

MunEM:
Sustainable energy management on municipal level

WP 2: Energy policy and economical framework

Report 1:
**Legal situation and regulatory framework in
Kaliningrad Oblast**

Coordination by

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1 Summary

The following report includes selected items of the legal and regulatory framework in Kaliningrad Oblast, particularly referring to the following key fields:

- organisation of the municipal utility sector
- regulatory framework and energy tariff setting
- system of social assistance and housing allowances
- energy use in residential buildings
- administration, maintenance and refurbishment of multi-family buildings
- energy use in public buildings and properties
- promotion of distributed generation and renewable energy sources

The report shows that in some areas like e.g. tariff setting or energy efficiency standards for buildings promising legal and regulatory framework conditions have been enacted in recent years or are currently under development, but in other areas these still have to be developed (e.g. energy audits, energy management, support for renewable energy sources for electricity and heat supply). The findings of this report have been translated into detailed policy recommendations for optimization of the legal and regulatory framework which have been compiled in a separate report (cf. MunEM WP2 Report *Findings of policy monitoring and proposals for optimization*).

2 Preface

The EU co-financed Interreg IVB project MunEM aims at promoting sustainable municipal energy management in Kaliningrad Oblast. The objectives of Work Package 2 of the MunEM operation are

- to assess existing regulatory and legal framework conditions in key areas of municipal housing and utility sector relevant for the project
- to develop policy recommendations for optimization of the legal and regulatory framework in these key areas
- to assess existing financing instruments for energy efficiency measures and to provide recommendations for their further development.

The following report assesses existing regulatory and legal framework conditions in the following key areas of municipal housing and utility sector:

- organisation of the municipal utility sector
- regulatory framework and energy tariff setting
- system of social assistance and housing allowances
- energy use in residential buildings
- administration, maintenance and refurbishment of multi-family buildings
- energy use in public buildings and properties
- promotion of distributed generation and renewable energy sources.

The report complements the MunEM Report “*First assessment of existing structures in energy policy*” which has been elaborated under Work Package 1 and which

includes a general description of the energy sector, key actors and key legislation in the energy sector, particularly with regard to energy efficiency.

Both reports have been elaborated under the leadership of *Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) GmbH* corresponding author being

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The *Housing Initiative for Eastern Europe (IWO e.V.)* took responsibility for preparing chapter 7 of the report.

The following project partners contributed to the report:

Government of Kaliningrad Oblast, Communal Service Department

Kaliningrad Regional Energy Efficiency Centre

Municipality of Mamonovo

Municipality of Svetlyj

German Federal Ministry of Finance (Lead partner)

Ministry of Science, Economic Affairs and Transport, Schleswig-Holstein

Investment Bank Schleswig-Holstein, Energy Agency

Municipal Utility Company Stadtwerke Lübeck

The findings of the report are based on questionnaires, interviews with project partners and other stakeholders in Kaliningrad Oblast (KO), and complementary inquiries of primary and secondary sources. The findings have been translated into detailed policy recommendations for optimization which have been compiled in a separate report (cf. MunEM WP2 "*Findings of policy monitoring and proposals for optimization*"). Issues dealing with financing of municipal energy efficiency measures are covered by a separate report elaborated under MunEM WP2 ("*Assessment of existing financing instruments and proposals for their further development*").

3 Organisation of the municipal utility sector

3.1 Overview

To perform their multiple utility functions, municipalities in KO have typically set up special 100% municipally owned companies responsible for the management, operation and maintenance of technical installations, buildings, equipment and municipal property.

- Municipal DH (DH) enterprises (*teploset*) are responsible for operation and maintenance of DH plants and networks as well as building substations.
- Municipal water supply and companies (*vodokanal*) are responsible for water supply, waste water and sewage treatment.

- Municipal utility and service companies are responsible for street lighting, waste removal and disposal, public baths, street and park maintenance.
- Municipal housing maintenance companies are responsible for maintenance for municipally owned buildings, maintenance and installations for heating, cold and hot water in residential buildings, 0.4 kW electric network, electric building installations.

In smaller communities integrated *municipal utility and service companies* provide multiple services. The vast majority of enterprises that provide housing and municipal utility services in the municipalities have the legal status of a *unitary enterprise* (German: *Unitarunternehmen*)¹.

3.2 Public utility enterprises in Svetlyj and Mamonovo

In *Svetlyj* there exist 4 municipal unitary enterprises which are responsible for the provision of municipal utilities in the town of *Svetlyj*.

- *Svetlovskaja Teploset* for heat and hot water supply
- *Svetlovskij Vodokanal* for water supply, waste water and sewage treatment
- *Upravlajutschschaja kompanija* for administration and maintenance of buildings
- *Svetlovskoje blagoustrojstwo* for streetlighting, waste removal, park maintenance

3 municipal unitary enterprises provide services to the communities of the urban district of *Svetlyj*.

- *Teploredprijatie* (heat and hot water supply)
- 2 municipal utility and service companies for water supply and wastewater treatment, streetlighting, administration and maintenance of buildings, waste removal etc.) each covering different communities of the urban district.

In *Mamonovo*, two municipal unitary enterprises are responsible for the provision of municipal services for the urban district:

- The municipal housing and communal service company *Mamonovskoje PZhKX* is responsible for central heat and hot water supply, maintenance and repair of heat boilers and substations, maintenance and repair of housing stock, water supply and wastewater etc.
- The second municipal unitary enterprise “*Tschistota*” is responsible for streetlighting, waste management and other services.

3.3 Organisation of heat supply in Svetlyj and Mamonovo

94% of residential buildings in *Svetlyj* are connected to the DH network. The municipal unitary enterprise *UMP Svetlovskaja Teploset* is responsible for heat and hot water supply in the town of *Svetlyj*. The enterprise is a commercialized entity with

¹ The *Russian Civil Code* defines the unitary enterprise as a commercial organisation not endowed with the ownership rights over the enterprise's assets. Instead the enterprise manages the assets on behalf of the owner (e.g. municipality) under the right of economic management. Hence, heat distribution networks and substations are property of the municipality being operated by municipal enterprises. Responsibility for efficient use of these assets is quite vague. Municipal enterprises are neither the owners of the operated assets, nor the party that benefits from maximizing operating profits: Under the existing legislation all the earned profits are to be transferred to the municipal budgets.

separate accounts and bookkeeping. No subsidies from municipal or regional budgets were formally envisaged for 2007. The municipal unitary enterprise *Teplopredpriyatie* provides heat and hot water to the rural communities belonging to the urban district of *Svetlyj*.

UMP Swetlovskaja Teploset buys the bulk of heat supplied to the customers from the *GRES-2* plant in *Svetlyj* which is owned and operated by the regional electricity supply company *OAO JSC Jantarenergo* (cf. *MunEM WP 1 Report "First Assessment of existing structures"*). This plant, however, is technically obsolete with low efficiency rates. The plant uses mazut (a type of heavy fuel oil) and is operated mainly during the heating period. It did not produce any electricity in the recent years.

The sales prices for heat from *GRES-2* are regulated by the *Service for Public Regulation of Prices and Tariffs in Kaliningrad Oblast (SPRPT)*. There is a uniform heat wholesale price for heat produced in the CHP and heat plants owned by *OAO Jantarenergo* amounting to 721 RUR/Gcal (17.26 €/MWh) (excl. VAT)².

In the small rural town of *Mamonovo* several smaller boilers and block stations supply heat and hot water to single buildings or small groups of buildings. At total, there are 8 boiler houses fired with coal.

3.4 Billing and collection procedures

3.4.1 Overview

According to the existing legislation, direct energy supply contracts concluded between individual households and municipal utility and service enterprises are possible in two cases:

- single family buildings (detached buildings)
- multi family buildings where the homeowners have selected the model of direct administration of the building (cf. below chapter 7)

According to the *Federal Housing Code of the RF* those organisations responsible for administration of multi family buildings are responsible to provide the municipal utilities to the individual consumers and conclude contracts with the respective utility providers and supply companies. Thus, in many cases the municipal housing management enterprises being responsible for administration and maintenance of the housing stock serve as intermediaries between the utility providers and the individual consumers. These intermediaries are normally responsible for invoicing the consumers for heat, hot water, and other utilities.

Regarding heat and hot water supply, these supply contracts normally include the following elements:

- period and scope of service provision
- maximum heat load
- normative technical losses
- other technical parameters (e.g. pressure, temperature profile etc.)

² 1 Gcal = 1.163 MWh, 1 € = RUR 35.91. *OAO Jantarenergo* is a vertically integrated regional electric power utility purchasing, producing, transmitting, distributing and selling electricity in KO. The company is currently under restructuring. Besides electricity, *Jantarenergo* produces heat in the CHP plants *GRES-2 in Svetlyj* and *Gusev* and several heat only boilers (HOB) in the city of *Kaliningrad*.

- accounting and payment procedures
- tariffs

3.4.2 Billing and collection procedures in the heating sector of Svetlyi and Mamonovo

In *Svetlyj* the municipal DH company *UMP Swetlovskaja Teploset* bills the households through the municipal housing management company *MUP Upravlajutschschaja kompanija* (German: *Verwaltungsgesellschaft*) according to the respective supply contracts. Hence, the municipal housing management company serves as an intermediary and settles billing and collection of consumer payments through a special accounting centre. The DH utility invoices the municipal housing management company according to the existing norms of consumption or the actual amount of services provided. The municipal housing management company divides this amount by the number of housing units in its jurisdiction and bills the consumers accordingly.

Heat and hot water consumption of individual apartment owners is either accounted on the basis of heat metering registrations or calculated by housing management companies based on consumption norms (e.g. property's floor space, number of tenants or amount of hot water consumption; cf. chapter 6.3).

In cases where the apartment owners of multi family buildings have established a homeowners' association for administration and management of their building, or where they select a specialized housing management company, billing and payments are settled through these organisations (cf. subchapter 6).

Direct billing is possible in those cases where direct contracts between utility providers and end users exist:

- single family houses
- direct administration of a multi family buildings by the owners.

