

Appendix 11. Additional Information to Chapter “Natural Capital”

Table 11.1 - List of certificates and auditors' conclusions on the compliance of the Engineering Division companies with the standards of quality and environmental safety.

Company name	Standard	Certification authority	Certificate details	Validity period of the certificate
JSC ASE EC (considering branch offices)	ISO 9001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229233Q-U/1, version 1 of 22.05.2018	22.05.2018 – 21.05.2021
JSC ASE EC (considering branch offices)	ISO 14001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229233E -U/1, version 1 of 22.05.2018	22.05.2018 – 21.05.2021
JSC ASE	ISO 9001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229233E -U/2, version 1 of 22.05.2018	22.05.2018 – 21.05.2021
JSC ASE	ISO 14001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229233E -U/2, version 1 of 22.05.2018	22.05.2018 – 21.05.2021
JSC “Atomenergoproekt”	ISO 9001:2015	TUV SUD Management Service GmbH	1210013667 TMS of 15.05.2018	15.05.2018 – 21.03.2019
JSC “Atomenergoproekt”	ISO 9001:2015	Academia-Cert	POCC RU.ФК94.И00019 of 09.04.2018	09.04.2018 – 09.04.2021
JSC ATOMPROEKT	ISO 9001:2015	AFNOR Certification	2011/40708.3 of 25.12.2018	25.12.2018 - 24.12.2021
JSC ATOMPROEKT	ISO 14001:2015	AFNOR Certification	2011/40709.2 of 12.02.2018	12.02.2018 - 11.02.2021
TREST ROSSEM LTD.	ISO 9001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229245Q-U, version 1 of 29.06.2018	29.06.2018 – 28.06.2021
TREST ROSSEM LTD.	ISO 14001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU229245E-U, version 1 of 29.06.2018	29.06.2018 – 28.06.2021
JSC “NIKIMT-Atomstroy” (considering branch offices)	ISO 14001:2015	Russian register	18.2227.026 of 07.12.2018	07.12.2018 – 07.12.2021
JSC “NIKIMT-Atomstroy” (considering branch offices)	ISO 9001:2015	Russian register	17.0645.026 of 24.04.2017	24.04.2017 – 18.02.2020

Company name	Standard	Certification authority	Certificate details	Validity period of the certificate
JSC "NIKIMT-Atomstroy" (considering branch offices)	ISO 9001:2015	IQNet	RU-17.0645.026 of 24.04.2017	24.04.2017 – 18.02.2020
JSC "NIKIMT-Atomstroy" (considering branch offices)	ISO 14001:2015	IQNet	RU-18.2227.026 of 07.12.2018	07.12.2018 – 07.12.2021
JSC "NIKIMT-Atomstroy" (considering branch offices)	ISO 9001:2015	Russian register	POCC RU.ГA45.K00260 of 16.05.2017	16.05.2017 - 16.05.2020
PJSC ESM	ISO 14001:2015	RusPromGrupp LLC	СДC.ТII.СМ.10329- 17 of 14.07.2017	14.07.2017 - 14.07.2020
PJSC ESM	ISO 9001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU002350, version 1 of 11.01.2019	11.01.2019 – 10.01.2022
PJSC ESM	ISO 14001:2015	BUREAU VERITAS Certification Holding SAS – UK Branch	RU002351, version 1 of 11.01.2019	11.01.2019 – 10.01.2022

Table 11.2 - Energy resources used by the Engineering Division of Rosatom State Corporation

