



# Strategic Analysis of the Global Status of Carbon Capture and Storage

Report 3: Country Studies  
Russia

Final Report



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# Strategic Analysis of the Global Status of Carbon Capture and Storage

Report 3: Country Studies  
South Africa

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## 1. Executive summary

Russia has not yet been active in establishing policies and legislation to provide specific incentives for the development of CCS technologies and their deployment in test projects.

Presently, Russian legislation in traditional subject matters including environment, oil & gas and climate change is likely to govern any CCS project. This legislation cannot be characterized as a solid framework but rather as a combination of rules and procedures. One regulation that is expected to play a role specifically protects the environment and the atmosphere. This regulation, inherited from the Soviet system, obligates private parties to acquire environmental permits and follow emissions standards. Payment for exceeding such standards is the main regulatory mechanism used to enforce this scheme.

However, Russia is starting to consider the spheres in which CCS may be implemented more effectively and is trying to create legislation closer to European standards.

## 2. Glossary

Law on Air Protection	Federal Law No. 96-FZ dated May 4, 1999 “On Protection of Atmosphere Air”
ANSI	American National Standards Institute
API	American Petroleum Institute
Civil Code	the Civil Code of the Russian Federation
CCS	Carbon Capture and Storage
CoAP	the Code on Administrative Offences of the Russian Federation
Criminal Code	the Criminal Code of the Russian Federation
Environmental Expertise Law	Federal Law No. 174-FZ dated 23 November 1995 “On Environmental Expertise”
Environment Protection Law	Federal Law No. 7-FZ dated 10 January 2002 “On Protection of the Environment”
FSSENR	the Federal Service for Supervision in the Sphere of Natural Resources
FSTS	the Federal Service for Supervision in the Transport Sphere
GHG	Greenhouse Gas
GOSTs	state standards
Industrial Safety Law	Federal Law No. 116-FZ dated 21 July 1997 “On Industrial Safety of Hazardous Industrial Objects”
Land Code	the Land Code of the Russian Federation
Law No. 155-FZ	Federal Law No. 155-FZ “On Inland Sea Waters, Territorial Seas and the Adjacent Zone of the Russian Federation”
Law on Monopolies	Federal Law No. 147-FZ dated 17 August 1995 “ <i>On Natural Monopolies</i> ”
Law on Territories	Federal Law No. 49-FZ “On Territories of Customary Land Use of the small indigenous peoples of the North, the Siberia and the Far East of the Russian Federation”
Licensing Law	Federal Law of August 8, 2001 “On Licensing of Certain Activities”
Merchant Shipping Code	Code of Merchant Shipping of the Russian Federation
OJSC	Open Joint Stock Company
Order No. 322	Order of the Ministry of the Natural Resources of the Russian Federation No. 322 dated 10 December 2007

PDK	critical permissible concentrations
PDU	critical permissible levels
R&D	research and development
Regulation No. 44	Regulation of the RF Government Regulation No. 44 dated 19 January 2000
Regulation No. 134	Regulation of the RF Government No. 134 dated 15 March 2006
Regulation No. 544	Regulation of the RF Government No. 544 dated 18 July 2008
Regulation No. 605	Regulation of the RF Government No. 605 dated 21 August 2001, which approved the Federal Target Scientific and Technical Program "Research and Innovation in Priority Areas of Scientific and Technical Development" for 2002 – 2006
Regulation No. 613	Regulation of RF Government No. 613 dated October 17, 2006, which approved the Federal Target Program "Research and Innovation in Priority Directions of Development of the Scientific and Technological Complex of Russia for 2007 – 2012".
Regulation No. 997	Regulation of RF Government No. 997 dated 13 August 1996
Resolution No. 632	Russian Government Resolution No. 632 of 28 August 1992 "On Approval of a Procedure for Determining the Fees and Their Limits, for Contamination of the Environment, Placement of Wastes, and Other Types of Negative Impact"
RF	Russian Federation
RPPP	the Rules of Protection of Trunk Pipelines adopted by Order of Deputy Minister of Fuel and Energy No. 9 dated 24 April 1992
Russian Tax Code	Tax Code of the Russian Federation (Part I, adopted by the Federal Law No. 146-FZ of July 31, 1998, and Part II, adopted by the Federal Law No. 117-FZ of August 5, 2000 as amended and supplemented).
SanPins	sanitary norms and rules
Shelf Law	Federal Law No. 187-FZ dated 30 November 1995 "On the Continental Shelf of the Russian Federation"
SNiPs	special technical construction rules
State Report 2005	State Report of the Ministry of Natural Resources of the Russian Federation "On Condition of Environment in the Russian Federation and its Protection in 2005"
State Report 2007	State Report of the Ministry of Natural Resources and Ecology of the Russian Federation "On Condition of Environment in the Russian Federation and its Protection in 2007"
Subsoil Law	Russian Federation Law No. 2395-1 of February 21, 1992 "On Subsoil", as amended and supplemented.
Town-Planning Code	the Town-Planning Code of the Russian Federation

Unified Register	the Unified State Register of Rights to Immovables and Transactions therewith
VAT	Value Added Tax
Waste Law	Federal Law No. 89-FZ of June 24, 1998 "On Waste from Production and Consumption"
Water Code	the Water Code of the Russian Federation
Water Resources Law	Federal Law No. 166-FZ dated 20 December 2004 "On Fishing and Conservation of Water Biological Resources"
y, yr	year
ZLD	zero liquid discharge

## **3. CO<sub>2</sub> pricing**

### **3.1 Introduction**

Russia is a signatory to both the UNFCCC and Kyoto Protocol. Its ratifications of these agreements entered into force on 28 March 1995 and 16 February 2005 respectively. As an Annex I Kyoto Protocol signatory, Russia has an emission reduction obligation. It has committed to hold its emissions at 100% of 1990 levels by 2012.