Besides to household customers, the DH utility also supplies heat to industrial, commercial and public customers with whom the company has direct contracts and collect money themselves.

In the case of *Mamonovo*, the municipal unitary enterprise *MKUP Mamonovskoje PZhKX* performs both heat supply and intermediary functions.

3.4.3 Selected legal acts

The following legal acts provide the overall legal framework for the municipal utility sector (with focus on heat and electricity) and regulate the contractual relationship between heat energy suppliers and consumers.

- The *Civil Code* of the RF contains general provisions on the energy supply contracts, quantity and quality of energy, the obligations of energy suppliers and consumers, payments for energy, subcontracting, etc.
- The *Federal Housing Code* of the RF.
- Urban Planning Code of the RF (2004)
- Government Regulation No. 307 "On the procedure of providing municipal utilities to the residents" (23 May 2006).

4 Regulatory framework and energy tariff setting

4.1 Regulatory authorities at federal, regional and municipal level

Regulatory functions in network industries generally include the following:

- Protection of competition and non-discriminatory network access
- Economic regulation (pricing and tariff setting)
- Technical regulation (securing a reliable and safe technical operation, environmental protection).

The subsequent chapter deals exclusively with the second of these regulatory functions (pricing and tariff setting).

Prices and tariffs for gas, electricity, heat and hot water are regulated by the state. In the RF, regulatory functions are shared between federal, regional and municipal authorities.

During 2003-2004 the *Federal Tariff Service (FTS)* was established as a subordinate governmental organization authorized to exercise control in price and tariff regulation for goods and services. This regulatory authority is subordinated directly to the government and financed from the federal budget.

The *Service for Public Regulation of Prices and Tariffs in Kaliningrad Oblast (SPRPT)* (former *Regional Tariff Commission*) performs regulatory functions at the regional level.

Also the *municipalities* perform regulatory functions in the municipal housing and utility sector. Municipalities have regulatory functions in the heat sector and determine prices for water and sewage tariffs.

The Federal Law No. 41-FZ “*On state regulation of tariffs for electric and thermal energy in the RF*” contains detailed provisions on the regulatory responsibilities of the different actors. Federal Law No. 35-FZ and Federal Law No. 36-FZ specify the regulatory tasks and responsibilities in the electricity sector.

4.2 Tariff setting in the electricity sector

4.2.1 Responsibilities

Table 1: Regulatory responsibilities in the electricity sector

Regulatory authority	Key regulatory responsibilities in the electricity sector
RF Government	<ul style="list-style-type: none">• defines basic principles and methods of pricing in the area of regulated prices (tariffs)• approves rules of government regulation of prices (tariffs)• sets tariff limits for final customers (incl. households)

	<ul style="list-style-type: none"> • sets marginal for tariff increases for final consumers
Federal Tariff Service (FTS)	<ul style="list-style-type: none"> • sets the tariffs or (lower and/or upper limits on the tariffs sold by generators in the wholesale market, except electricity sold at unregulated prices • sets (lower and/or upper) limits on the tariffs sold by generators in the wholesale market at unregulated prices • sets tariffs for services of organized trade operations in the electricity wholesale market and for services of operational dispatch supervision • sets tariffs for electricity transmission services and their lower/or upper limits • sets lower and/or upper limits on the tariffs for services of electric power transmission through power distribution networks • sets (lower and/or upper) limits on the tariffs for electricity supplied to final customers, including the tariffs for electricity sold at unregulated prices • sets tariff corridors (maximum/minimum caps) for end users • sets marginal for tariff increases for final consumers • sets prices for independent power producers* • sets amortization periods for renewable energy plants*
Service for Public Regulation of Prices and Tariffs for Kaliningrad Oblast (SPRPT)	<ul style="list-style-type: none"> • sets prices for electricity sales from combined heat and power plants • sets tariffs for services related to the transmission of electricity via distribution networks at distribution level (within the respective tariff limits set by the FTS • sets mark-ups for the guarantee suppliers (providers of the last resort) • sets retail electricity tariffs for final consumers within the tariff corridors determined by the FTS (except electricity sold at unregulated prices) • sets the fee for technical connection to distribution networks and/or standardized tariff rates • sets prices for connecting customers to electricity grids • approves feed-in tariffs for certain types of independent power producers (IPP) selling electricity to the grid. In general, these prices have to be negotiated on a commercial basis between the IPP and the regional electricity distribution company.

Sources:

RF Federal Law No. 41-FZ (10.3.1995) "On the regulation of electricity and heat tariffs in the RF" (as amended on 04.11.2007)

RF Federal Law No. 210-FZ (30.12.2004) "On principles for the regulation of tariffs of municipal organizations" (as amended on 26.12.2005)

RF Federal Law No. 35-FZ (26.3.2003) "On the electric power industry" (as amended on 04.11.2007)

** According to the RF Federal Law No. 28-FZ "On energy saving" (as amended on 18.12.2006).*

4.2.2 Tariff regulation methodologies

The electricity supply industry in the RF is presently in a transitional period to a liberalized and competitive electricity market. From 01.01.2011, prices on the wholesale power market shall be fully liberalized and all electricity (except electricity supplied to households) will be sold at competitive prices. Tariffs for households, as well as electricity transmission and distribution tariffs are going to be subject to state regulation also beyond of 2011.

Due to its small size and isolated character, KO has so far been regarded as a region where competition in the electricity sector is only possible to a limited extent (retail competition, no wholesale competition). The region has therefore not been included into any of the wholesale market price zones. Restructuring of the regional vertically integrated electricity supply utility *Jantarenergo* has been generally postponed and the process of market opening in KO faces some delay compared to other regions in the RF. *Jantarenergo* is currently being restructured, vertically unbundled and shall be partly privatized (cf. *MunEM WP 1 report "First assessment of existing structures"*).

In the electricity distribution sub-sector, a transition from the traditional system of "cost plus" regulation where regulated entities pass on all costs and recover an "economically justifiable" return as determined by the regulator, to a new regulatory system based on a return on capital employed methodology (RAB) combined with an incentive regulation started on 01.07.2008. RAB guarantees each distribution company a certain IRR (e.g. 11% annually, which enables new investments; tariffs are defined for 5 years and those able to be more efficient will improve their profits. For the next 5 year period, the regulator defines new tariffs from the most efficient production levels achieved by companies during the last regulatory period (Remes 2007:20). The respective *Guidelines for the Calculation of the Rate of Return on Invested Capital* has been approved by the FTS in March 2008.

4.2.3 Level of electricity tariffs

In absolute terms, the level of electricity prices in KO is fairly below EU average. In 2007, the average electricity tariff for households amounted to 1.56 RUR/kWh (0.043 €/kWh³) (incl VAT). The average electricity tariff for public/budget organisations and for industrial customers amounted to 2.21 RUR/kWh (0.062 €/kWh) (incl. VAT). There are still prevailing substantial cross-subsidies favouring household customers.

Table 2 provides an overview of the actual electricity tariffs (2008):

³ 1 € = RUR 35.91

Table 2: Selected electricity tariffs in Kaliningrad Oblast (2008)

Nr.	Customer group	Unit	Voltage level		
			≥110kV	20-1 kV	≤ 0.4 kV
1	2	3			
1	Industrial customers and equated non-industrial consumers (including public sector); excl. VAT				
	Single-rate tariff	RUR/kWh	1.5	1.73	2.33
	Double-rate tariff				
	Capacity	RUR/kW/month	3.344	3.973	x
	Energy	RUR/kWh	0.82	0.83	x
2	Households and equated customers, connected load ≤15kW; incl. VAT				
2.1	<i>Urban households in buildings with gas stoves</i>				
	Single-rate tariff	RUR/kWh	x	x	1.79
	Day/night tariff				
	7.00-23.00	RUR/kWh	x	x	1.86
	23.00-7.00	RUR/kWh			1.34
2.2	<i>Urban households in buildings with electric stoves and electric heating appliances and rural households</i>				
	Single-rate tariff	RUR/kWh	x	x	1.253
	Day/night tariff				
	7.00-23.00	RUR/kWh	x	x	1.30
	23.00-7.00	RUR/kWh			0.94
2.3	<i>Customers equated to household with gas stoves (cf. 2.1)</i>				
	Single-rate tariff	RUR/kWh	x	1.65	1.79
	Day/night tariff				
	7.00-23.00	RUR/kWh	x	1.72	1.86
	23.00-7.00	RUR/kWh	x	1.24	1.34
2.4	<i>Customers equated to urban households with electric stoves and electric heating appliances; and rural customers (cf. 2.2)</i>				
	Single-rate tariff	RUR/kWh	x	1.16	1.253
	Day/night tariff				
	7.00-23.00	RUR/kWh	x	1.20	1.30
	23.00-7.00	RUR/kWh	x	0.87	0.94

1 € = RUR 35.91.

Source: Order of the Service for Public Regulation of Prices and Tariffs in Kaliningrad Oblast No. 42-01/e/07 (17.11.2007).

An analysis of consumer price growth indices and electricity tariff growth rates for households 2002-2006 shows that electricity tariff growth has been fairly below the consumer price index growth in KO (Delegation of the European Commission to Russia/COWI Consortium 2007a).

In order to address the problem of increasing capacity shortages and enormous investment needs in the generation and distribution sector, in 2006/2007 the Federal Government initiated changes to the tariff policy. The regulated retail electricity prices

were set to grow by 11 percent in 2007, instead of the previous forecast of 7.5 per cent.

4.2.4 Perspectives for Kaliningrad Oblast

Article 27 of the Federal Law No.35-FZ “*On electric power industry*” which has been amended on November 4, 2007, includes general provisions on government regulation in an environment of restricted competition or in the absence of competition. In 2007, the RF Government adopted Resolution No. 951 (29.12.2007) “*On amending certain RF Government resolutions in connection to defining the particularities of functioning of the wholesale electric power (capacity market during the transition period within territories, which are not included in prices zones*”. These amendments determine the method of sale and purchase of electric power within territories that were not included into price zones of the wholesale market, in particular KO and others.