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)							
Electric power, including spent one, kW/h:	4,174,947	19.07	4,104,076	24.5	4,169,213	26.9	+1.6
- for domestic needs	4,174,947	19.07	4,104,076	24.5	4,169,213	26.9	+1.6
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent one, GJ:	18,600	15.06	16,629	13.3	17,354	16.1	+4.4
- for heating	9,228	10.80	-	-	-	-	-
- for process needs	7,593	2.95	-	-	-	-	-
- for hot water supply	1,779	1.31	-	-	-	-	-
Other (for heating, hot water supply and process needs)	-	-	16,629	13.3	17,354	16.1	+4.4
JSC ASE EC Volgodonsk Branch Office							
Electric power, including spent one, kW/h:	7,900,000	39.54	5,300,000	15	1,700,000	9.5	-68
- for domestic needs	2,680,000	13.44	3,400,000	9.6	1,300,000	7.26	-62
- for operation of electric devices in process flows	5,220,000	26.1	1,900,000	5.4	400,000	2.24	-79
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent one, GJ:	36,609.62	10.74	7,777.5	2.4	0	0	0
- for heating	36,609.62	10.74	7,777.5	2.4	0	0	0
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Kursk Branch Office							
Electric power, including spent one, kW/h:	244,235	0.87	552,888	2.33	1,191,989	5.34	+115.6
- for domestic needs	244,235	0.87	346,082	1.43	516,695	2.30	+49.3
- for operation of electric devices in process flows	-	-	206,806	0.90	601,357	2.69	+190.8
- for operation of electric motors	-	-	-	-	73,937	0.34	not applicable
Thermal energy, including spent one, GJ:	48.00	0.12	-	-	-	-	-
- for heating	48.00	0.12	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
JSC ASE EC Baltic Branch Office							
Electric power, including spent:	2,993,000	18.23	2,661,530	10.34	2,601,463	8.89	-2.3
- for domestic needs	2,795,450	17.02	2,395,377	9.31	2,341,316.1	8.00	-2.3
- for operation of electric devices in process flows	131,700	0.80	159,692	0.62	156,087.78	0.53	-2.3
- for operation of electric motors	65,850	0.41	106,461	0.41	104,058.52	0.36	-2.3
Thermal energy, including spent:	-	-	-	-	-	-	-
- for heating	-	-	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Representative Office in the Republic of Belarus							
Electric power, including spent:	15,632,201	141.8	18,404,455	157.53	26,075,558	244.15	+41.7
- for domestic needs	15,632,201	141.8	18,404,455	157.53	26,075,558	244.15	+41.7
- for operation of electric devices in process flows	0	0	0	0	0	0	0
- for operation of electric motors	0	0	0	0	0	0	0
Thermal energy, including spent:	2310.76	33.91	3050.1	40.84	3,458.98	48.19	+13.4
- for heating	2310.76	33.91	3050.1	40.84	3,458.98	48.19	+13.4
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE							
Electric power, including spent:	4,178,760	19	3,874,169	19.89	4,261,758	22.84	+9.1
- for domestic needs	4,178,760	19	3,874,169	19.89	4,261,758	22.84	+9.1
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	35,001.65	13.18	32,142.06	12.74	31,911.79	13.48	-0.7
- for heating	-	-	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other (heating and hot water supply)	35,001.65	13.18	32,142.06	12.74	31,911.79	13.48	-0.7
JSC ATOMPROEKT							
Electric power, including spent:	3,721,502	12.69	3,564,089	17.12	3,784,765	22.40	+6.2
- for domestic needs	3,721,502	12.69	3,564,089	17.12	3,784,765	22.40	+6.2
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy,	21,535.05	8.39	18,404	7.75	18,131	11.70	-1.5

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
including spent:							
- for heating	-	-	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other (heating and hot water supply)	21,535.05	8.39	18,404	7.75	18,131	11.65	-1.5
JSC "Atomenergoproekt"(administrative and economic activities)							
Electric power, including spent:	2,915,691	6.96	2,063,967	7.98	2,825,066	11.24	+36.9
- for domestic needs	2,798,374.4	6.50	1,950,515	7.58	2,686,550	9.90	+37.7
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors (operation of ventilation installations)	117,316.6	0.41	113,452	0.41	138,516	24.20	+22.1
Thermal energy, including spent:	17,417.80	1.56	110.68	0.57	265	5.74	+139.43
- for heating	15,234.20	1.11	53.67	0.23	105	1.11	+95.6
- for process needs	-	-	-	-	-	-	-
- for hot water supply	2,183.6	0.45	57.01	0.34	148	4.63	+159.6
Other	-	-	-	-	-	-	-
JSC "Atomenergoproekt"(Novovoronezh NPP-2 Construction Directorate)							
Electric power, including spent:	333,002	1.8	329,552	1.9	299,665	1.5	-9
- for domestic needs	333,002	1.8	329,552	1.9	299,665	1.5	-9
- for operation of electric devices in process flows	-	-	-	-	-	-	-
- for operation of electric motors (operation of ventilation installations)	-	-	-	-	-	-	-
Thermal energy, including spent:	4,856	3	602	3.7	586	3.29	-2.7
- for heating	4,856	3	602	3.7	586	3.29	2.7
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
TREST ROSSEM LTD. (Volgodonsk Branch Office)							
Electric power, including spent:	643,413	3.756	229,090	1.51	-	-	not applicable
- for domestic needs	75,300	0.45	27,490	0.18	-	-	-
- for operation of electric devices in process flows	568,113	3.311	201,600	1.33	-	-	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	7074.0	1,301	3,580	0.72	-	-	not applicable
- for heating	4,374	0.80	2,183	0.44	-	-	-
- for process needs	-	-	-	-	-	-	-

