Russia’s Oilfield Services Sector

Trends and Opportunities

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Summary

• Today’s Russia’s oilfield services sector presents USD25 billion worth of opportunities in a challenging environment of oligopolic ecosystem, vastly different business culture and turbulent geopolitical climate.

• Due to Western sanctions, Russia is pivoting to Asia to seek new markets and new supply of technology and equipment. Highest priority for Russia’s O&G sector is to ensure its continued long-term development – particularly in extraction of its Arctic, deep sea and other non-conventional oil. Western sanctions have temporarily impeded the supply of these technologies and services to Russia.

• Despite strong domestic players in the market, there have emerged niches where Singapore companies can be successful: subsea and offshore equipment, oil rig manufacturing, support ships building and chartering, and supply of services and machinery related to oil and gas exploration and production.

• Current market conditions favour proactive cultivation of long-term partnerships with Russian EPCs. Singapore companies with offshore solutions and unique subsea installation technologies present attractive options for Russian EPCs.

• However, market competition remains stiff. Western companies continue to maintain significant presence while Russian players are poised to continue to gain strength with Russian Government’s implementation of import substitution programme. Singapore companies should therefore be ready to present their best solutions, seek proper legal advice and conduct careful due diligence.
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2. Sizing up Russia’s oilfield services sector
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1. Overview of Russia’s O&G sector
Russia is the world's 3rd biggest oil producer after US and Saudi Arabia and the 2nd largest energy producing nation in the world after US.

Russia has almost 103.2 thousand million barrels of proved oil reserves at the end of 2014 (6.1% of the world’s total).

In March 2015 the new daily record of oil production was reached – 10.71 mil barrels.

50% of federal budget revenues derive directly from hydrocarbon production and exports.

Thus, the Russian government aims to maintain oil production at current levels for the foreseeable future.

In terms of oil exports: Russia’s refined oil exports increased 9.1% (13.7 mil tonnes) to 165.3 mil tonnes from 2013 to 2014, outpacing crude oil exports. Total oil exports to North Asia nearly doubled from 14% to 24% while exports of gas (to EU) declined in near proportion.

- In 2014, the volume of exports to China, South Korea and spot market (through Netherlands) increased which consequently shrunk the proportion of exports to Europe and CIS.
- Due to increase in domestic crude oil refining, the export volume of crude oil dropped, while the export volumes of refined oil increased.

### Table: Export Dynamics 2013 vs 2014

<table>
<thead>
<tr>
<th>Export</th>
<th>2013</th>
<th>2014</th>
<th>Dynamics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crude Oil, tons</td>
<td>236.6 mil</td>
<td>223.4 mil</td>
<td>-5.6%</td>
</tr>
<tr>
<td>Crude Oil, USD</td>
<td>173.67 bln</td>
<td>153.89 bln</td>
<td>-11.4%</td>
</tr>
<tr>
<td>Oil products, tons</td>
<td>151.6 mil</td>
<td>165.3 mil</td>
<td>+9.1%</td>
</tr>
<tr>
<td>Oil products, USD</td>
<td>109.33 bln</td>
<td>115.87 bln</td>
<td>+6%</td>
</tr>
<tr>
<td>Gas, bcm</td>
<td>196.4 bcm</td>
<td>174.3 bcm</td>
<td>-11.3%</td>
</tr>
<tr>
<td>Gas, USD</td>
<td>67.23 bln</td>
<td>55.24 bln</td>
<td>-17.8%</td>
</tr>
</tbody>
</table>

Source: Stats - Ministry of Energy of the Russian Federation, Federal Customs Service, CEIC
In terms of gas exports: Economic and political factors are pushing Russia to seek new, non-EU markets for its gas exports, notably North Asia.

EU policies and weather change - Europe is on the lookout for new gas suppliers to relieve its dependence on Gazprom, while warm winters have led to the decreasing gas consumption.

![Natural gas trade flows](image)

The weakness in European demand was further compounded by gas continuing to lose share in the power sector, especially to non-fossil fuels.