The Energy Strategy of Russia for the Period of up to 2020 (the “Energy Strategy”), which was approved by Russian Government Decree No.1234-p of 28 August 2003 (as further amended in 2009), emphasises the need to converge with European ecological standards. The Energy Strategy notes the need for environmental requirements on energy intensive activities or economic stimulation for more environmentally sensitive production methods. According to the Energy Strategy, carbon dioxide levels are expected to be at 75-80 percent of 1990 levels and not exceed 1990 levels until 2020. On this basis, Russia will likely meet its Kyoto obligations without any legislative action on GHGs.

Russia has a relatively well-developed regulatory regime for oil and gas exploration and extraction, which could provide the basis of regulation of CCS. However, there are as yet no CCS-specific enactments.

### **3.2 Mandatory cap and trade schemes**

There are no mandatory cap-and-trade schemes for GHGs in Russia.

#### **3.2.1 Carbon cost pass-through**

At present, we are not aware of any mechanisms for carbon cost pass-through in Russia.

### **3.3 Non-mandatory emission reduction schemes**

Generally, Russian legislation does not prohibit companies from participating in the voluntary carbon market. However, there is no legislation directly governing transactions involving Voluntary Emission Reductions (VERs). This, in addition to a number of concerns connected with various aspects (such as the uncertain legal nature of VERs under Russian legislation and, absence of clear tax regime with respect to VERs) of VERs trade, deters parties from active participation in such transactions. Nonetheless, it seems that even the existing legislation allows parties to buy and sell VERs. Pilot transactions for the generation and sale of VERs from a Russian entity to a foreign purchaser have occurred.

### **3.4 Carbon taxation schemes**

At present, we are not aware of any carbon taxation schemes in Russia.

### **3.5 Indirect cost imposition: renewable energy schemes**

#### **3.5.1 Portfolio energy standards**

On 8 January 2009, the Russian government released a decree announcing their priorities for improving energy efficiency in the energy sector. The decree states an official target of generating 4.5% of Russia's electricity from renewable energy by 2020 (20% by 2020 when large hydro is included).

#### **3.5.2 Feed-in tariffs**

At present, we are not aware of any existing or proposed feed-in tariffs in Russia.

### **3.6 Greenhouse gas emission and energy use reporting schemes**

According to Federal Law No. 96-FZ of 4 May 1999 (as amended) "On Protection of the Atmosphere", legal entities that emit noxious substances are subject to official recording. In addition, such entities are obliged to take inventory of noxious substances emissions.

Additionally, under Russian law, every person harming the environment should provide the supervising authorities with annual reports on the wastes generated in connection with its activities. For such purposes, special reporting formats were adopted (see, e.g., Resolution No. 1 of the Federal Statistics Service of 17 January 2005). There is not, however, any specific or direct obligation for an emitter to report on the emissions of GHG.

## 4. Existing CCS initiatives

We are not aware of any effective laws that specifically address CCS technology or projects. However, government-organized scientific research is ongoing.

In August 2001, the Russian Government approved the program of scientific research for 2002 – 2006 (Regulation No. 605). Under the program, the Ministry of Education and Science arranged competitive tenders for research in various areas of CCS technologies. Several scientific research institutes won these tenders and received governmental financing in their respective areas of CCS technologies.

In 2005, the Ministry of the Natural Resources mentioned in its State Report 2005 that CCS technology was undergoing theoretical research and development on the laboratory equipment of the open joint-stock company “All-Russia Heat Engineering Scientific and Research Institute”(State Report 2005).

In October 2006, the Russian Government approved a new scientific research program for 2007 - 2012 to fund CCS pilot projects (Regulation No. 613). Two scientific institutes, including the OJSC “All-Russia Heat Engineering Scientific and Research Institute”, won the tender.

The State Report 2007 also mentions CCS technologies (State Report 2007). According to the report, the OJSC “All-Russia Heat Engineering Scientific and Research Institute” managed to “invent CCS technology using fuel combustion within the chemical cycles, guaranteeing the burning of at least 95% of the carbon dioxide, as well as elaborate the optimal refining and storage solutions dealing with carriers of carbon dioxide for regions of Russia producing the most emissions of carbon dioxide”.

At this stage, the OJSC “All-Russia Heat Engineering Scientific and Research Institute” has suspended all CCS research. This is likely because Russia’s Kyoto obligations will be met with no action so there is no urgent need to decrease carbon dioxide emissions by developing CCS technologies.

### 4.1 Taxation incentives

Although there is no CCS-specific tax legislation, different tax incentives might apply.

In particular, some R&D costs may be incurred within the framework of a CCS-project. Russian tax legislation allows the deduction of 150% of the actual amount of R&D costs against profits, in the period these costs are incurred and provided that these costs are included into the specific list adopted by the Russian Government (see Decree of the Government of the Russian Federation from December 24, 2008 No. 988). Such R&D costs include *inter alia* expenses for elaboration of methods and means of removing carbon dioxide and harmful trace elements from the environment. Notably, these rules also apply to experimental projects. However, these rules are not applicable in certain cases, e.g. for contractors (subcontractors) incurring such costs under a relevant contract, or if R&D works result in the creation of an intangible asset.

Further, the CCS project implementation might require the modernization, extension, further equipping, retooling or creation of the new equipment facilities. The taxpayer is entitled to make a 10% or 30% one-off deduction of capital investment costs from the profit tax base depending on the depreciation group of the relevant fixed assets.

R&D works may be also exempt from the Russian VAT, in particular when such research and development relates to development of new products and technologies or to improvement of the products and technologies.

## **4.2 Liability for failure to capture**

There is no capture obligation in Russia. Accordingly, there is no direct liability for failure to capture.

## **5. Capture of CO<sub>2</sub>**

### **5.1 Introduction**

Russian legislation does not specifically address the capture of carbon dioxide. Where carbon dioxide is produced by a business, its emission or capture would be subject to existing environmental regulations. At the same time, there is a statutorily defined MPC (maximum permissible concentration) for carbon dioxide but this MPC is used to test the healthiness of an environment (food, air, etc) rather than to observe any specific carbon emission requirements.