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
- for hot water supply	2,700	0.50	1,397	0.279	-	-	-
Other	-	-	-	-	-	-	-
TREST ROSSEM LTD. (Kursk Branch Office)							
Electric power, including spent:	-	-	-	-	2,577,209	14.38	not applicable
- for domestic needs	-	-	-	-	878,232	4.90	-
- for operation of electric devices in process flows	-	-	-	-	1,698,977	9.48	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	-	-	-	-	1,216.48	0.95	not applicable
- for heating	-	-	-	-	942.48	0.72	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	304	0.24	-
Other	-	-	-	-	-	-	-
TREST ROSSEM LTD. (Representative Office in the Republic of Belarus)							
Electric power, including spent:	-	-	-	-	3,036,034	23.93	not applicable
- for domestic needs	-	-	-	-	955,662	7.55	-
- for operation of electric devices in process flows	-	-	-	-	2,080,372	16.38	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	-	-	-	-	2,148.63	0.33	not applicable
- for heating	-	-	-	-	1,850.63	0.29	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	298	0.05	-
Other	-	-	-	-	-	-	-
TREST ROSSEM LTD. (Branch Office in the People's Republic of Bangladesh)							
Electric power, including spent:	-	-	-	-	2,411,206	22.4	not applicable
- for domestic needs	-	-	-	-	936,449	8.7	-
- for operation of electric devices in process flows	-	-	-	-	1,474,759	13.74	-
- for operation of electric motors	-	-	-	-	-	-	-
Thermal energy, including spent:	-	-	-	-	-	-	-
- for heating	-	-	-	-	-	-	-
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC "NIKIMT-Atomstroy"							
Electric power, including spent one, kW/h:	4,726,060.65	37.31	4,468,658.5	36.49	8,486,559.4	44.85	89.9
- for domestic needs	1,438,255.65	19.75	777,120.03	16.97	3,284,937.2	18.44	322.7
- for operation of electric devices in process flows	3,149,495	16.84	3,399,378.5	17.81	4,803,959	23.84	41.3
- for operation of	138,310	0.72	292,160	1.712	397,663.18	2.56	36.1

Type of resources	Resource flow rate/ resource purchase expenses						
	2016		2017		2018		(2018-2017)/ 2017, %
	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	GJ or kW/h	mln. rubles	
electric motors							
Thermal energy, including spent one, GJ:	40,179.11	8.11	65,300.1	3.40	93,780.16	4.05	43.6
- for heating	36,735.68	6.21	54,864.96	3.06	79,363.06	6.32	44.6
- for process needs	0	0	5000	0.03	11,000	0.06	120
- for hot water supply	3,443.43	1.89	5,435.14	0.312	12,206.18	0.33	124.6
Other	-	-	-	-	-	-	-
PJSC ESM							
Electric power, including spent:	6,422,084.49	29.46	3,892,259	20.31	2,271,965	12.15	-41.6
- for domestic needs	153,112	0.70	202,463.8	1.40	129,883	0.6	-35.8
- for operation of electric devices in process flows	6,045,318.49	27.73	3,448,449.2	17.80	2,142,082	11.55	-37.88
- for operation of electric motors	223,654	1.03	241,346	1.12	0	0	not applicable
Thermal energy, including spent:	2,841.6	1.28	3,539.91	1.99	1,613.63	1.32	-54
- for heating	2,841.6	1.28	3,539.91	1.99	1,613.63	1.32	-54
- for process needs	-	-	-	-	-	-	-
- for hot water supply	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
ENGINEERING DIVISION*							
Electric power, including spent:	53,884,896.14	330.49	49,444,733.5	314.90	63,281,244.4	448.07	+28
- for domestic needs	38,225,139.05	253.09	39,375,388.83	267.41	50,684,234.3	376.74	+28.7
- for operation of electric devices in process flows	15,114,626.49	74.78	9,315,925.7	43.86	11,882,834.78	66.71	+27.6
- for operation of electric motors	545,130.60	2.57	753,419	3.65	714,174.7	27.46	-5.2
Thermal energy, including spent:	186,473.59	96.65	151,135.35	87.41	170,465.67	105.13	+12.8
- for heating	112,237.86	67.97	72,071.14	52.66	87,919.78	61.23	+22
- for process needs	7,593.00	2.95	5,000	0.03	11,000	0.06	+120
- for hot water supply	10,106.03	4.15	6,889.15	0.93	12,956.18	5.25	+88.1
Other (heating and hot water supply)	56,536.70	21.57	67,175.06	33.79	67,396.79	41.25	+0.3