Source: BP Statistical Review of World Energy 2015
As Russia turns to Asia-Pacific markets, it plans to increase its O&G export infrastructure

- Russia aims to diversify its O&G export markets and has been aggressively securing new supply contracts with the Asia Pacific and Turkey. By Energy Ministry estimates, Russian gas exports to Asia will rise from 14 bcm in 2014 to 130 bcm in 2035 and oil and coal exports will more than double.

**Yamal LNG project**

- Joint Novatek-Total-CNPC USD 20 bln project to supply LNG to the Asia-Pacific market.
- Novatek’s and project’s JV company’s subsidiaries operate in SG since 2013 to secure contracts for Yamal LNG.

**Eastern Siberia – Pacific Ocean oil pipeline**

**Oil:**
- USD 270 billion Rosneft-CNPC contract to supply 360 million tons of oil to China over 25 years through ESPO pipeline (operational for 2 years).

**Natural gas:**
- USD 400 bln Gazprom-CNPC “deal of the century” for gas supplies to China through “Power of Siberia” gas pipeline (60 bcm/year, under construction).

**Downstream construction projects by Rosneft:**
- “Far Eastern Petrochemical Company” in Nakhodka (total capacity 30 million tons) – project frozen due to low oil prices.
- New LNG plant in Sakhalin (capacity 5 billion tons).
Current oil and gas production is concentrated in Western Siberia. New projects in the Eastern Siberia and Far East region are in exploration stage.
Future of the Russian O&G industry - Russia is going to spend up to USD 400 bln to explore and produce offshore O&G in the Arctic over the next 20-25 years

- Russia owns 52% of Arctic oil and gas reserves.
- Arctic sea depth mostly 10 to 400 meters only (compare to 3 km+ in Brazil).
- Rosneft the key driver of Russia’s Arctic exploration.
- Rosneft estimates proven Arctic reserves as high as 25.5 bln tons of oil and 25 tln cubic m of gas.
- Rosneft plans to spend up to USD 400 bln on exploration and production in the Arctic over the next 20-25 years in partnership with ExxonMobil, Eni and Statoil.

Implications
- There will be increasing demand for foreign technologies related to Arctic oil drilling and exploration.
- Current political situation will push Russia towards actively seeking for Asian partners.
Sanctions and lower oil prices hardly affected the production figures in 2014

In 2014 Russia was the largest crude oil producer with the production rate of 10.6 bbl/day (12.65% of the world production). Russian oil production hit the new record-high volume since 1987 and grew 0.6% on y-o-y basis.

In 2015 the Russian government plans to keep the production rate at the same level in spite of the oil price volatility.

On the contrary, gas production shrunk by 4.2% and is expected to contract by 23 bcm in 2015 due to the slowing of EU economy and warm winters in the European continent – Europe continues to be the primary market for Russian natural gas.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013</th>
<th>2014</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil production</td>
<td>523.3 mil tons</td>
<td>526.8 mil tons</td>
<td>+0.6%</td>
</tr>
<tr>
<td>Gas production</td>
<td>668 bcm</td>
<td>640.2 bcm</td>
<td>-4.3%</td>
</tr>
</tbody>
</table>

Sources: Stats - Ministry of Energy of the Russian Federation, Federal Customs Service
Forecast – Minister of Energy of the Russian Federation Alexander Novak’s quote reported by Bloomberg on 11 March 2015
Oil price dynamics and implications for Russia

Last year global oil prices put the world’s economy in the situation of uncertainty.

It happened because by late 2014, world oil supply was on track to rise much higher than actual demand, as the chart below shows. As much as ~0.5 mb/d volumes were stockpiled away in the end of 2014. Hence, in September, prices started falling sharply as indicated in the chart on the right.

The plunging price of oil has also caused the ruble's value to drop sharply — it lead to the rise in inflation, as imports become drastically more expensive.