### **5.2 Integrated policy and legislation**

We are not aware of any integrated policy or legislation addressing the capture of carbon dioxide.

### **5.3 General policy and legislation with applicability to carbon capture**

A company engaged in production activities is subject to a multitude of regulations addressing environmental protection, but none of them has been established to specifically address CCS. The exact set of requirements that a company must comply with depends on the nature of the business conducted, although standard requirements applicable to carbon capture (as well as to capture of any other toxic emissions) would be those imposed by the Environment Protection Law and the Law on Air Protection.

#### **5.3.1 Planning requirements**

There are no CCS specific planning requirements in Russia. Please see the discussion of planning below in section 6.3.2.

#### **5.3.2 Relevant pollution laws and policies**

In accordance with the Law on Protection of Atmospheric Air, a company is required to identify (among its facilities and equipment) sources of emission of polluting substances into the air; such sources can be static and mobile. With regard to each source of emissions and business as a whole, a company must develop "limits" (i.e., pre-approved quantities of pollutants that the company is authorized to emit) for allowable emissions into the atmosphere. Rostekhnadzor, the relevant State regulatory agency, must approve the limits selected and grant a permit. The term for which the limits are approved usually does not exceed five years. If the limits are not approved, an emission permit is issued for one year on the basis of temporarily approved emissions.

In addition, a company which has static emission sources must carry out an inventory of emissions and industrial monitoring in respect of compliance of actual emissions with approved limits and permits issued. A company is also obligated to undertake measures for the capture, recycling, deactivation, and reduction of emission of pollutants and hazardous substance into the air.

Under Russian law (including Federal Law No. 7-FZ "On Protection of the Environment" of 10 January 2002 (as amended), Federal Law No. 96-FZ "On Protection of the Atmosphere" of 4 May 1999), emissions of noxious substances listed by the authorities into the atmosphere is allowed on the basis

of a permit issued by the authorized agencies. Persons negatively impacting on the environment (including in the form of emitting noxious substances into the atmosphere) must pay to do so. The amount of payment is to be calculated on the basis of, inter alia, Resolution No. 632, and generally depends on whether the volume of emissions made by an entity is within or exceeds the standard established for such entity by an authorized supervising agency.

Occasionally, additional regulations are imposed to motivate entities causing atmospheric pollution to emit less. For example, on 8 January 2009 the Russian Government adopted a resolution that establishes a target limit relating to the oil and gas sector that will see the payment for exceeding the target limit for methane increased by 100 percent.

#### **5.4 Liability for failure to capture**

There is no capture obligation in Russia. Accordingly, there is no direct liability for failure to capture.

#### **5.5 Taxation incentives**

Please refer to section 4.1 above.

## 6. Transport of CO<sub>2</sub>

### 6.1 Introduction

There is presently no comprehensive regulatory scheme for the transport of carbon dioxide in Russia.

Generally, the major means of transport of goods and substances in Russia is by pipeline, by road, rail, ship, or other means of transport. Regulation governing the transportation of carbon dioxide by the means of transport (eg, by road, rail or ship) other than by pipelines generally contains no difference in comparison with the regulation related to the transportation of other goods by those means of transport.

As for pipelines, the specifics of regulation is mainly based on the fact that pipelines are generally of two types: trunk pipelines and private pipelines. Trunk pipelines are owned by state owned companies, and private pipelines by private entities.

Russian legislation contains regulations on the use of trunk pipelines, but is almost silent with respect to the use and transport of goods and substances via private pipelines.

The term "trunk pipelines" is defined in the Rules of Protection of Trunk Pipelines adopted by the Order of Deputy Minister of Fuel and Energy No. 9 dated 24 April 1992 (the RPPP). Under the RPPP, trunk pipelines include pipelines by which oil, natural gas, oil products, oil and synthetic hydrocarbon gases, unstable gasoline, condensate and liquid ammonia are transported.

To be deemed "trunk", such pipelines must run from locations whereby the relevant commodity is produced to the locations of oil refinement and unloading, consumption of oil products or their transshipment to another means of transport and sale of gas, including the liquefied gas, to the consumers.

The above definition implies that trunk pipelines on the Russian territory relate only to transportation of gas, oil and oil products. Trunk pipelines may not be operated by private companies.

### 6.2 Integrated policy and legislation

We are not aware of any specific legislation or policy governing the transport of carbon dioxide in Russia.

### 6.3 General policy and legislation specific to transport of carbon dioxide

#### 6.3.1 Licencing of transportation activities

#### PIPELINES

#### NEW PIPELINES

Law on Monopolies provides that transportation of oil and oil products via trunk pipelines (*magistralnye truboprovody*) and gas via all pipelines are markets in the state of natural monopoly. That means that

those activities may only be conducted on-shore by the state owned organizations to which the natural monopoly is granted by the government.

Currently, such organizations are OJSC “Gazprom” (in relation to gas pipelines), OJSC “Transneft” (in relation to trunk oil pipelines), OJSC “Transnefteprodukt” (in relation to trunk oil products pipelines).

In the Russian Federation, the list of activities requiring government licence is set out by Federal Law “*On Licensing of Certain Activities*” (the Licensing Law). Under the Licensing Law, transportation of certain substances, including carbon dioxide, by means of pipelines is not subject to government licensing.

However, the Licensing Law provides for licensing of operating hazardous industrial objects (HIO), in which case if a pipeline is deemed, following the definition of HIO provided for by Federal Law No. 116-FZ dated 21 July 1997 “*On Industrial Safety of Hazardous Industrial Objects*” (the Industrial Safety Law), as a hazardous industrial object, a licence should be obtained to operate the pipeline.

## EXISTING PIPELINES

The licensing of the activities connected with the existing pipelines are the same as described in section (a) above.

## ROAD AND RAIL TRANSPORT

Under the Licensing Law, transportation by road transport is not subject to government licensing.