The resolution introduces amendments to the following legal acts:

- Resolution No. 643 (24.10.2003) “*On the rules of the transition wholesale power (capacity) market*”.
- Resolution No. 109 (26.02.2004) “*On formation of prices for electric and thermal power in the RF*”
- Resolution No. 530 (31.08.2006) “*On approving the rules of operation of retail electricity markets during the transition period of electricity industry restructuring*”

(cf. *MunEM WP1 Report “Assessment of existing structures*).

4.3 Tariff setting in the gas sector

4.3.1 Responsibilities

Table 3: Regulatory responsibilities in the gas sector

Regulatory authority	Regulatory responsibilities in the gas sector
RF Government	<ul style="list-style-type: none"> • defines basic principles and methods of pricing in the area of regulated prices (tariffs)
Federal Tariff Service (FTS)	<ul style="list-style-type: none"> • approves the methodological guidelines for calculation of regulated gas prices • sets annual prices for natural gas extracted and supplied by <i>Gazprom</i> and its affiliates • approves and sets natural gas wholesale prices • sets tariffs on natural gas transmission services and services of gas transportation through natural gas distribution networks.
Service for Public Regulation of Prices and Tariffs for Kaliningrad Oblast (SPRPT)	<ul style="list-style-type: none"> • sets retail tariffs for households as well as for budget financed entities (prices for natural gas, associated gas and liquefied gas are not allowed to surpass maximum tariff caps fixed by the FTS)

4.3.2 Level of gas tariffs

The gas prices for 2008 were set by Order No. 403-e/1 of the RF Federal Tariff Service. The average regulated wholesale gas prices in 2008 amounts to RUR 1,690 (47.06 €) per 1,000 cbm (excl. VAT) for non-residential customers and RUR 1,290 (35.92 €) per 1,000 cbm for residential customers.

In 2008, there were 15 regionally differentiated price groups. KO has been placed in one of the highest price categories (10-A).

Table 4: Regulated prices of natural gas in pricing zone 10-A (Kaliningrad Oblast), excluding VAT (VAT=18%) (*).

Unit	Non-residential				Residential	
	2007	Maximum non-residential price**	2008	Maximum non-residential price ¹	2007	2008
RUR/1,000 m ³	1,673	2,677	2,091	3,137	1,196	1,495
€/1,000 m ³ (1 € = RUR 35.91)	46	75	58	87	33	42

(*) Regulated price paid by local distribution companies and major consumers that buy gas from Gazprom and its affiliates

** The maximum price can be applied to new customers and customers buying gas above the volumes contracted.

Source: <http://www.eegas.com/zones.htm>.

Below a selection of household gas prices applied by the Federal State Unitary Enterprise *FGUP Kaliningradgasifikazija* which is a subsidiary of *Gazprom* and supplies gas to the customers in KO.

Table 5: Selected retail gas prices for household customers in KO (2008)

Purpose	Currency (RUR)	Currency (€)
For cooking and hot water supply		
<i>According to consumption norms</i>	3.14 RUR/m ³	0.09 €/m
<i>Metered:</i>	3.14 RUR/m ³	0.09 €/m ³
Heating of buildings		
<i>According to consumption norms</i>	1.5 RUR/ m ³	0.04 €/
<i>Metered:</i>	n/a	n/a
For cooking, heating and hot water (total)		
<i>According consumption norms</i>	n/a	n/a
<i>Metered</i>	2.02 RUR/ m ³	0.06 €

1 € = RUR 35.91.

Source: KREEC

Historically, in order to protect domestic industry and customers, gas tariffs have been set at levels which have not allowed *Gazprom* to make a profit on domestic sales; as a result *Gazprom* has in effect subsidized the domestic sector on the back of its export business. Consequently, *Gazprom* claims that it is not profitable for the company to supply gas to the region of Kaliningrad. In 2006, estimated annual losses amounted to 8.4 mln. US \$. According to enterprise representatives, transit costs and gas transport system costs are not sufficiently accounted for.

The level of household tariffs is still fairly below economically justified costs and there prevail considerable cross-subsidies. Some categories of consumers enjoy certain privileges in the form of tariff discounts which are assigned by federal legislation.

In November 2006, the RF Government took the decision to stepwise increase domestic natural gas prices for industrial consumers to European levels by 2011. Compared to 2007, gas prices increased on average by 13% in 2008.

A new domestic gas price system – netback pricing – tying the level of domestic prices to that of export prices has been introduced in 2006. This provided an increase of domestic gas prices by 15 per cent in 2007. Annual growth rates in 2008-2010 shall amount to 25-27 per cent (Remes 2007, RAO EES 2008).

4.3.3 Liquefied gas

In *Svetlyj*, the price for liquefied gas for end users amounts to 31.74 RUR/ m³. In *Mamonovo*, the price for liquified gas for end users is between 13.92 and 18 RUR/kg.

4.4 Tariff setting in the DH sector

4.4.1 Responsibilities

In the heat sector regulatory functions are shared between federal, regional and municipal authorities.

Table 6: Regulatory responsibilities in the DH sector

Regulatory authority	Regulatory responsibilities in the DH sector
RF Government	<ul style="list-style-type: none"> • defines basic principles and methods of tariff regulation • sets tariff caps • sets maximum tariff growth caps for each region • sets price corridors for heat produced in co-generation mode • sets price corridors for heat not produced in co-generation mode
Federal Tariff Service (FTS)	<ul style="list-style-type: none"> • sets (lower and/or upper) limits on the tariffs for heat produced by the power plants generating electricity and heat in cogeneration mode • sets prices for heat supplied by regional power utility companies (e.g. <i>Jantarenergo</i>). • sets (lower and/or upper) limits on the tariffs for heat, with the exception of heat produced by power plants generating electricity and heat in cogeneration mode • sets heat tariff growth caps for each region in order to control inflation (USAID et al. 2007) • sets minimum and maximum caps for retail heat prices while the final price level is approved by the regional regulatory authority (SPRPT)
Service for Public Regulation of Prices and Tariffs for Kaliningrad Oblast (SPRPT)	<ul style="list-style-type: none"> • sets tariffs for heat transmission services • sets the tariffs for heat, except heat produced by power plants generating electricity and heat in cogeneration mode within the respective tariff limits set by the FTS • sets the tariffs for heat produced by power plants generating electricity and heat in cogeneration mode within the respective tariff limits set by the FTS • sets heat tariffs (except co-generated heat) in the frame of the tariff corridors • sets heat tariffs for co-generated heat in the frame of the tariff corridors • sets heat prices for industrial heat plants • approves heat tariffs for end users
Municipalities	<ul style="list-style-type: none"> • approve the heat tariffs for households in accordance with the SPRPT • may set tariffs above/below/ the tariff level set by the SPRPT • may be authorized by the laws of a constituent entity of the RF to perform government regulation of tariffs for heat (except heat produced in power plants generating electricity and heat in cogeneration) distributed directly by the sources of heat ensuring heat supply to customers located in the same municipality

	<ul style="list-style-type: none"> • may set heat tariffs above or below the level fixed by the <i>SPRPT of Kaliningrad Oblast</i>. In both cases the difference has to be compensated for by the municipal budget. The household tariffs are not allowed to surpass the level determined by the FTS • shall set the mark-ups on the tariffs for electricity and heat supplied by power supplying entities to the customers
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Sources:

RF Federal Law No. 41-FZ (10.3.1995) “On the regulation of electricity and heat tariffs in the RF” (as amended on 04.11.2007)

RF Federal Law No. 210-FZ (30.12.2004) “On principles for the regulation of tariffs of municipal organizations” (as amended on 26.12.2005)

RF Federal Law No. 35-FZ (26.3.2003) “On the electric power industry” (as amended on 04.11.2007).

4.4.2 Heat cost and tariff calculation methodologies

So far, heat tariffs for final consumers have been usually calculated according to the formula “costs plus limited profit”. It is envisaged to transform the regulatory system from traditional “cost plus” regulation and to include incentive based regulatory elements. Incentive regulation, which is applied by several other transition countries, means that tariff calculation is based on *price* (or sometimes *revenue*) *caps*: Generally, incentive regulation restricts changes in prices that the regulated company can charge and allows it to temporarily retain extra profits from efficiency improvements. This gives the company an incentive to reduce costs, but allows prices and revenues to exceed costs temporarily.

According to existing legislation, heat generation and distribution costs have to be unbundled, and heat suppliers are eligible for the investment component of the price to partly finance investment programs coordinated with the municipality.

Cost and tariff calculation methodologies are determined by the following legal acts:

- Federal Law No. 210-FZ “On the principles of tariff regulation of the organizations of the municipal sector” (30 December 2004). This law came into force on January 1, 2006. It sets out the general objective of “cost covering municipal utility services”. The law determines different cost and tariff calculating methodologies for the housing and utility sector:
 - Determination of fixed tariffs
 - Determination of maximum tariffs
 - Indexation of tariffs

These methodologies basically apply to water supply, waste water removal/treatment and waste management. Article 15 contains provisions referring to the heat and electricity sector.

- Federal Law 41-FZ “On state regulation of tariffs for electric and thermal energy in the RF” (14.04.1995)
- Resolution of the Government of the RF No. 109 “On price formation for electric and thermal energy in the RF” (26.02. 2004).

There are basically two tariff calculation methodologies presently applied in the heat sector. In practice, a combination of both is applied:

- Calculation of economically justified costs within the frame of respective tariff limits.
- Determination of regulated surcharges in addition to the tariffs for customers in order to finance municipal investment and infrastructure development programmes. However, before 2009 the tariffs are not allowed to surpass the respective federal and regional tariff caps what makes application of respective surcharges very difficult.

According to information provided by the *SPRPT of Kaliningrad Oblast*, price adjustment formula (price escalators) are used to some extent in order to adjust tariffs to fuel cost increases.