On the other hand it helped the exporters of O&G sector to balance the losses with increased ruble revenue.
2. Sizing up Russia’s oilfield services sector
Russian share of the world’s oil field services market is about 16.8% (USD 25 bln)

While recent geopolitical tensions and sanctions have meaningfully reduced foreign investment in Russia, the country remains an important market for international oilfield services (OFS) firms such as Schlumberger, Haliburton, Weatherford, etc. given Russia’s sizable oil and gas reserves as well as due to the fact that the economy is highly dependent on hydrocarbons.

Russia’s market in the global oilfield services market is about USD 25 bln, while the world oilfield services market is believed to be as large as USD 149 bln.
Vast number of offshore O&G platforms and vessels will be required for Arctic shelf development once oil price recovers

<table>
<thead>
<tr>
<th>Marine facilities for shelf development:</th>
<th>Estimate by Russia’s Ministry of Industry (units) – by 2020¹</th>
<th>Estimate by Krylov Shipbuilding Research Institute (units) – by 2030⁴</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exploratory and production platforms</td>
<td>25-30²</td>
<td>55</td>
</tr>
<tr>
<td>Floating drilling rigs</td>
<td>No data</td>
<td>34</td>
</tr>
<tr>
<td>Support, service and auxiliary vessels</td>
<td>80-90</td>
<td>93</td>
</tr>
<tr>
<td>LNG carriers including ice-reinforced³</td>
<td>40</td>
<td>27</td>
</tr>
<tr>
<td>Oil tankers (including the ones with DWT above 70,000 tons), bulkers, universal and multipurpose vessels, timber carriers</td>
<td>Up to 230</td>
<td>58 (just oil tankers)</td>
</tr>
<tr>
<td>Ice breakers:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diesel-powered open sea icebreakers with a capacity of 25 MWt and 18 MWt</td>
<td>12</td>
<td>46</td>
</tr>
<tr>
<td>Auxiliary and harbour ice-breakers with a capacity of 4-7 MWt</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Research vessels</td>
<td>27</td>
<td>39</td>
</tr>
</tbody>
</table>

Structure of potential demand for offshore platforms in Russia by 2030

- **By application (O vs G):**
  - Offshore gas platforms - 14
  - Offshore oil platforms - 41

- **By client company:**
  - Demand from Rosneft - 30
  - Demand from Gazflot⁴ - 21
  - Demand from SovComFlot - 3

- **By region of usage:**
  - Platforms for Okhotsk Sea² - 22-23
  - Platforms for Barents Sea - 17-19
  - Platforms for Kara Sea (incl. Ob-Taz bay) - 12-13
Russia’s oil production is an established oligopoly (Rosneft + 5), while its gas production is a near monopoly (Gazprom + 3).

However, the sheer size of Russia provides space for smaller players. Today, there are more than 170 O&G producing companies in Russia.

<table>
<thead>
<tr>
<th>Company</th>
<th>Oil production (mil tons, 2014)</th>
<th>% to 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosneft</td>
<td>201.992</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Lukoil</td>
<td>86.689</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Surgutneftegaz</td>
<td>61.425</td>
<td>100%</td>
</tr>
<tr>
<td>Gazprom neft</td>
<td>50.942</td>
<td>+2.8%</td>
</tr>
<tr>
<td>Tatneft</td>
<td>26.223</td>
<td>+0.4%</td>
</tr>
<tr>
<td>Bashneft</td>
<td>17.808</td>
<td>+10.8%</td>
</tr>
<tr>
<td>Russia (total)</td>
<td>526.75</td>
<td>+0.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company</th>
<th>Gas production (bcm)</th>
<th>% to 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gazprom</td>
<td>432.03</td>
<td>-8.1%</td>
</tr>
<tr>
<td>Novatek</td>
<td>53.56</td>
<td>+1.5%</td>
</tr>
<tr>
<td>Rosneft</td>
<td>37.33</td>
<td>+3.9%</td>
</tr>
<tr>
<td>Lukoil</td>
<td>18.73</td>
<td>+2.6%</td>
</tr>
<tr>
<td>Russia (total)</td>
<td>640.24</td>
<td>-4.2%</td>
</tr>
</tbody>
</table>