Rail transportation of cargo is included into the list of licensed activities under the Licensing Law. Licensing of rail transportation is governed by Regulation of the RF Government No. 134 dated 15 March 2006 (Regulation No. 134).

The Licensing Law provides for two licensing regimes: namely, “general” and “simplified”. The simplified regime can be chosen by an applicant to cover certain types of licensed activities, including rail transportation.

The licensing authority is the Federal Service for Supervision in the Transport Sphere (FSTS). The licensing procedure includes the following steps:

- submission of application to the FSTS together with certain documents outlined in the Licensing Law and Regulation No. 134 (including constituent documents, state registration certificates, registration certificates confirming ownership of rolling stock, documents confirming the presence and eligibility of qualified staff, etc.). In case of use of the simplified procedure, the applicant does not need to submit documents required by Regulation No. 544;
- review of the application and related documents by the FSTS; and
- adoption and notification of the decision to the applicant by the FSTS.

FSTS must adopt a decision on granting/declining to grant a licence to the applicant within 45 days following the submission of the application. In case of use of the simplified procedure, this term is reduced to 15 days.

The licence is granted for a five-year renewable term.

## TRANSPORTATION BY SHIP

Maritime transport is also a licensed activity under the Licensing Law. The simplified licensing regime is also applicable.

Licensing of maritime transport is governed by Regulation of the RF Government No. 544 dated 18 July 2008 (Regulation No. 544).

The licensing authority is Federal Service for Supervision in the Transport Sphere (FSTS). The licensing procedure includes the following steps:

- submission of application to the FSTS together with certain documents outlined in the Licensing Law and Regulation No. 544 (including constituent documents, state registration certificates, registration certificates confirming ownership and eligibility of vessels, documents confirming the presence and eligibility of qualified staff, etc.). In case of use of the simplified procedure, the applicant does not need to submit documents required by Regulation No. 134;
- review of the application and related documents by the FSTS; and
- adoption and notification of the decision to the applicant by the FSTS.

FSTS must adopt a decision on granting/declining to grant a licence to the applicant within 45 days following the submission of the application. In case of use of the simplified procedure, this term is reduced to 15 days.

The licence is granted for a five-year renewable term.

Transportation by internal water transport is also a licensed activity under the Licensing Law. The simplified licensing regime is also applicable.

Licensing of transportation of cargo by internal water transport is also governed by Regulation of the RF Government No. 544 dated 18 July 2008 (Regulation No. 544).

The procedure of obtaining the licence is similar to the one described for maritime transport.

### 6.3.2 Planning

## ZONING FOR TRANSPORT FACILITIES

In the Russian Federation, the term “zoning” relates to lands located on the territory of settlements (including cities) and is part of town-planning activities. Zoning is primarily governed by the Town-Planning Code of the Russian Federation (the Town-Planning Code). Zoning rules set out in the Town-Planning Code do not provide for a special town-planning zone for pipelines. The regions and municipalities may enact their own town-planning regulations that may not contradict the Town-Planning Code. The zoning of particular settlements is governed by town-planning documentation of such settlements and determines whether certain objects may be constructed in particular locations on the territory of the settlement.

In addition to town planning zones, Russian legislation provides for other types of zones with specific regimes of land use. The use of land in the Russian Federation is primarily governed by the Land Code of the Russian Federation (the Land Code). In accordance with the Land Code, transport facilities in the Russian Federation may only be constructed on lands qualified as transport lands. Pipelines may be constructed on transport lands and partially on land under settlements.

In relation to pipelines, special technical construction rules (SNIps) provide for special protection zones around pipelines (from 25 to 100 meters from pipeline axis) and pipeline protection distances (25 to 3000 meters from a pipeline to the nearest settlement, factory or other facility, depending on the pipeline's parameters and the facility's parameters).

## **CONSTRUCTION AND BUILDING CODES**

Construction and building activities in Russia are primarily governed by the aforementioned Town-Planning Code and technical normative acts referred to as Construction Norms and Rules (SNIps) and state standards (GOSTs).

## **PIPELINE LICENSING REGIMES – NEW PIPELINES**

### **ONSHORE PIPELINES**

In order to construct a pipeline, a proponent must first obtain land-use rights over the land plot(s) through which the pipeline is planned to run. Such land use rights may be in the form of ownership, lease or easement.

A proponent must then apply for a construction permit in relation to the pipeline. Construction permits are only granted after the construction documentation is reviewed by various government agencies. The project documentation for the construction of a pipeline will be subject to environmental expertise (please refer to section 6.3.2.7 below).

After obtaining the construction permit the proponent may start constructing the pipeline. After the pipeline is constructed, the proponent must obtain a permit for introducing the pipeline into operation.

After obtaining the permit for introducing the pipeline into exploitation, the proponent must register its ownership of the pipeline with the Unified State Register of Rights to Immovables and Transactions therewith (the Unified Register).

### **OFFSHORE PIPELINES**

Offshore pipelines may be laid and operated in the inland sea waters, territorial seas and on the continental shelf of the Russian Federation.

The use of the inland sea waters and the territorial seas of the Russian Federation are governed by Federal Law No. 155-FZ "On Inland Sea Waters, Territorial Seas and the Adjacent Zone of the Russian Federation" (Law No. 155-FZ). This Law authorizes the RF Government to regulate the laying and operation of pipelines in the inland sea waters and territorial seas.

In line with Law No. 155-FZ, the RF Government adopted Regulation No. 44 dated 19 January 2000 (Regulation No. 44). Regulation No. 44 allows Russian and foreign legal entities to lay pipelines in the inland sea waters and territorial seas upon prior permit of the Federal Service for Supervision in the Sphere of Exploitation of Natural Resources (the FSSSENR). Foreign applicants must use diplomatic channels. The application must be submitted to the FSSSENR at least 6 months prior to the commencement of work on the laying of the pipeline. The procedure of obtaining the permit from FSSSENR is set out in detail in the Order of the Ministry of the Natural Resources of the Russian Federation No. 322 dated 10 December 2007 (Order No. 322)

The use of the continental shelf of the Russian Federation is governed by Federal Law No. 187-FZ dated 30 November 1995 "On the Continental Shelf of the Russian Federation" (the Shelf Law).