*The data earlier provided in the Public Annual Reports for 2016, 2017 was recalculated for 2016, 2017, 2018 due to the following:

- exclusion of information about Sibirsky Orgstroyproekt JSC caused by the lack of activity from the 2nd half-year of 2017 and the enterprise's being liquidated;
- exclusion of information about VdMU LLC, SMU No. 1 LLC, JSC "Spb EIZ";
- closing/opening of TREST ROSSEM LTD. branch offices;
- separation of information regarding Novovoronezh NPP-2 Construction Directorate in JSC "Atomenergoproekt";
- overall provision of information on Belarus NPP construction site (considering subcontractors), not only for Representative Office of JSC ASE EC in the Republic of Belarus.

Table 11.3 - Impact on atmosphere during NPP construction

Company (facility) name/ pollutant substances released into the atmosphere	Volume of pollutant substances, tons			
	2016	2017	2018	(2018-2017)/2018, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)				
Sulphur dioxide	0.004	0.65	0.54	-16.7
Carbon oxide	0.04	3.10	4.62	+49.2
Nitrogen oxide	0.04	0.38	0.17	-54
Other substances	4.28	8.26	4.32	-48
<i>Total:</i>	<i>4.36</i>	<i>12.39</i>	<i>9.66</i>	<i>-22</i>
JSC ATOMPROEKT				
Sulphur dioxide	0.00004	0.00004	0.00004	0
Carbon oxide	0.005	0.005	0.005	0
Nitrogen oxide	0.0001	0.0001	0.0001	0
Other substances	0.31	0.31	0.31	0
<i>Total:</i>	<i>0.31</i>	<i>0.31</i>	<i>0.31</i>	<i>0</i>
JSC "Atomenergoproekt"				
Sulphur dioxide	0.0	0.0	0.006	not applicable
Carbon oxide	0.03	0.03	0.20	more than 200
Nitrogen oxide	0.0	0.0	0.008	not applicable
Other substances	0.44	0.02	0.03	+68
<i>Total</i>	<i>0.47</i>	<i>0.05</i>	<i>0.24</i>	<i>more than 200</i>
JSC "Atomenergoproekt"(Novovoronezh Branch Office - Novovoronezh NPP-2 Construction Directorate)				
Sulphur dioxide	0.1	0.29	0.26	- 10
Carbon oxide	2.39	2.38	2.12	- 11
Nitrogen oxide	0.32	3.34	3.01	- 10
Other substances	0.81	1.04	0.92	- 11.5
<i>Total</i>	<i>3.62</i>	<i>7</i>	<i>6.30</i>	<i>- 9.9</i>
TREST ROSSEM LTD. (Volgodonsk Branch Office)				
Sulphur dioxide	0.004	0.002	0	not applicable
Carbon oxide	2.93	1.47	0	
Nitrogen oxide	0.57	0.29	0	
Other substances	11.13	5.56	0	
<i>Total:</i>	<i>14.64</i>	<i>7.32</i>	<i>0</i>	
JSC «NIKIMT-Atomstroy»				
Sulphur dioxide	0.09	0.39	0.009	-97.7
Carbon oxide	3.06	4.70	1.48	-68.5
Nitrogen oxide	1.57	0.44	0.05	-88.9
Other substances	6.02	33.18	3.80	-88.6
<i>Total:</i>	<i>10.75</i>	<i>38.72</i>	<i>5.34</i>	<i>-86.2</i>
PJSC ESM				
Sulphur dioxide	0.0002	0	0	not applicable
Carbon oxide	0.24	0.36	0.20	-44.1
Nitrogen oxide	0.007	0.03	0.006	-79.78
Other substances	2.59	0.71	0.45	-36.37
<i>Total:</i>	<i>2.84</i>	<i>1.10</i>	<i>0.66</i>	<i>-40</i>
ENGINEERING DIVISION*				
Sulphur dioxide	0.20	1.34	0.82	-38.8
Carbon oxide	8.71	12.05	8.63	-28.3
Nitrogen oxide	2.51	4.48	3.25	-27.5
Other substances	25.56	49.08	9.83	-80
Total:	36.98	66.88	22.52	-66.3