Further legal acts which have to be considered are:

- Governmental Regulation No. 306 “*On the acceptance of regulations for determining the consumption norms for the municipal utilities*” (23 May 2006) (VI).
- Governmental Regulation No. 307 “*On the procedure of providing municipal utilities to the residents*” (23 May 2006).

4.4.3 Tariff setting procedure

The calculated tariffs are approved by the *SPRPT of Kaliningrad Oblast* “at economically justified level”. This means, that the authority can reduce the proposed tariff.

Based on the heat tariffs approved by the *SPRPT*, the municipalities determine the effective level of heat tariffs to be paid by the final consumers. The municipalities may reduce the tariffs for residents’ supply of space heating and hot water supply and compensate the balance from the municipal budget. Such tariff rebates are going to be phased out by 2009 and the customers are expected to cover 100% of the utility price.

Payments by residents for heat and hot water are based either on real consumption (if metering devices are installed) or on consumption norms. This means that residents pay for fixed consumption of energy for space heating and hot water independent of real consumption. Consumption is calculated on the basis of normative values for space heating and hot water. The procedure of determining these consumption norms is specified by Governmental Regulation No. 306 “*On the acceptance of regulations for determining the consumption norms for the municipal utilities*” (23 May 2006).

According to the Governmental Regulation No. 307 “*On the procedure of municipal utilities to the residents*”, municipalities set minimum comfort requirements, and if the quality of service falls below these, customers may refuse paying for this service.

Below the procedure of calculating heat tariffs for end users in the MunEM pilot community *Mamonovo* is given as an example:

Table 7: Procedure of calculating the average heat tariff for final customers in Mamonovo (2007) (including VAT)

Average heat tariff (approved by SPRPT of Kaliningrad Oblast)	1,447.00 RUR/Gcal	34.65 €/MWh	
Maximum level to be paid by the households (85% from approved heat tariff)	1,229.95 RUR/Gcal	29.45 €/MWh	
Invoiced to residents	1,229.95 RUR/Gcal	29.45 €/MWh	
Normative heat consumption	0.0183 Gcal/m ² /month		If monthly payments If payments during heating period
	0.0366 Gcal/m ² /month		
Normative hot water consumption	0.00527 Gcal/person/day		
Heat tariff	22.51 RUR/m ² /month	0.63€/ m ² /month	If monthly payments If payments during heating period
	45.02 RUR/m ² /month	1.25€/ m ² /month	
Hot water tariff	6.48 RUR/person/day	0.18€/person/day	

1 Gcal = 1.163 MWh, 1 € = RUR 35.91.

Source: Municipality of Mamonovo

Commercial and public customers pay mostly according to real consumption registered by heat meters.

4.4.4 Structure and level of heat and hot water tariffs in KO

In 2007, the average heat tariff in KO amounted to 890 RUR/Gcal (21.31 €/MWh) (without VAT). There is a large difference between the municipality with the lowest tariff level (645 RUR/Gcal) (15.44 €/MWh) and that with the highest tariff level (1,740 RUR/Gcal) (41.67 €/MWh). This can be explained by different types of fuel, length and losses of DH grids.

In 45.5% of municipalities in KO the households pay less than 100% of the approved heat tariff and there are heat subsidies paid from the municipal budgets. However, from 2009 it is envisaged that the consumers shall cover 100% of the public utility costs

4.4.5 Structure and level of heat and hot water tariffs in Svetlyj

The bulk of heat supplied to the consumers by *UMP Swetlovskaja Teploset* is purchased from *Svetlyj CHP plant (GRES-2)* which is a subsidiary of the electricity supply company *OAO Jantarenergo*. The heat tariffs include principally all expenses of the municipal DH utility (purchased heat from GRES-2, depreciation, maintenance, operation, salaries, taxes, profit, and investment surcharge). However, the tariff caps set by the Federal Tariff Service FTS are quite restrictive and in fact investment surcharges have not been included so far.

Below an overview of the heat tariff calculation structure in *Svetlyj* is provided:

Table 8: Heat tariff calculation scheme in Svetlyj (since 2008)

I Heat sales

1	Purchased heat	Thsd. Gcal
1.1	Transmission losses (normative losses 15%)*	Thsd Gcal.
1.2	Heat sales	Thsd. Gcal

II Costs

1	Costs of purchased heat	Thsd. RUR
2	Heat distribution costs	Thsd. RUR
2.1	Costs for heat transport and distribution (total of 2.1.1 – 2.1.10)	
2.1.1.	<i>Electricity consumption for technical purposes</i>	Thsd. RUR
2.1.2	<i>Water preparation (to compensate for water grid losses)</i>	Thsd. RUR
2.1.3	<i>Material for maintenance and repair</i>	Thsd. RUR
2.1.4	<i>Depreciation (heat pipes 12,5% p.a., buildings 2,5% p.a.)</i>	Thsd. RUR
2.1.5	<i>Fault clearing service (labour costs)</i>	Thsd. RUR
2.1.6	<i>Wages for technical staff (labour costs)</i>	Thsd. RUR
2.1.7	<i>Social expenses</i>	26.2%
2.1.8	<i>Further direct costs (insurance costs, replacement parts, fuel and lubricants, etc.)</i>	Thsd. RUR
2.1.9	<i>Workshop expenses (material, overhead)</i>	Thsd. RUR
2.1.10	<i>Administration costs</i>	Thsd. RUR
2.2	Surcharge for profit and risk (Maximum 10% from 2.1)	Thsd. RUR
-	Calculated tariff (1 Gcal)	RUR
2.3	Investment programme (from 2008)	Thsd. RUR
-	Investment surcharge (per Gcal)	RUR
2.4.	Total	Thsd. RUR
-	Calculated tariff including investment surcharge	RUR

* Real losses amount to 42%

Source: Municipality of Svetlyj

The sales price for heat from the *Svetlyj GRES-2 plant* is set by the *SPRPT of Kaliningrad Oblast*. There is a uniform heat price for heat produced in the GRES-2 and all other heat generation plants owned by *OAO Jantarenergo* which in 2007 amounted to 765.6 RUR/Gcal (18.33 €/MWh) (excl. VAT). In 2007, heat production cost of the CHP plant amounted to 1.770 RUR/Gcal (42.93 €/MWh) (cf. Delegation of the European Commission to Russia/COWI Consortium 2007c).

The *SPRPT of Kaliningrad Oblast* only accepts normative losses to be included into the heat tariff amounting to 15%, although the real network losses are much higher (42%). The difference between normative losses and actual losses has to be covered by the municipal budget.

In 2007, the average heat tariff for final customers in *Svetlyj* amounted to 1,201.24 RUR/Gcal (28.77 €/MWh) (incl. VAT). The respective heat tariffs are the same for all customer groups (households, public sector and commercial sector).

Table 9: Heat tariffs in Svetlyj (excluding VAT)

	Unit	2003	2004	2005	2006	2007
Not metered	RUR/m ² /month					25.55
	€/ m ² /month					0.71
Metered	RUR/Gcal	722.53	744.53	836.68	836.68	1,018.85
	RUR/MWh	621.26	640.18	719,42	719,42	876,05
	€/MWh	17.30	17.83	20.03	20.03	24.40

1 Gcal=1.163 MWh

1 € = RUR 35.91

Source: *Delegation of the European Commission to Russia/COWI Consortium 2007c; own calculations*

When not metered, heat consumption is calculated per month and paid for 6 months. For example, in 2007 the tariff is 25.55 RUR/m²/month (0.71€/m²/month).

4.4.6 Structure and level of heat and hot water tariffs in Mamonovo

The actual average heat tariff in *Mamonovo* amounts to 1,447 RUR/Gcal (34.65 €/MWh) (incl. VAT); cf. Table 7.

5 System of social assistance in the municipal housing and utility sector

5.1 Overview

The social assistance system in the municipal utility and housing sector is generally in a transitional stage. The “traditional” system of social assistance included the following types of

- (a) tariff subsidies paid to the utility providers (including DH enterprises) and cross-subsidies
- (b) tariff discounts and in-kind benefits for special consumer groups (*l'goti*)
- (c) burden limits and income based housing allowances
- (d) social assistance payments to low income and vulnerable households.

In 2005, the RF Government launched several key reforms in this area. There is presently a transition towards full cost accounting and unsubsidized utility tariffs to be finalized by 2009. Since 2005, also the system of *l'goti* is being reformed and the system of income based housing allowances and social assistance payments effectuated. The following subchapters provide more detailed information on the different types of social assistance.

5.2 Direct heat subsidies from the municipalities to the DH companies and utility providers

In accordance with the Decision of the Government of the RF No. 541 (29.08.2005) “*On federal standards for payments of housing and municipal utilities*” the federal standard for household payments for housing maintenance and renovation as well as for provision of municipal utilities has been fixed at a level of 100% of economically justified costs. Direct subsidies to the suppliers of housing and municipal utility services are going to be phased out by 2009.

In 2007, in 45.5% of municipalities in Kaliningrad Oblast households paid less than 100% of the official heat tariff and in these cases there were applied special compensation payments from the municipal budgets. In *Mamonovo* households have to cover only 85% of the heat costs, 15% are covered by the municipality. In *Svetlyj*, the municipal decision-makers decided to formally phase out direct heat subsidies in 2007.

5.3 Cross-subsidies

Due to social reasons, substantial cross-subsidies still prevail in the electricity and gas sector, where tariffs for industrial consumers are higher than tariffs for the household sector despite the fact that distribution costs for residential consumers are usually higher than for industry. To a minor extent, cross subsidies can be found in the heating sector as well.

5.4 Poor enforcement of payment, limiting disconnection from DH

In the RF residents are protected by law against cut off of heat supply. In case of outstanding payments the heat supplier can only recover arrears by taking the matter to court. In case residents can prove no or low income DH company has to write off the debt.