The Shelf Law allows Russian and foreign legal entities to lay and operate pipelines on the continental shelf upon obtaining a permit from the Federal Agency for subsoil management.

The procedure for obtaining the permit for laying pipelines in the continental shelf is set out in Order No. 322. The permit is issued by FSSNR.

## ENVIRONMENTAL IMPACT ASSESSMENT

Environmental impact assessment in the Russian Federation is generally performed in the following forms:

- environmental control;
- environmental audit; and
- environmental expertise (*ekologicheskaya ekspertiza*).

The conduct of environmental control is governed by Federal Law No. 7-FZ dated 10 January 2002 “*On Protection of the Environment*” (the Environment Protection Law). The Environment Protection Law provides for three types of environmental control – (1) government environmental control; (2) industrial environmental control and (3) public environmental control.

The list of facilities (including trunk pipelines) that are subject to federal government environmental control is set out in Regulation of the RF Government No. 285 dated 31 March 2009. Non-trunk pipelines are not directly included into that list.

Regulations governing implementation of industrial and public environmental control have not yet been adopted.

Environmental audit is mentioned in the Environment Protection Law but is not obligatory and the federal regulations for its implementation have not been adopted. Obtaining an opinion of independent environmental auditors can be useful, however, as evidence in court against claims for pre-existing environmental damage and in other cases.

The conduct of environmental expertise is governed by Federal Law No. 174-FZ dated 23 November 1995 “*On Environmental Expertise*” (the Environmental Expertise Law). The Environmental Expertise Law provides for government (federal and regional) and public environmental expertise.

Environmental expertise is defined as assessment of the documents justifying the environmental feasibility of proposed activity.

Although the Environmental Expertise Law outlines the list of facilities subject to the government environmental expertise and does not directly include pipelines, in practice it is interpreted as requiring such expertise for obtaining of a construction permit for a pipeline. The procedure of conducting federal environmental expertise is envisaged by RF Government Regulation No. 698 dated 11 June 1996. The government environmental expertise is conducted by an expert commission formed by the Federal Service for Environmental, Technological and Atomic Supervision. The expert commission must include independent experts. The term of conduct of government environmental assessment may not exceed six months. The opinion of the expertise may be challenged in court. The court may order a repeated expertise.

Public environmental expertise may be conducted in relation to the same facilities as the government expertise. Public environmental expertise must be initiated by citizens or non-governmental organisations (NGOs) or municipalities and is conducted by an NGO specializing at environmental

protection. The application of the NGO(s) for conduct of public environmental expertise must be state registered. The opinion of the public expertise has consultative effect, since it is submitted to the government authority conducting the government environmental expertise.

## **STAKEHOLDER ENGAGEMENT**

### **PUBLIC CONSULTATION**

Please refer to section 6.3.1.7 above in relation to public environmental control and public environmental expertise.

### **LEGAL CHALLENGE**

As an exception to the general rule of the Russian procedural legislation, environmental actions may be brought to the court by any authorized official or by any citizen.

#### **6.3.3 Access / tenure**

### **NATURE OF PROPERTY INTERESTS CONFERRED**

As discussed in section 7.2 below, trunk pipelines in Russia are owned by state owned companies.

Ownership of private pipelines is not restricted but such pipelines must be registered with the Unified Register.

### **ESTABLISHING PRIORITY BETWEEN TRANSPORT AND EXISTING USES AND RIGHTS**

### **PETROLEUM AND RESOURCE EXTRACTION**

Generally, subsoil rights with respect to petroleum and resource extraction do not compete/cross with the rights to construction and operation of pipelines since the latter usually require only surface rights rather than subsoil rights. If there is any such competition and construction and/or operation of a pipeline requires subsoil rights, according to a general rule, priority is given to the rights which were granted earlier.

### **FISHING**

The use of water resources in the Russian Federation is governed by the Water Code. In accordance with the Water Code, a right of use over water facility owned by the Russian Federation, a region or a municipality may be granted for construction of pipelines on the basis of water use agreements.

Federal Law No. 166-FZ dated 20 December 2004 "On Fishing and Conservation of Water Biological Resources" (the Water Resources Law) provides for two types of special protection zones – fish protection zones and protected fishery zones. The boundaries of such zones and the regime of economic activities in such zones (including their intersection with pipelines) are determined by the Federal Fishing Agency separately for each zone.

## FAUNA AND FLORA, INCLUDING ENDANGERED SPECIES

Russian legislation provides for specially protected natural territories (including state conservation areas (zapovedniki), national parks, natural parks, state natural wildlife refuges, etc.). In relation to state conservation areas, conduct of any economic activities is prohibited on their territory. In relation to national parks, Federal Law No. 33-FZ dated 14 March 1995 specifically provides that it is prohibited to construct pipelines on their territory.

Russian legislation also contains special provisions aimed at protection of wildlife from impact of pipelines. One of the regulations of note is Regulation of RF Government No. 997 dated 13 August 1996 (Regulation No. 997).

## NAVIGATION

As discussed in sections 6.3.2.6 (a)-(b) above, pipelines may be laid and operated in the inland sea waters, territorial seas and the continental shelf of the Russian Federation. The pipeline routes are determined in a process of approval of laying of such pipelines. In case of approval, such routes are publicly announced to sailors for navigation purposes.

## RIGHTS OF INDIGENOUS PEOPLES AND OTHER CUSTOMARY RIGHTS

Law on Territories provides that pipelines may run through customary land use territories on the basis of easements, unless such easements contradict the legal regime of such territories envisaged by the regulations establishing such territories.

## COMPULSORY ACQUISITION AND COMPENSATION REGIMES

Compulsory acquisition of privately owned land plots is governed by the Land Code. Land plots may be subject to compulsory acquisition for the purpose of constructing pipelines on them if such pipelines have federal, regional or municipal significance. Compulsory acquisition may only be conducted on the basis of a court decree with a one year prior notice.