Gas production data – Central Control Administration of the Fuel and Energy Complex
Russian OFS market is consolidated and each segment has a number of key players

Drilling market, 2013

Geophysical well logging market, 2013

Seismic research market, 2013

Sources: Deloitte’s report on Russian OFS market prospects
2014 Western sanctions has temporarily impeded Russia’s continued development of its O&G sector

Singapore has not imposed sanctions against Russia

The EU and US restrictions are on:

• **transacting or dealing in new debt** (>30 days (EU), >90 days (US)), or equity instruments for major Russian energy companies:
  1. Rosneft
  2. Gazprom (US sanctions only)
  3. Gazprom Neft
  4. Transneft
  5. Novatek (US sanctions only)

• **supplying goods, services and technology* to conduct** well testing and deepwater (>150 m), **Arctic offshore and shale projects** to major Russian oil E&P companies:
  1. Gazprom
  2. Gazpromneft
  3. Lukoil
  4. Rosneft
  5. Surgutneftgaz

*The provision of specialised floating vessels for use in deep water or arctic oil exploration and production is also prohibited.
Import substitution and localization programme therefore intensified in 2015

Russian Energy Ministry aims at decreasing the level of import in O&G machinery down to 43% from current 60% by 2020.

The categories of goods which are imported the most are:

- Equipment and technologies for off-shore, horizontal, controlled-angle and directional drilling
- Equipment for hydraulic fracturing
- Artificial lift systems
- Tubing equipment
- Equipment for geological and seismic exploration

Features of import substitution programme (for all industries) as at April 2015

- Worth RUB1.5 trn (~USD30 bln), out of which RUB235 bln (USD4.7 bln) will be funded from Federal budget.
- Foreign companies invited to localize production in Russia and receive incentives
- Note: not meant to substitute 100% of imports with domestic products – market still open for foreign exporters
Foreign companies can participate in the Russian oil & gas industry through co-investment and provision of goods and services.

Foreign investment in Russian O&G industry:
• In the last few years, annual volume of foreign investments ranged from 6 to 16 billion US$
• Around 15-20 per cent of oil and 3-4 per cent of gas production is accounted for by foreign capital.

Prospective forms of foreign involvement in the Russian O&G industry:
• Participation in joint projects with Russian state-run oil & gas companies (Gazprom, Rosneft), especially in new oil regions: in the north of Western Siberia, in Eastern Siberia and on sea shelf. For the Russian side, the main motive for admission of foreign companies in those projects is a chance to:
  o Import advanced technologies
  o Get access to sales market infrastructure
  o Attract foreign investments
  o Provision of hi-tech services to enhance production efficiency, especially on sea shelf
• Supplies of hi-tech equipment which Russia cannot manufacture on its own.

Conditions for foreign participation in projects:
• Advanced technology transfer
• Investment
• Localization

"Reasonable level of localization", according to Putin

Contracts and orders given to foreign companies - 25-30%
Contracts and orders given to Russian companies - 70-75%
- including localized production
Russian oilfield services industry generally have a high import structure, especially for the following products:

- **Software**: 91%
- **Shelf equipment**: 78%
- **Catalysts for oil processing and petchem production**: 74%
- **Valving and line accessories**: 62%
- **Equipment for oilfield construction**: 61%
- **Pumping and compressor equipment**: 60%
- **Services for shelf projects**: 58%
- **Equipment for hard-to-recover reserves**: 50%
- **Equipment for conventional oilfields**: 20%
- **Geological survey and well logging (geophysical) equipment**: 19%

This means Singapore exporters should tap on market’s weaknesses and focus on sub-sectors with significant import share (marked with ★) in order to avoid strong competition from the Russian companies.
3. Suggested market entry points
1. Engage Russian O&G producers (top of the value chain)

O&G producers can either contract SG companies through their in-house services department or recommend them to their partner EPCs.
2. Engage Russian EPCs

WIPs to make first contact with these companies:

Russian EPCs are natural partners for SG companies primarily in onshore works and projects.