5.5 Tariff discounts for privileged groups (*l'goti*)

The former system of privileges for special groups of residents (*l'goti*) has been gradually transformed since 2005. This system provided non-monetarized (in-kind) privileges and utility tariff discounts ranging from 50% to 100% to 12-16 different classes of privileged persons (e.g. pensioners, war veterans, handicapped persons, Chernobyl victims, military and police personell, war widows, persons decorated for acts of bravery, patriotism, and other great achievements) independent of income levels.

Several privileges (e.g. for military officers, veterans etc.) have been phased out since 2005. Social privileges (e.g. disabled persons and war veterans) and social compensations for residents were earlier accounted between the municipal authorities and the DH utility. Now, it is envisaged that direct payments are made to these residents who pay the “normal” tariff to the DH utility.

In the urban district of *Svetlyj* 9,747 households and 2,479 persons are eligible for such privileges (7% of the total number of residents). Payments are made directly to the households by the municipalities, but covered from the Oblast budget (transit item).

5.6 Burden limits and housing allowances

In accordance to the Decision of the Government of the RF No. 541 (29.08.2005) “On federal standards for payments of housing and municipal utilities” the share of household payments for housing and utility services shall not exceed 22% of the total household income⁴. If a household’s utility expenditures exceed this burden limit, the household is eligible for a housing allowance. The allowances are paid directly to the household by the municipalities, but covered from the Oblast budget (transit item).

In *Svetlyj* 1,343 households (i.e. 14% of all households within the urban district) receive housing allowances, in *Mamonovo* 311 households (i.e. 13 % of all households).

In the Oblast of Kaliningrad the respective numbers are 11,052 (7.1 %). In total, 80.1 mln. RUR were spent from the Oblast budget.

In *Svetlyj*, the respective payments to households from the municipal budget amounted to 12.07 mln. RUR in 2006, in *Mamonovo* 2.6 mln. RUR.

5.7 Tariff increase limits

According to the Resolution of the Government of the RF No. 109 (26.02.2004) „*On price formation in the area of electricity and heat in the RF*” annual tariff increases for public utilities are limited to 14% p.a.

⁴ The calculation is based on a complex procedure. Payments are based on a notional amount the household is “entitled” to spend. There are public utilities cost limits per 1 m² per month (maintenance and current repairs, heat supply, hot and cold tap water supply, sewage maintenance, electricity and gas supply) which are being applied to calculate the exact amount of allowances. The federal limit of public utilities costs is 41.6 RUR/m²/month and the federal limit of living area maintenance costs is 3.2 RUR/m²/month.

5.8 Social assistance for vulnerable and low income households

Besides the general burden limits (see above) local governments cover 50% of the public utility costs for vulnerable groups of the population such as retirees, families with many children, invalids etc. In *Svetlyj*, 814 low-income households (8% of all households) receive respective social assistance payments, which are fully covered from the Oblast budget. In the urban district of *Svetlyj* a municipal programme has been launched to support needy individuals. In 2007, 320,000 RUR have been spent from the municipal budget for implementation of the programme.

5.9 Affordability of utility and housing services for households

The affordability ratio for any particular utility service can be explained as the percentage of the expenses on that utility service in the total household expenses. A maximum ratio of 25% for all utility services covering electricity, heat, water supply and sanitation is suggested by Tepic/Frankhauser (2005). On average, housing and energy expenditures in total household income amount to 18 % in *Svetlyj* and to 7 % in *Mamonovo*.

5.10 Selected legal acts relevant for social assistance and housing allowances

- Housing Code of the RF
- Federal Law № 210-FZ (30.12.2004) *“On the principles of tariff regulation of the organizations of the municipal sector”*
- Government Regulation № 307 (23.05.2006) *“On the procedure of providing communal services to the population”*.
- Government Regulation № 306 (23.05.2006) *“On acceptance of methodology for estimation of tariffs and prices in the housing sector”*
- Government Regulation №. 541 (29.08.2005) *“On federal standards for estimation of public utility tariffs”*
- Government Regulation № 1 (05.01.1995) *“On limitation of electricity, heat and gas supply for consumers (i.e. companies and organizations) in case of non-payment for energy consumed”*
- Government Decree No. 761 *“On granting allowances for housing and municipal utilities”*.
- All-Union State Standard P 51617-2000 *“Public Utilities. General Technical conditions”*. The standard includes general technical public utilities requirements. This standard is applied by companies and organizations of housing sector.

6 Energy use in residential and public buildings

6.1 Energy efficiency standards for new buildings and major refurbishments

6.1.1 Overview

Construction norms in the RF are established at federal and regional level. Federal norms are divided into

- (a) Construction Norms and Specifications (SniPs)
- (b) State Construction Standards (GOST)
- (c) Code of Rules for Design and Construction (SP)

SniP documents generally contain normative prescriptive and performance requirements while GOST documents contain test protocols for measuring and reporting performance.

The State Committee on Construction, Architecture and Housing Policy (*Gosstroj Rossiï*) is responsible for developing construction norms and regulations.

The regional authorities develop their own regulatory documents called *Territorial Construction Norms* (TSN). Stringency of these norms has to comply with nation-wide requirements, but TSN offer more flexibility, e.g. in terms of building design, selection of building envelopes and engineering equipment. The TSN have to be approved and officially registered at the Federal Construction Committee. Federal construction norms are mandatory for seven years from the day of their adoption, and become recommendations afterwards (cf. USAID 2007:73).

6.1.2 Federal level

The Russian building codes have become increasingly strict. At federal level a “new generation” of building codes has been adopted since 2003, which were largely inspired by the experience of innovative TSN developments at regional level (particularly TSN 23-304-99 for Moscow, but also TSN from other regions like TSN 23-314-2000 Kaliningrad Oblast, others).

On federal level, the following codes and standards have been adopted:

- new code “*Thermal performance of buildings*” (SniP 23-02, adopted in 2003)
- new code of practice “*Design of thermal performance of buildings*” (SP 23-101)
- standard for indoor climate (GOST 30494)
- two new standards on building energy audits (GOST 31167, GOST 31168)
- a standard on the detection of concealed defects of building thermal insulation (GOST 26629)
- sections entitled “*Energy efficiency*” and “*Sanitary-epidemiological requirements*” in the frame of two new residential codes (SniP 31-01, SniP 31-02).

Info Box 1: The federal building code “Thermal performance of buildings” (SniP 23-02-2003)

The new building code provides major improvements compared to previous ones and combines several innovative elements:

- numerical values for required performance targets corresponding to international standards
- classification of new and existing buildings according to their energy efficiency
- stimulation of constructing buildings with better energy performance than required by the code
- mechanisms for identifying low-performance buildings and mandating necessary upgrades
- design guidelines for both prescriptive and performance-based compliance paths
- methods for oversight and enforcement (energy passports).

In selecting the level of thermal performance for a building, one has to observe code requirements of specific energy consumption by the building over the heating season in the range of 70-85 kJ (m²×°C×day) depending on the number of floors. Compared to the 2001 standards, the new code provides for an average 40% reduction of heat demand.

The code establishes two ways of compliance,

- a) a prescriptive path with thermal resistance values for individual building envelope elements.
- b) a performance based path with specific energy consumption targets for the entire building, allowing for tradeoffs in energy performance between the different building elements taking into account the heat supply system.

The choice between those paths is left to the owner/developer.

The new federal code does not only apply to new buildings and major refurbishments, but also to existing buildings with provisions for evaluating and monitoring thermal performance and energy parameters for design and operation. The code also sets up a **rating system** for buildings.

The code requires the performance of quality control for the thermal insulation for new buildings by means of **thermographic testing**, in accordance with GOST 26629.

The new code has also a section on building **energy audits** intended to determine the energy efficiency of a building and to assess measures for increasing energy efficiency.

The RF building codes follow generally the approach set out by the EU Directive 2002/91/EC on Energy Performance of Buildings (e.g. holistic/performance-based approach, energy certification etc.).

Cf. Matrosov/Goldstein (2004): Advances in energy codes in Russia and Kazakhstan. Harmonization of Codes with European Standards; Osipov/Matrosov 2006; Matrosov 2007.

The *Federal Law on Technical Regulations* of 2003 stipulates that all federal standards in the RF including the standard on Thermal performance of Buildings to become voluntary in 2010.

6.1.3 Regional level

Regional codes are mandatory and developed according to the criteria described above. They may be in compliance with with federal codes, or even more stringent. Regional codes contain detailed climate parameters not contained in the federal codes.

6.1.4 Regional energy efficiency standards for new buildings

The actual thermal protection standards for KO are based on the respective territorial construction norm TSN 23-314 2000-KaIO (TCH 23-314 2000-KaIO.)

Table 10: Thermal insulation standards for new buildings

	Germany*		Denmark ¹⁾ (U=W/m ² K)	Latvia ⁴)	Lithuania ³⁾ U (normative)	Poland ⁵⁾ U - draft	Czech Republic ⁶⁾	Oblast K'grad U=W/m ² K [R-values]
	EnEV 2007	KfW 40**						
Walls			0.40	0.35-0.40	0.20	0.30-0.40	0.30-0.38 (0.20-0.25)	0.37 [2.68]
Windows			2.00 ²⁾	2.2	1.60	1.7-1.9	1.7 (1.2)	2.38 [0.42]
Roof			0.25	0.2	0.16	0.25	0.24 (0.16)	0.29 [3.4]
Bottom (Floor) against ground			0.30	0.25	0.25	-	0.38 (0.25)	n/a
Floor above pilotis								0.28 [3.54]

Source: Materials from BEEN project, personal communication with Vladimir Potapov (KREEC) on 28.02.2008.

*: No demand on separate U-values but on total energy demand, mentioned U-values can reach target under standard conditions of a multifamily building

** : No legal demand, but a special demand of a support programme operated by "Kreditanstalt für Wiederaufbau"

1) From 01.01.2006, in DK new buildings are combined with max. energy consumption

2) from 01.01.2008

3) from 04.01.2006

4) from 01.01.2003 new in progress

5) draft, in force 01.01.2008?

6) from March 05 (besides required values are valid recommended values in present time obligatory for subsidy from Structural Funds – in brackets.