Russian Civil Code also allows the seizure of one's property in certain cases. In this case, the former owner is to be paid for that property. The amount of payment may be challenged by the former owner in court.

### 6.3.4 Environmental and other risks

#### POLLUTION – NOISE, AIR AND WATER

The Environment Protection Law envisages certain indicators of permissible physical impact (including the noise indicators). Such indicators are currently established by sanitary norms and rules (SanPins).

The CoAP provides for administrative fines for exploitation of means of transport that exceeds the permissible noise indicators but the fine amount (US\$3-10) is negligible.

Air and water contamination is established if the concentration of certain pollutants in the air or water exceeds certain permissible concentration indicators (PDK) established separately for each pollutant. On the basis of PDK, indicators attributable to each source of pollution (critically permissible levels; PDU) are established. PDU may be temporarily substituted by limits of emission.

There are no PDK or PDU established for emissions of carbon dioxide into the air or water.

In case of contamination of internal water facilities with oil or oil products, the liable person shall be obliged to compensate the damage caused to such facility in full. The amount of damage is determined in accordance with the Guidelines adopted by Order of the Ministry of Natural Resources No. 13989 dated 13 April 2009.

Compensation of environmental damage to inland sea waters, territorial seas or the continental shelf with oil, oil products or liquefied natural gases is governed by the Merchant Shipping Code.

The CoAP also provides for administrative liability for a number of administrative offences related to contamination of air and water with hazardous pollutants.

The Criminal Code envisages criminal liability for violation of terms of circulation of hazardous chemical substances and waste if it created a threat of, or caused significant harm to the human health or significant environmental damage.

It also envisages criminal liability for contamination of air, water and sea if such contamination is significant.

## **WASTE**

Management and disposal of waste in Russia is primarily governed by the Waste Law. In accordance with the Waste Law, the RF Government adopted Regulation No. 461 dated 16 June 2000 governing the establishment of permissible waste levels and limits for deposit of waste.

The CoAP provides for administrative liability for non-compliance with the environmental and sanitary rules of waste management in the form of fines and suspension of activity for up to 90 days for legal entities.

If the violation of waste management rules results in contamination, the violator will also be held liable for contamination.

Special administrative liability in the form of a fine and potential confiscation of the licence is envisaged by the CoAP for deliberate illegal dumping of waste into the inland sea waters, territorial seas or continental shelf from vessels, airplanes and pipelines.

In relation to criminal liability for illegal disposal of waste please refer to section 2 above.

## **OCCUPATIONAL HEALTH AND SAFETY**

We are not aware of any legislative requirements specifically connected with the transportation of carbon dioxide. Protection of health and safety of employees working at the transportation facilities is generally regulated by the labour legislation of the Russian Federation.

## **THREATENED/ENDANGERED SPECIES**

The CoAP provides for administrative liability for destruction of rare and threatened species recorded in the Red List in the form of administrative fine.

The Criminal Code envisages criminal liability for destruction of natural habitats of such species that resulted in their perishing.

## **MIGRATORY SPECIES**

Regulation No. 997 contains special provisions related to protection of migrating species when constructing and exploiting pipelines.

The CoAP provides for administrative fines for violation of the rules of protection of migration routes of wildlife.

### **6.4 Taxation of carbon dioxide transport**

Russian tax legislation does not provide for any specific regulations regarding the carbon dioxide transport. Thus, general tax treatment applies. Please refer to section 4.1 above.

### **6.5 Evaluation**

The Russian land and water use, environmental and transport-related legislation is unsystematic, ambiguous and often contradictory. This creates a degree of regulatory uncertainty.

## **7. Exploration of potential CO<sub>2</sub> storage sites**

### **7.1 Introduction**

Russia does not have any specific legislation in the domain of exploration of potential carbon sequestration sites. These issues are governed by Russian general subsoil legislation.

### **7.2 General policy and legislation with application to exploration of potential carbon sequestration sites**

As mentioned above, there is no policy or legislation that directly applies to the exploration of potential carbon sequestration sites in Russia. Due to the fact that subsoil within the territory of the Russian Federation, including the underground space and mineral resources is a state property, under the *Federal Law on Subsoil No. 2395-1 dated February 21, 1992, as amended*, granting of subsoil for use shall be legalized by a special state permit in the form of the licence. This is a document certifying the right of its holder to use a subsoil plot within specific boundaries in accordance with the purpose stated therein for specified period of time. Under the Subsoil Law, the subsoil plots are granted, inter alia, for the exploration and acceptability appraisal of underground facilities unrelated to mineral production. Thus, the permission for the activities related to exploration of potential carbon sequestration sites is provided by the relevant subsoil use licence.

#### **7.2.1 Exploration licencing**

##### **APPLICATION CRITERIA**

Generally, exploration subsoil licences for the exploration of potential carbon sequestration sites are issued pursuant to an application to the Russian Federal Subsoil Use Agency (Russian subsoil licencing authorities) and require a decision of a special commission formed by the Agency. If the respective subsoil plot qualifies as a plot of federal significance the grant of exploration rights requires a special decision of the Russian government.

The applicant and holder of an exploration licence may be any person, including non-Russian companies, except for (i) on-shore subsoil plots which qualify as subsoil plots of federal significance which may be used only by Russian companies (i.e., an exploration licence in respect of such plot may be held by a Russian company only) and (ii) any off-shore subsoil plot (all of which are deemed to be of federal significance) may only be used by a Russian company with at least 50% participation of the Russian state and meeting other criteria established by law. It is noteworthy that although Russian subsoil legislation allows non-Russian companies to directly hold Russian subsoil licences, in practice such licences are not issued to non-Russian companies and there are only a few examples where such companies directly hold Russian subsoil licences. Therefore, in most cases non-Russian companies hold Russian subsoil licence through their Russian subsidiaries.

The application for the acquisition of exploration licence must be filed with, and considered by, the Russian Federal Subsoil Use Agency.