Western EPCs and oilfield services companies maintain strong presence in the Russian market. In spite of the fact that they tend to subcontract companies from their respective countries, in certain cases they might prefer to work with SG companies instead. Recent examples include:

- Oil rigs supplied to **Seadrill** which has been contracted for ExxonMobil-Rosneft’s Arctic projects

- Chartered 3 vessels to serve the needs of **ExxonMobil Sakhalin** project

- Were pre-selected by **Saipem** for South Stream Russia-EU gas pipeline project in the Black Sea

- Subcontracted by **Schlumberger (Mi Swaco)** for works in Sakhalin projects

- Subcontracted by Chinese company **CPOE** for supply of foam glass and accessories for cryogenic (LNG) modules for the Yamal LNG project.
Possessing a unique market position and relevant expertise Keppel is already present in Russia through supplies to Lukoil’s and Seadrill (which operates Rosneft-ExxonMobil projects in the Arctic).

Traditionally Keppel brings along Singapore companies for subcontracts, pioneering thus their road to the market and increasing awareness about Singapore’s O&G services sector.
5. Complement Russian equipment/service providers, compete against Western incumbents and Chinese newcomers by offering good price/quality solution

**Russian equipment producers and service providers**
- Supply mostly low- and medium-tech solutions for onshore industry.
- Sometimes looking for foreign partners with expertise to develop production.
- Very hard to compete with due to the weak rouble (pricing).

**EU, US and Norwegian players**
- Continue to supply non-sanctioned equipment. Extremely reluctant to leave the market even when it comes for sanctioned items.
- The best way to compete with them is to offer alternative solutions and offer competitive “price-quality” combination.

**Chinese newcomers**
- Aggressively explore new opportunities in the Russian market looking for freed-up niches left after European and American companies.
- Traditionally Russians are reluctant to buy Chinese products both due to the quality issues and cultural challenges of doing business with Chinese businessmen.

**Singapore companies**
- Should be ready to position themselves as sophisticated, alternative, sanction-proof suppliers.
- Should come prepared to cope with the cultural challenges: investment into building personal relations and sometimes the need to rely on verbal agreements and unspoken rules – i.e. “gentlemen’s agreements”.
- Should tap on good price/quality balance as if compared to the Westerners or Chinese companies.
In summary:
Singapore companies can target service providers, EPCs and O&G producers

Local players:
- Uralmash
- VZBT
- Generation Industrial Group
- Kungurmash
- VolgaBurMash
- BurlIntekh

Foreign players:
- Apollo Gossnitz Gmbh
- MSA a.s.
- HIT VALVE Spa
- Yantai Jereh Oilfield Services Group
- Honghua Group

Assorted selection of suppliers – including SPVs and one-day firms created specially for one-time corrupt supplies and tax evasion purposes.

Local:
- Kogalymnftetgeofizika
- Bashnftetgeofizika
- Siberian Service Company

(larger foreign companies operate in this market through Western EPCs)

Local:
- EDC
- Eriell
- Integra
- OZNA
- RusGazEngineering
- OGE Engineering
- RU-Energy Group
- Rimera Group
- Gazprom Bureniye
- TNG Group

Foreign (18% of the market):
- Schlumberger
- Baker Hughes
- NOV
- Haliburton
- NADL

Companies and personalities related to the top O&G companies’ management

- Rosneft
- Gazprom
- Lukoil
- GazpromNeft
- Tatneft
- Bashneft
- Surgutneftegaz
Russian Ministry of Industry and Trade identified the following foreign alternative suppliers based on political neutrality

The Russian O&G industry is highly opaque and political. In October 2014, the Russian Ministry of Industry and Trade is reported to have selected alternative suppliers for some of the imported goods based on the political neutrality of the countries in the current clash between Russia and the West.

