a joint venture, the parties are seeking to reduce their individual levels of risk. They are also aiming at sharing the significant costs and establishing their preferred principles within the joint venture. The agreement thus creates a joint venture between parties acting for mutual benefit. Each party’s entitlement to ownership and benefits, as well as liability to cost, expense and risk, are determined by the percentage interests set by the joint venture agreement.

A specific case of a joint venture is an international consortium. International consortium in the energy sector is a temporary union between two independent companies created to execute exploration and production activities (at the fields), construction of energy transportation systems (pipelines and electricity grid), processing and effective distribution of energy material and products, etc. One of the purposes of consortia establishment is to increase competitiveness of the companies on international energy markets.

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18 Source: Irina Mironova.
20 Ibid. p. 15.
Consortium is a format that can be used both by companies and by states. The difference with the classical joint venture is that a consortium is created for a specific project implementation, and when the project is over, the venture stops its existence as well. The share in the consortium depends on the agreed amount of investment to be provided by each contracting party.

One of the examples of strategic cooperation in the energy sector in partnership between Russia’s Gazprom and Germany’s BASF. In 1990, companies agreed to market Russian natural gas in Germany on a long-term basis. The companies now cooperate in the development of gas reserves in Siberia (Yuzhno-Russkoye field and the Achimov deposits in the Urengoy field), with gas transports to Germany (Nord Stream and the South Stream projects), and in the sale of natural gas with their trading company WINGAS. As can be seen from below figure, BASF and Gazprom are symmetrically present along the supply chain. Both companies are interested in the continuous and stable functioning of the supply chain. Assets exchange transactions help to strengthen this strategic partnership, not only in that they bring relevant assets to the respective company, but in that they lead to the situation when companies act in favour of their partners in their own respective markets.

**Figure 3. Assets exchange and consortium within a single supply chain: Gazprom and BASF example**

<table>
<thead>
<tr>
<th>Exploration and production</th>
<th>Transportation</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yuzhno-Russkoye field</td>
<td>Nord Stream</td>
<td>WINGAS – distribution and trading</td>
</tr>
<tr>
<td>Achimov deposits in the Urengoy field</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Besides partnership, some other strategies of the companies may also include exchanges of assets.

Firstly, one of these strategies is horizontal integration, or growth in the sector of presence, e.g. by promoting own expertise abroad; and business diversification (or horizontal diversification) – entry in a new business.

Secondly, vertical integration is a strategic decision of the company to integrate along the value chain. The situation is rather common when companies in charge of certain segments of the chain, in order to ensure security of supply and maximise profits, make a choice to focus on acquiring assets in other segments. For producers, the objective is to integrate downstream activities into the supply and participate in processing (refining) and distribution, as well as in the generation sector. Acquisitions in other segments of the value chain have a potential to stabilise financial results of a company and, ultimately, to increase a company’s capitalisation, on top of giving entry to new segments without losing its position in the initial market.

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23 4D Consult. Обмен энергетическими активами как инструмент обеспечения энергетической безопасности. p. 12.
Considering vertical integration as such (in relation with general business strategy, not only asset swap deals), the key to success for the energy companies, whether those are state companies or multinational corporations, is twofold – control over resources and control over processing and distribution (and also over power generation and transmission). Given the relatively limited amount of available assets worldwide, the asset swap mechanism is projected to be one of the main means of promoting vertical integration, both backward and forward.\(^2\)

Thirdly, **geographic diversification**, which from the one hand has a potential to level out political risks, and from the other, give access to the new resource base.

Fourthly, **technologies and expertise** are an important target for companies that go international. “Some NOCs still lack the know-how and the capital to get to their oil on their own, and thus seek out supermajors to help”.\(^25\)

Ensuring adequate global energy supply requires significant and timely investment and international cooperation along the entire supply chain. Many national and international energy companies that operate across the borders develop new tactics and strategies to address challenges and to satisfy complex criteria of energy security for both energy consuming and energy producing countries. Exchange of assets is one of the tools that can be used within their tactics.