7) from 01.06.1979. New building regulation is almost ready to enter in force.

6.1.5 Energy efficiency standards for major refurbishments

The actual thermal protection standards for KO are based on the respective territorial construction norm TSN 23-314 2000-KaIO (TCH 23-314 2000-KaIO.)

Table 11: Thermal insulation standards for refurbished buildings

	Germany		Denmark ¹⁾ (U=W/m ² K)	Latvia	Lithuania ³⁾ U(justificable)	Poland ⁵⁾	Czech Republic	Oblast Kaliningrad U=W/m ² K [R-values]
	EnEV 2007	KfW 40						
Walls			0.20	0.35-0.40	0.30	0.30-0.40	0.30-0.38 (0.20-0.25)	0.37 [2.68]
Windows			1.5	2.2	0.19	1.7-1.9	1.7 (1.2)	2.38 [0.42]
Roof			0.15	0.2	0.25	0.25	0.24 (0.16)	0.29 [3.42]
Bottom (Floor) against ground			0.15	0.25	0.35	-	0.38 (0.25)	n/a
Floor above pilotis								0.28 [3.54]

Source: Materials from BEEN project, personal communication with Vladimir Potapov (KREEC) on 28.02.20008, own calculations.

6.2 Energy passports

The federal and regional building codes require for new buildings the completion of an “Energy passport”, a document intended to verify compliance of calculated energy performance values with code-stipulated values. Energy passports also give potential buyers and residents information on the buildings’s energy profile.

For existing buildings, the new federal code and regional codes require selective inspections and reviews to determine compliance with relevant codes or to assess the need for renovations.

6.3 Heat metering and consumption based billing

6.3.1 Overview

Both the Federal Law No. 28-FZ “On energy saving” as well as the Regional Law No. 134 “On energy saving” (21.06.1999) include provisions for compulsory metering of all energy related transactions. However, no specifications on time limits for meter installations have been made, no sanctions have been introduced, and compliance has been rather weak so far.

Several public support programmes did provide funding for the equipment of building level heat meters in residential and public buildings:

- Regional *Energy Saving Programme of Kaliningrad Oblast* (1999, amended in 2001; cf. *MunEM WP 1 Report “First assessment of existing structures”*)
- Regional *Programme for Modernization of Municipal Housing and Utility Sector of Kaliningrad Oblast* (2002).

From 2002-2005 some 6 mln. RUR have been allocated in order to install 75 heat meters in public authorities which equals to 20% of the required amount.

6.3.2 Heat and hot water metering in Svetlyj and Mamonovo

In *Svetlyj*, 1 heat meter has been installed at the outlet of the CHP plant GRES-2. 47 building level heat meters have been installed so far: 23 in residential buildings, 8 in social service organisations, and 16 in public buildings.

In *Mamonovo*, almost all boiler houses lack heat meters. However, the distances between boiler houses and the supplied buildings are quite short. Only 2 public buildings dispose of heat meters at the outlet of the boiler house. 15 % of residential buildings are equipped with building level heat meters.

In KO, on average only 2.7% of residential buildings are presently equipped with building level heat meters.

Heat and hot water consumption of individual apartment owners is either accounted on the basis of heat metering registrations or calculated by housing management companies based on consumption norms (e.g. property’s floor space, number of tenants).

The municipality of *Mamonovo* has developed a comprehensive system of differentiated consumption norms applying to different types of buildings.

6.4 Energy audits for public and private buildings

According to Article 10 of the Federal Law No. 28-FZ “*On energy saving*”, organizations shall be subject to compulsory energy audits, irrespective of their legal status and ownership, if the annual consumption of energy resources exceeds 6,000 toe or 1,000 tons of motor fuel.

7 Administration, maintenance and refurbishment of multi-family buildings

7.1 General information on the housing stock in the Oblast Kaliningrad

Table 12: Ownership structure of the housing stock in Kaliningrad Oblast (2007)

Total housing stock	19.13 mln. m ²	100%
Private ownership	14.17 mln. m ²	74.1%
Municipal ownership	4.48 mln. m ²	23.4%
State ownership	0.48 mln. m ²	2.5%

Source: Government of Kaliningrad Oblast

The housing stock of KO comprises up to 19 mln. m² of which more than 15 mln. m² belong to urban areas. Nearly 30% of the housing stock is represented by low-rise buildings erected in the pre-war period. Industrial development in the 1960s and 1970s gave an impetus to the construction of panel buildings, aiming at providing the population with low price housing.

The housing stock of KO increased in 2007 by 501 thsd. m² of total residential space. Such remarkable impetus in the housing construction (0.53 m² per inhabitant in the region) allowed achieving housing provision to up to 20.4 m² per inhabitant.

Table 13: Age structure of housing stock in Kaliningrad Oblast (2006)

Construction year	Thsd. m ²	Share in total housing area
Until 1920	36.1	0.89 %
1921-1945	5,737.4	29.99 %
1946-1970	2,892.8	15,12 %
1971-1995	8,122.6	42.46 %
After 1995	2,324.1	12,15 %
Total	19,126.4	100%

Source: Government of Kaliningrad Oblast

The percentage of “improved” housing space (i.e. housing provided with main urban amenities – hot water, heat supply and sewerage – amounts to 73.6 % of total housing space (82.1 % in cities and 43.0 % - in rural areas). 92.7 % of the housing stock is provided with public water supply, 89 % - sewerage, 88,3 % - heating, 76.6 % - bath rooms, 74.1 % - hot water supply. Gas supply is provided in 93.8 % of the housing stock.

Quality of housing and housing maintenance is still very poor. The majority of buildings requires urgent repair.

Table 14: Level of deterioration of housing stock in Oblast Kaliningrad (2006)

Level of deterioration	Thsd. m ²	Share in total housing area
0-30%	9,664.4	50.53 %
31%-65%	8,665.5	45.31 %
66-70%	452.3	1.51 %
>70%	276.8	2.36 %
Total	19,126.4	100%

Source: Government of Kaliningrad Oblast

The specific feature of the housing stock of KO is the presence of a substantial share (30.1 %) of pre-war residential housing which is characterized by a high degree of decay, and furthermore, there are a large number of houses so called “*khrushovkas*” with very poor energy performance characteristics.

According to the data of *Kaliningrad Statistical Committee* on the territory of KO there are located 63,077 houses, 3,795 of which being slum dwellings (ветхие) and 462 in an accident condition (аварийные).

In 2006, 616.4 thsd. m² (or 3.2%) of the housing stock were characterized “dilapidated” with a total of 30,500 residents living in such buildings. 67.4 thsd. m² (0.35% of the housing stock) were characterized as “imminent to collapse” with a total of 4,000 residents living in such buildings.

Another distinguishing feature of KO is the existence of a large share of obsolete formerly German utility infrastructure already in operation since 1945.

Therefore, the housing stock and communal infrastructure in KO require complex modernization including energy efficiency measures.

137 organisations with different ownership are active in the housing sector. 114 municipal enterprises, 4 state enterprises, 12 private enterprises and 7 with mixed ownership.

7.2 The process of housing privatization

In 1990/1991 started a process of cost free or low cost mass privatization of the state and municipal owned housing stock allowing individual tenants to claim ownership over their housing units. Owners of privatized apartments became also partial owners of the building common space and common infrastructure such as heating or hot water supply pipes.

7.3 The “traditional” system of administration and maintenance of multi-family buildings

Traditionally, municipal housing maintenance companies (known as *zheks*) took care of building infrastructures when housing was under municipal or state ownership. Frequently, after the privatization of apartments the owners did not gain a sense of responsibility over the areas of common and as a rule, the municipal maintenance companies continued to maintain and operate the buildings. However, maintenance was rather unsatisfactory:

The main problem with the existing system of housing management is that the existing municipal housing maintenance companies face no effective pressure to improve service quality. Maintenance is priced on a normative basis, i.e. by square

meter or number of rooms, and there is no link between the maintenance tariff and the quality and quantity of service provided.

Further drawbacks include:

- low payments for maintenance and repair
- cross-subsidies
- lack of competitive environment

7.4 Main reform steps since 2000

The Regional government of KO has chosen as a strategic reform approach targeting to attract private companies for management of housing and housing infrastructure via tendering, and to develop contractual relations (concessions) according to the *Federal Law on Concession Agreements* № 115-FZ (21.07.2005).

As a result, in 2006 documents for 10 tender procedures have been submitted to the *Tendering Agency* of KO in 2006.

7.5 The new Federal Housing Code and its implications for energy efficiency in multi family buildings

7.5.1 Overview

The new RF Housing Code was adopted in December 2004 and came into force in March 2005 (cf. Federal Law No.189-FZ (29 December 2004). It transfers the responsibility for maintenance and repair of housing to the new homeowners. Homeowners are obliged to bear the costs for maintenance of the common property according to their respective ownership share in the common property by regular payment for maintenance and repair. The municipalities are entitled by Article 165 to provide the housing administrations (i.e. administration organisations, HOAs or cooperatives financial support as investment grants or soft loan.

Section VIII, Articles 161-165 of the Housing Code set the legal framework for administration and management of the housing stock. In accordance with the Housing Code, control of multi family buildings, including common places has been transferred to homeowners for management from March 1, 2006. Only municipal housing will remain in municipal ownership and municipalities' books.

According to Article 161, 2 of the Housing Code, the homeowners have to reach a common decision by December 31, 2007 about the form of administration and management of their building. Three options are envisaged by the law:

- a) **direct administration by all homeowners:** the homeowners elect one owner or a representative as administrator; this implies that contracts for provision of utilities (water, heat, gas, electricity, waste removal) have to be concluded between the utility enterprises and each apartment owner individually. For concluding contracts on maintenance and repair of common property a common or majority decision of the homeowners' meeting is necessary. Generally, this model is suitable for buildings with a low number of apartments.
- b) **administration by a homeowner association (HOA).** A HOA is a non profit organisation and acts as a legal body. It is founded by homeowners and has

special decision-making bodies including *plenary meeting*, *executive board* and *manager* etc.