The list is not publicly released but is purported to name:

- South Korea: Daewoo, LHE, KwangShin – compressors, plate heat exchangers
- India: Indore Composite – reactants
- Belorussia: Naftan – additives
- Singapore: NuStar – subsea equipment
- China: CNPC, China National Logging Corporation, Shanghai Electric Heavy Industry, Huawei (telecom), Yantai Jereh Oilfield Services, Kingdream Public (Sinopec subsidiary), Shaanxi Aipu Machinery.
IE will be leading a two-track business mission (O&G, Food) from 17-20 Nov 2015

**O&G Track**

- **Fly in to Moscow on 17 Nov (Tue)**
  - Depart Singapore via SQ62 on 17 Nov at 02:35, arrive Moscow at 08:45 (11hrs 10mins)

- **Fly out to Singapore on 20 Nov (Fri)**
  - Depart Moscow via SQ61 on 20 Nov at 14:20, arrive Singapore on 21 Nov (Sat) at 05:50 (10hrs 30mins)

**Programme**

<table>
<thead>
<tr>
<th>17 Nov (Tue)</th>
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<tbody>
<tr>
<td><strong>TBC</strong></td>
<td>Meeting with Rosneft</td>
</tr>
<tr>
<td><strong>TBC</strong></td>
<td>Meeting with Lukoil</td>
</tr>
<tr>
<td><strong>TBC</strong></td>
<td>Meeting with USC</td>
</tr>
</tbody>
</table>

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<tr>
<th>18-19 Nov (Wed-Thu)</th>
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<tbody>
<tr>
<td><strong>TBC</strong></td>
<td>Meeting with Distributors</td>
</tr>
<tr>
<td><strong>TBC</strong></td>
<td>Meeting with EPCs</td>
</tr>
</tbody>
</table>
4. Some challenges to note
Customs specifics

It is important to know that parallel import in Russia is prohibited*.

The goods can only be sold by authorized resellers in the territory of Russia. These goods should also be produced for Russia solely and not for any other countries.

These rule covers everything, from O&G equipment to perfume.

New regulations under discussion

In the nearest future the Russian government might adopt a law on support to domestic producers of O&G equipment. The current proposal is to impose a 30% limitation for purchase of equipment outside of the Customs Union for state companies. At the same time it is proposed to nullify customs duties for those types of equipment that are not produced in the Customs Union. IE will continue to track these developments.

Customs tariffs

The same import tariffs are applied for the territory of the whole Eurasian Economic Union (Russia, Belarus, Kazakhstan, Armenia at the moment), Kyrgyzstan to join until the end of 2015).

The tariffs vary significantly depending on the type of imported equipment. It is important to look up the tariffs on the official website of the EAEU's Commision as being a part of WTO Russia applies zero tariff rate for many types of O&G related equipment.

http://www.eurasiancommission.org/en/
We should be cognizant of a number of challenges for this sector

<table>
<thead>
<tr>
<th>Red tape</th>
<th>Corruption</th>
<th>Language barrier</th>
<th>Cultural barrier</th>
<th>External: Sanctions</th>
<th>External: Oil prices collapse</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Russian NOCs are rather bureaucratic.</td>
<td>• As any emerging market, Russia faces some tough corruption problems.</td>
<td>• Most Russian staff in NOCs have either poor or nil level of English.</td>
<td>• Russian way of doing business is very different compared to Singapore.</td>
<td>• Geopolitical risks of new sanctions</td>
<td>• Threat of further oil price collapse that would lead to the cut in investment programs and rouble depreciation.</td>
</tr>
<tr>
<td>Solution – to work with decision-makers top down who would manage the deal personally.</td>
<td>Solution – to have strong legal support and stay cautious in general.</td>
<td>Solution – to have a good technical translator or interlocutor.</td>
<td>Solution – to build personal trust and try to bridge the cultural gap with knowledge and patience.</td>
<td>Solution – to have strong legal assistance and be aware of the original sanctions wordings.</td>
<td>Solution – to take the oil price volatility risks into account when calculating the projects’ economic model.</td>
</tr>
</tbody>
</table>
5. Q&A?
Thank You

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