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26 Source: ERI RAS.
**Practical aspects of assets exchange operations**

The process of exchange of assets is a complicated business transaction. The preparatory work on any acquisition of oil and gas assets, including acquisition within a swap operation, is as important as the negotiation of the deal itself. Incomplete or inadequate preparatory work can undermine success of a deal.27 There are several methods, which can be used to determine value of an asset, including comparison to similar assets, assessing cash flow, acquisition cost, replacement cost, and deprival value. The method of evaluating cash flow potential suggests a summation of discounted projected cash flows related to the asset weighted with the probabilities of occurrence of these cash flows. Intervening variables include general factors that will affect all assets across portfolio (such as cost of capital, forecasts of oil and gas prices, cycle times for activities, parameters for resource use, and parameters for operating costs), and asset-specific data and uncertainties.28

Another serious complication is approval of the transaction. The approval is needed for various reasons – one of them is compliance with the competition rules (this is relevant for North America and Europe since these two regions are most actively promoting the principles of competitive markets). In other regions, approval processes are also needed for transactions of asset acquisition, but more for the sake of governmental control of the assets located on its territory, which might have a strategic importance.

Competition is a widely discussed topic within the energy sector regulation debates, particularly in relation to the network-bound energy industries such as electricity and gas and their liberalisation, not only in the EU: discussions are also evolving about possible market liberalisation in the Asia Pacific.29 (A consumer-centred paradigm of increased competition entails that “the institutional configuration of a system based on the technically-centralised model can be restructured, and monopoly rights withdrawn to permit different suppliers to compete for customers”).29

The process, of course, is not easy. All attempts in protecting competitiveness stem from national-level regulation (principally within the boundaries of nation-states).31 As noted in the monograph analysing competition in EU energy markets, “until recently the physical characteristics of networks – such as fixed grids and pipelines – seemed to have constrained the scope for liberalisation and market-opening. A further constraint has been perceived in the high degree of government ownership and control in these industries. Supervision by public authorities has seemed necessary to protect the large numbers of captive consumers dependent upon energy supplied through transmission and distribution networks”.

These above arguments are relevant for both national and regional / international energy markets and go back to the necessity of access to infrastructure (access to resources / access to markets), as well as necessary investment, which create favourable conditions for vertical integration of energy companies. For example, the new European energy and competition policies are aimed at “(1) establishing free, integrated and transparent energy markets for gas and electricity; (2) ensuring regulated third party access to energy Infrastructure, including transmission/distribution system and LNG facilities, of the basis of published and non-discriminatory tariffs; (3) providing transparent third-party access to gas storage; (4) enforcing unbundling of transmission and distribution system operators from entities involved in energy production or supply; and (5) setting independent regulation of gas and electricity markets”.32

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Competition legislation promotes competition by regulating anti-competitive conduct by companies.\(^{34}\) Modern competition law has historically evolved on a country level to promote and maintain competition in markets principally within the territorial boundaries of nation-states.\(^{35}\) The protection of international competition is governed by international competition agreements. “Market access in the energy sector sometimes depends on having access to transportation and distribution networks. These networks may be owned by large vertically integrated state-owned monopolies and may remain in the hands of monopoly provider, whether public or private, even after privatisation of the energy sector. The GATS includes disciplines on monopolies and exclusive service suppliers (Article VIII) and restrictive business practices (Article IX), but these have been said to offer only ‘partial remedies’ to the problems that may arise where networks are controlled by monopoly suppliers”.\(^{36}\)

Thus, we have identified two groups of practical challenges associated with asset exchanges – (a) technically evaluating assets, and (b) approving the transactions with the antimonopoly authorities. Both of these challenges are not exclusive for this type of transactions; the first one stems from asset valuation methods; the second from the posture of authorities concerning the position of large corporations on the energy markets (EU, US) and/or the intent to control the activities with the country’s assets (China, Russia). Overall concerns can be broken down to two main concerns: decreased competitiveness of the market and growth of monopolist influence of a single company.

In any case, the challenges are specific for each region and have to be dealt with respectively. In relation to the competition rules, there should be a clear understanding of the problem of over-regulation. In case of the intent of higher governmental control, the exchange of assets can actually be an easier way to enter the new market rather than acquisition, because the government might be interested in promoting the internationalisation of its companies’ activities and thus be more willing to approve of transactions that will bring its companies assets in the upstream area.

**Exchange of assets in relation to the ECT principles**

There are several challenges associated with asset exchange transactions, namely asset valuation and transaction approval in relation to national energy security priorities / competition law. What does the Energy Charter Treaty (ECT) have to offer to parties that are seeking opportunities of asset exchanges and encounter these difficulties?

There is a need for multilateral rules of international cooperation for implementing highly capital-intensive projects in an increasingly globalised world. The ECT was negotiated to meet that need. The ECT principles include competitive markets; investment protection; assurance of reliable cross-border energy flows; dispute settlement; energy efficiency. The fundamental aim of the ECT is to strengthen the rule of law on energy issues, by creating a level playing field of rules to be observed by all participating governments, thus mitigating the risks associated with energy-related investments and trade. By reducing the political risks that foreign investors face in the host country, the ECT seeks to boost investor confidence and to contribute to an increase in international investment flows.