One may apply for the exploration licence provided that the respective subsoil plot is included in the licencing program. The respective subsoil plot may be included into the program at a request of interested person, however, the procedure involves several steps and takes a long time in practice.

The applicant for the subsoil licence must comply with requirements established by Russian law with respect to subsoil users (to have respective expertise, licences, specialists etc).

## **RIGHTS CONFERRED BY EXPLORATION LICENCE**

The Subsoil Law confers on the holder of an exploration licence the right to:

- use the subsoil area granted to it for any type of business or other activity in accordance with the purpose provided for by the licence;
- to chose such activity at his discretion provided it is not in conflict with the applicable law;
- to use the results of his activity provided this is contemplated by the licence; and
- to request a revision of the licence terms from the state bodies if circumstances materially change from those under which the licence was granted

Subsoil licences do not grant any surface rights which are always acquired separately from subsoil licences or rights to construct/operate the respective reservoir which require another subsoil licence. It is noteworthy that one may obtain a combined licence – for the right to explore and operate a subsoil plot. In this case no additional licence will be required for operating the subsoil plot.

## **LICENCE TERM**

The right to subsoil use for the exploration is granted for a period of up to five years, but the period of use shall be extended at the initiative of the subsoil user, if there is a need to complete exploration, provided there are no breaches of the licence's terms and conditions by this subsoil user.

## **CHALLENGING LICENCES**

The right to subsoil use may be subject to early termination, suspension or restriction by the bodies that have granted the licence, inter alia, in the following cases:

- appearance of immediate danger to the health of the people working or living in the areas affected by operations related to the use of subsoil;
- material violation of the licence terms by the subsoil user;
- repeated violation of the established rules for the use of subsoil by the user;
- occurrence of emergency situations (natural disasters, war and others);
- if the subsoil user failed to commence operations in the established scope within the term provided for by the licence; or
- the non-filing of the reports stipulated by Russian law by a subsoil user on subsoil reserves etc.

Any decision of the licencing authorities in respect of early termination, suspension or restriction of a licence may be challenged in court of arbitration (Russian state commercial courts).

## **7.2.2 Access / tenure**

### **NATURE OF PROPERTY INTERESTS CONFERRED**

The legal nature of subsoil rights in Russia is not very clear: the law is silent in this respect. Sometimes such rights are viewed as civil law rights, sometimes as administrative rights (special permit granted by state authorities) and sometimes as mixed rights of both civil law nature and administrative law nature. In our view, Russian subsoil rights are not civil law rights and should be viewed as administrative rights and, therefore, should be governed by Russian administrative law.

### **ESTABLISHING PRIORITY BETWEEN EXPLORATION AND EXISTING USES AND RIGHTS**

#### **PETROLEUM AND RESOURCE EXPLORATION AND EXTRACTION**

Under Russian law, the user of a subsoil plot has exclusive rights to conduct the works at the subsoil plot and, therefore, it is generally prohibited to grant subsoil rights with respect to the same subsoil plot to different persons. The only exception is established for exploration licences – two or more explorations licences may be issued to different persons, however, exploration licence cannot be issued if one holds production rights in respect of the same subsoil plot. Therefore, production (extraction) rights have a priority before exploration rights.

#### **SUBSEQUENT USES**

There is no specific subsoil regulation in respect of subsequent use.

#### **RIGHTS OF INDIGENOUS PEOPLES AND OTHER CUSTOMARY RIGHTS**

Russian law does not grant any specific rights to indigenous peoples or other customary rights in case of exploration of potential carbon sequestration sites.

#### **COMPULSORY ACQUISITION AND COMPENSATION REGIMES**

There are no compulsory acquisition or compensation rules in Russia for exploration of potential carbon sequestration sites.

## **7.2.3 Planning and construction regulation applicable to carbon sequestration facilities**

### **ZONING**

The lands used for the construction of carbon sequestration facilities must be of an appropriate land category and have an appropriate permitted use, that is, permitting construction and operation of the qualifying facilities. Most likely the land that would be suitable for construction and operation of such facilities will be classified as forest fund or as industrial land with a permitted use expressly providing for the construction and operation of such facilities. If a plot of land in question does not meet these criteria, the parameters of the plot must be changed (if allowed by law) before any construction may be started.

## **ENVIRONMENTAL IMPACT ASSESSMENT**

This matter is discussed in detail in section 6.3.2.7.

## **CONSTRUCTION AND BUILDING CODES**

This matter is discussed in detail in section 6.3.2.5.

## **STAKEHOLDER ENGAGEMENT**

This matter is discussed in detail in section 6.3.2.8.

### **7.3 Taxation of carbon sequestration exploration activities**

There are no specific tax regulations with regard to the carbon sequestration exploration activities. Costs associated with exploration activities may be qualified as costs associated with development of natural resources that may be tax deductible under certain conditions. Assuming that the carbon sequestration exploration activities require the subsoil licence, costs associated with the obtaining of such licence, at the choice of the taxpayer, may be regarded either as intangible assets and depreciated for tax purposes within the term of the licence or as other expenses and deducted for profits tax purposes within two years.

### **7.4 Evaluation**

The current absence in the Russian Federation of any exploration policy or legislation for carbon sequestration is not likely, of itself, to be a major hindrance to the exploration and development of such storage facilities.

## **8. Injection and pre-closure of CO<sub>2</sub> storage formations**

### **8.1 Introduction**

Currently, there are no policies or regulatory frameworks in Russia that specifically govern the injection and pre-closure of carbon sequestration formations.

### **8.2 General policy and legislation**

#### **8.2.1 Injection licencing**

As mentioned above, there is no general policy or legislation that directly applies to the exploration of potential carbon sequestration sites in Russia. As discussed above in the Section 7.2, due to the fact that subsoil within the territory of the Russian Federation is state property, granting of subsoil for use shall be legalized by a special state permit in the form of the licence. Thus, the permission for activities related to injection of carbon dioxide into sequestration formations is provided by the relevant subsoil use licence.