- c) administration via a specialized municipal or private property **management organisation/company** to be selected by tender. The municipal authorities organize the tender if no decision by the homeowners is being made or if all areas are under state or municipal ownership. The services provided by the management include administration/management services (accounting, billing etc.) and services for operation and maintenance of the building.

Generally, decisions can be taken if more than 50% of the homeowners are present. Decisions can be taken with a simple majority of voices. Several decisions on special issues (e.g. reconstruction) require a majority of 2/3. If the owners of a multifamily building do not reach a decision before December 31, 2007 on how their house will be managed, the municipal authorities shall take charge and choose a property management organisation/company by tender on a competitive basis.

The basic rationale is to reduce administration costs by establishing a competitive environment.

In the region the selection of the management form by homeowners is ongoing. The part of buildings where the inhabitants made decisions on the management form constitutes 25% of the total number of residential buildings. 78% of them have chosen the management enterprises, 40% of which chosen private management companies. The selection procedure of the management form has been prolonged until 1st May 2008.

Today on the territory of municipal units in the region 144 organizations of different legal organizational forms are operating performing management of multi-flat buildings and providing maintenance and repair services for the common properties in the buildings. 151 homeowners' associations and 50 housing cooperatives have been established. The floor space of the building stock being administered by homeowners' associations and housing cooperatives remains to be insignificant (6% of total floor space of the building stock). However, the speed by which these organizations are being established - in the first quarter of 2008 the number of housing associations increased to 11% - allows to expect a sound increase in the number of buildings administered by these organizations in the future.⁵

7.6 Problems of housing maintenance, repair and modernization

More than 500 organisations with different ownership structures provide municipal services to the population. In the first half of 2007, the share of private enterprises amounted to 60.2 %, that of municipal enterprises to 34.7%.

At Oblast level, the average maintenance costs amount to 7.5 RUB/m².

According to national statistical data, the level of decay of the housing stock due to longstanding funding gaps of current and capital repair of multi-flat buildings is increasing.

⁵Sub-programme "Conduct of capital repair in multi-flat buildings" of the Target Programme "Zhilishe" of Kaliningrad Oblast for 2006-2010.

The efforts undertaken by the municipalities allowed reaching in 2006 building repairs amounting to 652.8 thsd. m² (compared to 167.3 thsd. m² in 2004).

The housing stock in KO is characterized by poor energy efficiency and significant energy losses. The potential for energy savings in the region amounts to 40 – 50% and reaches 1.118 mln. Gcal annually corresponding to 1.132 billion RUR (approx. EUR 28,6 mln.). This constitutes 25% of total energy consumption per year.

On the other side, investments for the heat-insulation of front of the building, replacement of heating elements and windows, installation of heat regulators, replacement of drop heating systems amount to 3,630.00 RUR (EUR 92) per square meter. The ways of financing of such investments could be raising communal tariffs, lower price of investments, using of budget funding along with credits, combination of heat-insulation with other measures within a complex approach.

The main mechanisms planned for encouragement of energy saving measures in KO include:

- Provision of state guarantees by the state bodies and organs of self-government for loans attracted for realization of energy saving projects;
- Implementation of the RF Housing Code and transfer of communal enterprises to investors for management and concession on a competitive basis;
- Improvement of the system of communal tariffs to encourage energy and resources savings on all levels, application of energy passports for new and existing buildings;
- Conduct of energy audit of buildings with private and public ownership;
- Introduction of regional standards with regard to specific energy consumption, and control over energy consumption.

Besides, the situation in KO can be characterized by the following:

- 1) Citizens – owners of flats in multi-flat buildings do not want to take responsibility over their buildings and hesitate to take loans being members of housing associations due to the financial burden they expect by attracting loans.
- 2) Despite of that fact that according to the legislation the costs for capital repairs shall be covered by the owners, in the structure of communal tariffs these costs are absent. The costs for maintaining common property envisaged in communal payments do not reflect actual technical conditions of the building and necessary scope of measures to be carried out. Furthermore, the owners do not exercise control over conducted repair measures and their quality.
- 3) Citizens expect that the capital repair of multi-flat buildings will be conducted by local administrations and funded through local budgets; on the other hand local authorities do not require participation of homeowners in co-financing of capital repair which again encourages such expectations.
- 4) Local authorities take decisions on capital repairs which do not comply with the RF Housing Code according to which carrying out of capital repair can be conducted after decision taken by homeowners.

- 5) Capital repair requires huge resources which could not be provided from state budgets of different levels.
- 6) Limited funding of capital repair does not meet real demand, and conducted measures are not connected to modernization and energy efficiency measures.

The Regional Government of KO approved a sub-programme “*Conduct of capital repair in multi-flat buildings*” in the framework of the Target Programme “Zhilishe” for 2006-2010.

Along with provision of funds from the *Promotional Fund for Reforming the Housing and Utility Sector*, funds from regional and local budgets, the mentioned sub-programme envisages participation of inhabitants in conducting of capital repairs.

Measures of capital repair according to the sub-programme include:

- 1) repair of building systems of electricity, gas, and water supply, repair of building infrastructure, installation of energy control and regulation devices;
- 2) repair and replacement of elevators;
- 3) repair of basement being a part of common property;
- 4) repair and insulation of front of the building;
- 5) repair of roof.

7.7 Development of homeowner associations in Kaliningrad Oblast

On the territory of KO 105 homeowner associations and 50 housing cooperatives are presently existing taking responsibility for 9.6 % of the total area of multi family buildings.

In the urban district of *Svetlyj* the total number of HOAs presently amounts to 4 (from which 3 are in the town of *Svetlyj*). This number will grow in the next months as the homeowners of multifamily buildings have to reach decision on the future form of housing administration.

Out of 863 residential buildings in the town of *Svetlyj*,

- homeowners of 415 buildings have chosen the model of direct administration
- 3 buildings are managed by homeowner associations
- 445 buildings are still managed by the Municipal Unitary Enterprise “*MUP Uprawlajutschschaja kompanija*”

There are 214 multifamily buildings in the community of *Mamonovo*. According to the legislation the owners have to reach a 100 % decision on the future administration form of the housing estate during the homeowners’ meetings. They also have to assign the former city unitary enterprise of *Mamonovo* with the tasks of commercial and technical management. At the moment this enterprise is being restructured. Two private enterprises will emerge in the legal form of Limited Liability Company responsible for commercial as well as technical administration. Founder is the *Mamonovo* municipality.⁶

⁶ Administration of *Mamonovo* municipality

7.8 Financial support schemes for renovation of multi family buildings

7.8.1 Federal level

Recently the central government has launched the *Federal Law No. 185-FZ "On the Promotional Fund for Reforming the Housing and Utility Sector"* (21 July 2007). The law provides financial support to regions and municipalities in the RF for renovation and modernisation of common property in multi-family buildings and for re-settlement of residents from demolished housing. It targets the period 2007-2011 and has a total budget of 240 bln. RUR. It is envisaged that there will be funding from the federal budget.

60% of the funds are envisaged for repair and modernization of multifamily buildings, 40% for resettlement of citizens from demolished housing stock to new housing areas.

Main preconditions to be met by municipalities:

- the share of commercial organisations in the municipal complex shall reach 80% of the total number of municipal organisations by 2012
- the share of multi-family buildings (MFB) administered by private administration enterprises shall increase to 80% by 2012
- the share of MFB administered with homeowner associations shall reach 20% of the total number of MFB
- Securing of co-financing from regional and municipal budgets covering 50% of overall financing requirements
- Securing of co-financing from homeowners covering a minimum share of 5%

The funds are going to be disbursed on accounts of the HOAs.

To become eligible for financial support the following additional pre-requisites have to be fulfilled:

- existence of a regional programme for repair and modernization of multi family buildings
- existence of a regional programme for resettlement of citizens
- approval of co-financing from regions and municipalities
- co-financing from homeowners with own funds
- privatisation quota of municipal utilities
- privatisation of municipal housing enterprises and repair enterprises
- Decree for development of HOA in MFB in the municipalities. Minimum: 5% of the housing stock; 2011 20%:
- Federal Target Program on creation of an automated system of state land cadastre and state registration of estate units
- Rules for subsidies for rents and operational costs in the frame of social assistance
- Phase-out of compensation payments for supply companies
- Phase-out of cross-subsidies in municipal housing companies.

7.8.2 Regional level

- Programme for Reforming and Modernization of Housing and Municipal Utility Sector 2002-2010. The programme stipulates provision of financial assistance

from the regional and local budgets, budgets of communal unitary enterprises, assistance in obtaining loans and grants for the purposes of modernization of communal infrastructure, investment allocations, implementation of energy saving technologies etc.

- Target programme „*Zhilishe*“ for the period 2006-2010 approved by Decree of the Regional Government of KO No. 700 (26.09.2006). The programme envisages development of financial instruments for the modernization of housing and utility sector, development of mortgage lending mechanisms, instruments for attracting private investments, provision of payment guarantees and subsidies as additional loan coverage. The programme measures should be financed from federal, regional, municipal budgets and other non-budget funds.

7.8.3 Municipal level

The RF Housing Code authorizes municipalities to offer financial support for the renovation of multi-family buildings from the municipal budget. Multi family buildings which selected the model of direct administration are not eligible.

7.9 Key legal acts

Federal legislation

- RF Housing Code
- Federal Law No. 185-FZ “On the Promotional Fund for Reforming the Housing and Utility Sector” (21 July 2007)

Regional legislation

- Programme for Reforming and Modernization of Housing and Municipal Utility Sector 2002-2010
- Regional Law No. 683 “On the procedure of administration of a multifamily building being in state property of Kaliningrad Oblast’ (November 24, 2005)

8 Special provisions for public buildings and properties

8.1 Legal framework for heat and hot water metering in municipal buildings and estates

Cf. chapter 6.3. The possibility to meter energy consumption is one of the main preconditions for implementing an effective energy management system for public buildings. In *Svetlyi*, 30% of public buildings and estates are equipped with building level heat meters, but only 3 % of residential buildings.