Where do asset exchange transactions fit in the framework of the ECT?

Firstly, in the very essence asset exchanges are based on the same principles to reduce political and, to a larger extent, commercial risks for participating companies.

Secondly, mutual asset acquisitions within the asset exchange deal can be characterised as investments: the ECT contains a broad, “asset-based” definition of an investment. According to Article 1(6), “investment” means every kind of asset, owned or controlled directly or indirectly by an Investor. […] A change in the form in which assets are invested does not affect their character as investments and

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\(^{35}\) Ibid.

the term “Investment” includes all investments, whether existing at or made after the later of the date of entry into force of this Treaty […]”.

Do asset exchange deals meet the ECT provisions on competition, access to markets, cross-border energy flows, and technology transfer? And how international cooperation could be enhanced by promotion of asset swaps?

In accordance with the ECT, Article 6 on Competition, “Each Contracting Party shall work to alleviate market distortions and barriers to competition in Economic Activity in the Energy Sector”. In addition, ECT Article 3 on International Markets states that “The Contracting Parties shall work to promote access to international markets on commercial terms, and generally to develop an open and competitive market, for Energy Products and Materials”.

The mechanism of asset swaps does not contradict the principles of the ECT, which are inter alia competitive markets and non-interrupted cross-border energy flows. The mechanism of asset swaps contributes to the development of open markets and could stimulate competition in certain market segments, although, due to the fact that the fraction of asset exchanges in MA&D activities is very small, their impact on the markets is also quite small. However, from an open market prospective, asset swaps allow to lower entry barriers to new markets and provide opportunities for closer cooperation between energy companies.

The role of the asset exchanges in the energy sector

Ensuring adequate global energy supply requires significant and timely investment and international cooperation along the entire supply chain. Many national and international energy companies that operate across the borders develop new tactics and strategies to address challenges and to satisfy complex criteria of energy security for both energy consuming and energy producing countries. Exchange of assets is one of the tools that can be used within their tactics. Asset exchange is a mechanism of risk mitigation for (1) investment activities; (2) energy companies internationalisation / globalisation strategies implementation; (3) solving the difficult issues of reciprocity access to market segments. This mechanism is used worldwide.

Asset exchange deals as such do not directly affect market as they do not influence trends in supply and demand, or in price levels. At the same time, they actually result in the increase of the number of active companies within the separate segments of the supply chain; as a part of vertical integration strategies, they allow for improved access to markets for producers; improved access to resources for consumers, and this is, essentially, why this mechanism works.

Asset exchanges are part of company’s internationalisation strategy, which aims at (a) diversification of economic risks while finding opportunities of profitable investment or profitable assets acquisition, both within the industry that the company is active in, and in the adjacent areas (horizontal diversification); (b) modernisation via transfer of technologies and management experience (or horizontal integration via transfer of technologies and management experience); and (c) integration in the world economy and international markets while securing existing markets (can be pursued via vertical integration). Together with other forms of international cooperation, asset exchange is one of the essential mechanisms, especially in the early phases of such internationalisation strategy implementation.

In the situation of mutual mistrust, lack of financial confidence and resources, assets exchange mechanism helps to provide stable flow of energy and capital, and in most cases provides states with pathways to enhance their respective energy securities.

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38 Ibid.