#### **APPLICATION CRITERIA**

The application criteria for the acquisition of subsoil licence for injection and pre-closure of carbon sequestration formations are the same as discussed in section 7.2.1.1 above.

#### **RIGHTS CONFERRED BY INJECTION LICENCE**

The relevant rights are discussed in the Section 7.2.1.2 above.

#### **LICENCE TERM**

The right to subsoil use may be granted for an unlimited period of time in order to construct and operate underground facilities unrelated to mining operations, to construct and operate underground facilities involved in the burial of waste, and to construct and operate oil and gas storage facilities.

#### **CHALLENGING LICENCES**

This is discussed in Section 7.2.1.4 above.

#### **8.2.2 Approval processes for sequestration facility closure**

There is no specific process for the sequestration facility closure. Such process will currently be governed by general rules related to abandonment of fields and filed facilities.

#### **8.2.3 Access / tenure**

As mentioned above, due to the fact that subsoil within the territory of the Russian Federation, including the underground space and mineral resources is state property, granting of subsoil for use shall be subject to the licence.

#### **8.2.4 Planning and construction regulation applicable to carbon sequestration facilities**

##### **ZONING**

This matter is discussed in detail in section 6.3.2.4.

##### **ENVIRONMENTAL IMPACT ASSESSMENT**

This matter is discussed in detail in section 6.3.2.7.

##### **CONSTRUCTION AND BUILDING CODES**

This matter is discussed in detail in section 6.3.2.5.

##### **STAKEHOLDER ENGAGEMENT**

This matter is discussed in detail in section 6.3.2.8.

#### **8.2.5 Strategic Activities**

Under Russian foreign investments legislation, any works intended to make an active impact on geophysical processes and phenomena are deemed to be strategic activities and the companies engaged in such activities are deemed to be strategic companies. Russian law restricts acquisition of control (as defined by Russian law) over such companies by non-Russian investors. Such acquisition requires a preliminary consent of the Russian government. The same restriction applies to Russian companies operating/working at subsoil plots of federal significance.

#### **8.3 Taxation of injection and pre-closure of carbon sequestration facilities**

There are no specific tax regulations in relation to injection and pre-closure of carbon sequestration facilities. Thus, general tax treatment applies. Assuming that the injection and pre-closure of carbon sequestration facilities require a subsoil licence, expenses associated with obtaining such licence, at the choice of the taxpayer, may be regarded either as intangible assets and depreciated for tax purposes within the term of the licence or as other expenses and deducted for profits tax purposes within two years.

#### **8.4 Evaluation**

The current absence in the Russian Federation of any exploration policy or legislation for carbon sequestration is not of itself likely to be a major hindrance to the exploration and development of such storage facilities.

## **9. Post-closure and long-term storage of CO<sub>2</sub>**

Russia does not have any integrated policies and legislation governing post-closure and long-term storage of carbon dioxide. All such issues should be governed by general rules applicable to protection of subsoil and environment and storage of hazardous materials.

## **10. Summary**

There is as yet no specific CCS legislation in Russia. Therefore, all such projects are governed based on the existing general provisions of other areas of law.

## 11. References

### 11.1 Legislation, regulations, case law and international material

#### 11.1.1 International

Kyoto Protocol to the *United Nations Framework Convention on Climate Change*, opened for signature 11 September 1997 2303 UNTS 148 (entered into force 16 February 2005).

#### 11.1.2 Legislation and regulation

Federal Law No. 7-FZ of 10 January 2002 “*On Protection of the Environment*”.

Federal Law No. 89-FZ of June 24, 1998 “*On Waste from Production and Consumption*”.

Federal Law No. 96-FZ of 4 May 1999 (as amended) “*On Protection of the Atmosphere*”

Federal Law No. 116-FZ of 21 July 1997 “*On Industrial Safety of Hazardous Industrial Objects*”.

Federal Law No. 155-FZ of July 31, 1998 “*On Inland Sea Waters, Territorial Seas and the Adjacent Zone of the Russian Federation*”.

Federal Law No. 166-FZ of 20 December 2004 “*On Fishing and Conservation of Water Biological Resources*”.

Federal Law No. 174-FZ of 23 November 1995 “*On Environmental Expertise*”.

Federal Law No. 187-FZ of 30 November 1995 “*On the Continental Shelf of the Russian Federation*”.

Federal Law No. 2395-1 of February 21, 1992 “*On Subsoil*”, as amended and supplemented.

Order of the Ministry of the Natural Resources of the Russian Federation No. 322 dated 10 December 2007.

Regulation of the RF Government Regulation No. 44 dated 19 January 2000.

Regulation of the RF Government No. 134 dated 15 March 2006.

Regulation of the RF Government No. 544 dated 18 July 2008.

Regulation of the RF Government No. 605 dated 21 August 2001, which approved the Federal Target Scientific and Technical Program “*Research and Innovation in Priority Areas of Scientific and Technical Development*” for 2002 – 2006.

Regulation of RF Government No. 613 dated October 17, 2006, which approved the Federal Target Program “*Research and Innovation in Priority Directions of Development of the Scientific and Technological Complex of Russia for 2007 – 2012*”.

Regulation of RF Government No. 997 dated 13 August 1996.

Resolution No. 1 of the Federal Statistics Service dated January 17, 2005

Rules of Protection of Trunk Pipelines adopted by Order of Deputy Minister of Fuel and Energy No. 9 dated 24 April 1992.

State Report of the Ministry of Natural Resources of the Russian Federation “*On Condition of Environment in the Russian Federation and its Protection in 2005*”.

State Report of the Ministry of Natural Resources and Ecology of the Russian Federation “*On Condition of Environment in the Russian Federation and its Protection in 2007*”.

Tax Code of the Russian Federation (Part I, adopted by the Federal Law No. 146-FZ of July 31, 1998, and Part II, adopted by the Federal Law No. 117-FZ of August 5, 2000 as amended and supplemented).