8.2 Energy consumption limits for budget financed entities

There has been established a system of annual consumption limits on electricity and heat consumption for budget-financed entities. These limits are being determined based on average consumption rates during the previous three years. If energy consumption exceeds those limits, the additional costs have to be compensated for by extra-budget financing sources. The use of energy consumption limits does not necessarily stimulate energy efficiency improvements, but in many cases leads to reductions of temperature and comfort levels.

8.3 Legal framework for establishing energy managers

There is currently no legal framework in place prescribing the mandatory establishment of energy managers in budget financed entities. One of the key activities performed by KREEC was the development of a network of municipal energy managers involving 22 municipalities of the Oblast Kaliningrad. This network was established in 2004 on a voluntary basis and has been supported by the Danish government.

8.4 Energy audits and certificates for public buildings

Info Box 2: Legal foundations for energy audits

According to Article 10 of the Federal Law No. 28-FZ "On energy saving" energy inspections are carried out to evaluate the efficiency of energy use and to reduce fuel and energy costs of the consumers. Compulsory energy audits must be performed for any organization, irrespective of its legal status or form of ownership, where annual energy consumption exceeds 6,000 tons of reference fuel, or 1,000 tons of motor fuel. Energy audits of those organizations with an annual energy consumption of less than 6,000 tons of reference fuel shall be performed according to the decision of executive bodies representing the subjects of the RF responsible for coordinating the activities in the field of efficient energy use. The order and the schedule of energy audits shall be determined by the Government of the RF. In 1998, the Order of the RF Ministry of Fuel and Energy (22.01.1998) "On conducting energy audits and implementing priority energy saving measures in budgetary organizations" has been adopted.

8.5 Incentive systems for energy efficiency in budget financed entities

The Federal Government Resolution No. 588 (15.6.1998) "On additional measures to stimulate energy conservation in Russia" stipulated that budget financed entities, for the first time, were given the right to keep at their disposal saved financial resources for the period of energy saving activities payback plus one year. At the same time, a

system of limiting fuel and energy consumption for entities financed from the federal budget was implemented and a legal framework for such limits was established.

Several regions adopted regulations to guarantee that municipalities' budgeted funds for energy expenditures would remain at their disposal even if energy saving programmes reduced expenditures.

Several municipalities in KO have developed mechanisms which ensure that budget fund savings achieved as a result of energy savings are used for additional energy saving measures. In its Decree No. 649 (20.09.2008) the municipality of *Svetlyj* ruled that budget funds which have not been used up as a consequence of energy savings have to be used for additional energy saving measures (meter installations, renovation of local networks etc.).

The new draft energy efficiency law of KO (cf. *MunEM WP 1 Report: "Assessment of existing structures"*) includes provisions for the introduction of energy efficiency incentives for budget financed entities like fixed energy consumption limits.

9 Promotion of distributed generation and renewable energy sources (RES)

9.1 Overview

Chapter 2 of this report provided already a brief overview of the organisational framework of municipal heating and utility sector. Additional information on energy supply related issues is available in the *MunEM WP1 report "First assessment of existing structures"* which includes a general assessment of fuel, electricity and heat supply as well as electricity sector organisation and restructuring in KO.

The following subchapters provide information on the legal framework regarding (independent) distributed electricity generation and support of renewable energy sources (RES) for heat and electricity supply.

9.2 Non-discriminatory access to electricity grids

The *Federal Antimonopoly Service (FAS)* is responsible for the protection of competition and non-discriminatory network access in the electricity sector. Article 26 of the Federal Law No. 35-FZ "On the electric power Industry" regulates the access to electricity grids and electricity transmission services. Articles 20, 21 and 26 include the principle of non-discriminatory access to the services of natural monopolies. According to Article 21.1 the government is to approve the rules of non-discriminatory access to electricity transmission services. The RF Government Resolution No. 861 (27.12.2004) "*On approval of rules for non-discriminatory access to power transmission services (...)*" formulates the rules for non-discriminatory grid access.

9.3 Public support for independent power producers

According to Article 14 of the Federal Law No. 28-FZ (03.04.1996) "*On energy saving*" independent electric and thermal power producers have the right to deliver energy to the grids of the respective energy suppliers in the quantities and modes agreed upon with the energy supply organization and the regulatory authority. Energy suppliers are obliged to ensure the energy supply from those generators to their grids at prices formulated in the procedure approved by bodies of executive power of the constituent entities of the RF.

Besides the lack of a clear, transparent and calculable framework regarding the electricity sales, independent CHP producers reportedly face complicated rules for construction approval, grid interconnection, equipment certification, ecological standards which hamper CHP investments. These rules prevent the efficient siting of any new generation not owned by incumbent electricity service providers.

9.4 Public support for use of renewable energy sources (RES)

9.4.1 Federal level

So far, there has been a lack of an effective regulatory framework supporting the use of RES at the federal level. According to Article 14 of the Federal Law No. 28-FZ (03.04.1996) "*On energy saving*", for energy installations which use RES and which are built in accordance with programs in the field of energy saving, prices for electric power shall ensure the recovery of capital investments in the construction of these

installations within a period of time agreed upon with the body of executive power of the constituent entity of the RF.

Reportedly, the Federal Government started to prepare a *Law on Supporting the Use of Renewable Energy Sources*. The draft law aimed at increasing the share of RES in electricity production from currently 1% to 3-5% by 2015 and 10% by 2020. Adoption of this law was planned for 2007, but is still pending. According to information by the Federal Ministry of Industry and Energy, it is also envisaged to pass a new *Law on the basic principles of bioenergy development in the RF*. Also a *Federal Programme for the development of bioenergy in the RF 2008-2015* is currently under preparation.

On November 4, 2007 amendments to the Federal Law No.35-FZ (21.03.2003) “*On the electric power industry*” were adopted which also include provisions regarding the support for RES. According to these amendments, the government shall formulate respective quantitative targets, an action programme, certification rules, and develop measures for RES support by the state (subsidies, surcharges to tariffs, obligatory purchase volumes of electric power generated using RES).

Info Box 3. Provisions regarding the public support for RES (according to the amendments to the Federal Law No. 35-FZ “On electric power industry” of 04.11.2007)

Article 21,1:

The government

- approves the principal areas of government policy regarding energy efficiency of the electric power industry containing targets for generation and consumption of electricity based on RES as a percentage of the total balance of electricity generation and consumption; [the government] approves the plan and action program for achieving the above-mentioned targets.
- establishes the rules, criteria and the procedure for certifying a generation facility using RES (...); generation facilities using RES shall also include cogeneration facilities if the above mentioned facilities use RES for the generation of electricity and heat.
- supports the use of RES and encourages energy efficient technologies (...).
- approves criteria for granting subsidies from the federal budget as compensation for the cost of technical connection of generation facilities with installed capacity of <25 MW recognized (...) as certified facilities using RES (...).

Article 21,2:

The government (or the authorized federal executive bodies)

- approves the procedure for maintaining the register of issuance of and payment for the certificates confirming the amount of electricity produced by certified generation facilities using RES.
- establishes an increment to determine the price of electricity produced by certified generation facilities using RES which shall be added to the equilibrium price of the wholesale market.
- establishes the purchasable amount of electricity produced by certified generation facilities using RES, which shall be binding upon the buyers of electricity in the wholesale market.

According to recent information of the *Russian Wind Energy Association*, the Federal Government is planning to establish a system of minimum feed-in tariffs for renewable electricity producers. Reportedly, the remunerations shall be covered from the federal budget.

Table 15: Planned feed-in tariffs for renewable electricity

Source	Remuneration in RUR	Remuneration in EUR	Guaranteed remuneration period (years)
Wind	4.31	0.12	10
Hydro (<25 MW)	2.28	0.06	10
Geothermal	3.59	0.10	10
Biomass	1.95	0.05	7
Tidal	5.10	0.14	15
Photovoltaic	16.73	0.47	15

1 EUR=35.72 RUR (29.11.2008)

Source: OAO RusGidro; cited in Schulze 2008.

9.4.2 Regional level

So far, regional and municipal authorities have been the main driving force for RES development in the RF. By now, the regional authorities of KO did provide interest subsidies to reduce interest rates of commercial loans to average European rates⁷. On 16.09.2002, the Regional Government of KO adopted Decree No. 466 “On measures to support investment activities in Kaliningrad Oblast in development of renewable energy”.

The Regional Government is currently pursuing an electricity capacity development strategy combined with fuel diversification and also seeks to considerably accelerate the use of local and renewable energy sources. In 2007, the Government adopted a *Regional Energy Strategy up to 2031* which was approved by the Federal Government. This strategy includes ambitious targets for the use of RES (cf. *MunEM WP1 Report “Assessment of existing structures in energy policy”*).

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11 Selected acronyms

BEA	Berlin Energy Agency
BSR	Baltic Sea Region
cbm	cubic meter
bcm	billion cubic meters
CEO	Chief Executive Officer
CHP	Combined heat and power
CIS	Commonwealth of Independent States
DH	District heating
EPC	Energy performance certificate
ESCO	Energy Service Company
EU EPBD	EU Energy Performance of Buildings Directive
FSU	Former Soviet Union
FTS	Federal Tariff Service
HOB	Heat only boiler
IPS/UPS	Interconnected Power Systems/Unified Power Systems
JSC	Joint Stock Company
KO	Kaliningrad Oblast
MW	Megawatt
NPP	Nuclear power plant
O&M	Operations and maintenance
SPRPT	Service for Public Regulation of Prices and Tariffs
RES	Renewable energy sources
RF	Russian Federation
RPI	Retail Price Index
SNiP	<i>Stroitel'nye normy i pravila</i> (Construction norms and specifications)
TGC	Territorial Generation Company
toe	tons of oil equivalent
UCTE	Union for the Coordination of Transmission of Electricity
USAID	United States Agency for International Development
WGC	Wholesale Generation Company
WP	Work Package