39 Ibid.

### Asset exchange examples

<table>
<thead>
<tr>
<th>Company A</th>
<th>Company B</th>
<th>Year</th>
<th>Exchange Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>ExxonMobil (USA)</td>
<td>Rosneft (Russia)</td>
<td>2012</td>
<td>Joint ventures to manage an exploration programme in the Kara Sea and Black Sea. Neftegaz Holding America Limited (independent indirect subsidiary of Rosneft registered in Delaware): 30% equity in ExxonMobil’s share in the La Escalera Ranch project in the Delaware Basin (Texas, USA); the right to acquire a 30% interest in 20 blocks held by ExxonMobil in the US Gulf of Mexico. RN Cardium Oil Inc. (an independent Rosneft subsidiary): acquired 30% of ExxonMobil's stake in the Harmattan acreage in the Cardium formation of the Western Canada Basin (Alberta, Canada).</td>
</tr>
<tr>
<td>Total (France)</td>
<td>ExxonMobil (USA)</td>
<td>2012</td>
<td>Total will offer ExxonMobil its stakes in the PL089 license (5.6%) and the Sygna (2.52%), Statfjord Øst (2.8%) and Snorre (6.18%) fields. In return, it will take ExxonMobil’s 4.7% interest in the Oseberg field in the North Sea and a 4.33% interest in the Oseberg transportation system, along with interests in the PL029c license (100%) and the PL029b license (30%), containing part of the Dagny field. Additionally, Total will pay a cash consideration to ExxonMobil.</td>
</tr>
<tr>
<td>Shell (UK / Netherlands)</td>
<td>Chevron (USA)</td>
<td>2012</td>
<td>Chevron will transfer to Shell its interests in the Browse LNG project in Western Australia, which has an estimated value of some $30 million, while Shell will transfer its 33.3% interest in two gas fields connected to its Wheatstone project, also located in Western Australia. Shell will also make a $450 mln cash payment to Chevron. Shell will acquire Chevron’s 20% interest in the West Browse assets and a 16.7% interest in East Browse.</td>
</tr>
<tr>
<td>Royal/Dutch Shell (UK, the Netherlands)</td>
<td>Gazprom (Russia)</td>
<td>2011- current</td>
<td>Joint projects in West Siberia and in the east of Russia; Gazprom’s participation in Shell’s undertakings in third countries; Increased liquefied natural gas (LNG) deliveries to quake-hit Japan from the Sakhalin-II project (Shell wants to boost the plant’s output by 50% and raise its stake in the plant); 2013: Russian arctic shelf, deep shelf outside Russia; Joint venture (to be registered in Saint-Petersburg) to explore shale oil fields in Khanty-Mansiysk region.</td>
</tr>
<tr>
<td>Company Pair</td>
<td>Year</td>
<td>Description</td>
<td>Location</td>
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<tr>
<td>BP (UK) - BG Group (UK)</td>
<td>2008</td>
<td>BP and BG exchange a package of North Sea assets which is intended to strengthen BP’s position as a major operator in the Southern North Sea and facilitate development activity and investment in the UKCS</td>
<td>North Sea</td>
</tr>
<tr>
<td>StatoilHydro (Norway) - Rosneft (Russia)</td>
<td>2012</td>
<td>Joint venture to explore the Perseevsky license block in the Barents Sea and three blocks in the Sea of Okhotsk. Statoil will hold a 33.33% stake in the project. Rosneft’s participation in the exploration of license blocks in the Norwegian part of the Barents Sea, as well as the possible acquisition by Rosneft of interests in Statoil’s international projects.</td>
<td>Target: Jointly explore offshore fields in the Russian sections of the Barents Sea and Sea of Okhotsk. Joint research to identify effective approaches to developing deposits with hard-to-recover oil and gas reserves. European oil and gas markets; Upstream (E&amp;P).</td>
</tr>
<tr>
<td>ENI (Italy) - Rosneft (Russia)</td>
<td>2012</td>
<td>Joint venture to explore the Fedynsky and Central Barents fields in the Barents Sea and the Western Chernomorsky field in the Black Sea. Eni will hold 33.33% in the project.</td>
<td>Upstream - Barents Sea, Black Sea</td>
</tr>
<tr>
<td>ENI (Italy) - Gazprom (Russia)</td>
<td>2010</td>
<td>Gazprom joins Elephant oilfield in Libya (33% in the project). Eni will be taking part in projects to develop northwest Siberian assets owned the Arctic Gas company.</td>
<td>Upstream (E&amp;P), oil field</td>
</tr>
<tr>
<td>ENI (Italy) - Gazprom (Russia)</td>
<td>2013</td>
<td>Gazprom seeks acquisition of a stake in Mozambique’s Area 4</td>
<td>Upstream (E&amp;P), offshore gas fields, LNG</td>
</tr>
<tr>
<td>ENI (Italy) - CNOOC (China)</td>
<td>2012</td>
<td>Production agreement in exchange of technology know-how</td>
<td>Upstream (E&amp;P), deep water block in China South Sea</td>
</tr>
<tr>
<td>Gas de France/SUEZ (France) - Wintershall (Germany)</td>
<td>2009</td>
<td>Asset swap deal covering acreage in the German sector of the North Sea which will see the French group get 40% of two sectors, and Wintershall gaining 25% of acreage next to the Mittleplate oil field.</td>
<td>North Sea</td>
</tr>
</tbody>
</table>