*The data earlier provided in the Public Annual Report for 2016, 2017 was recalculated for 2016, 2017, 2018 due to exclusion of information about VdMU LLC, SNU No. 1 LLC, JSC "Spb EIZ" and exclusion of information about Sibirsky Orgstroyproekt JSC for 2016.

(GRI 303-3, 303-5) Table 11.4 - Total volume of water withdrawal in the regions of operation with a breakdown by the following sources, mln liters

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	Well of Forest Comfort recreation center	2.59	2.34	1.56	-34
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Nizhny Novgorod Water Channel, the Oka river	18.54	20.80	20.90	0
JSC ASE EC Volgodonsk Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	Tsimlyansk storage lake	30.50	27.60	10.00	-64
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	-	-	-	-	-
JSC ASE EC Baltic Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	Wells No.3/2010, No.5/2010	9.66	9.32	9.08	-3
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	-	-	-	-	-
JSC ASE EC Representative Office in the Republic of Belarus					
Surface waters, including swamps, rivers, lakes and oceans	The Vilia river (Belarus NPP RUE)	-	-	66.92	not applicable
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Belarus NPP RUE - domestic	9.50	10.10	51.36	more than +200
JSC ASE EC Branch Office in Hungary					
Surface waters, including swamps, rivers, lakes and oceans		Not applicable			
Underground waters					
Sea water					
Water being a by-product of production process					
Rain water collected and stored by the company					
Sewage waters of other companies;					
Municipal and other water supply systems.	Mezofold Paks, Zrt.	-	0.50	0.50	0
JSC ASE					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Surface source of water - Moskvoretsko-Vazuzskaya and Volzhskaya water systems Northern water treatment station Moswaterchannel JSC	14.92	15.43	17.43	-34
JSC ATOMPROEKT					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Vodokanal SPb SUE	20.46	17.24	18.42	7
JSC "Atomenergoproekt"					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Moswaterchannel JSC, Balakovo Vodokanal MUE Volgograd Gorvodokanal; Desnogorsk Public Utility MUE; MUE GTS; Vodokanal MUE; Aquaservice MUE	20.01	22.57	21.74	-4
Novovoronezh Branch Office of JSC "Atomenergoproekt"					
Surface waters, including swamps, rivers, lakes and oceans	no water intake				
Underground waters					
Rain water collected and stored by the company					
Sewage waters of other companies;					
Municipal and other water supply systems.					
TREST ROSSEM LTD. (all branch offices)					
Surface waters, including swamps, rivers, lakes and oceans	no water intake				
Underground waters					
Rain water collected and stored by the company					
Sewage waters of other companies;					
Municipal and other water supply systems.					
JSC "NIKIMT-Atomstroy"					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Water being a by-product of production process	-	-	-	-	-
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Moswaterchannel JSC	33.34	28.40	22.41	-21
	Vodokanal MUE, Obninsk	3.78	4.00	3.82	-4
	Seversk Vodokanal JSC	2.29	2.31	2.39	+3
PJSC ESM					
Surface waters, including swamps, rivers, lakes and oceans	no water intake				
Underground waters					
Rain water collected and stored by the company					
Sewage waters of other companies;					
Municipal and other water supply systems.					
ENGINEERING DIVISION*					
Surface waters, including swamps, rivers, lakes and oceans	Tsimlyansk storage lake, the Vilia river	30.50	27.60	76.92	+179
Underground waters	Well of Forest Comfort recreation center, wells No. 3/2010, No. 5/2010	12.25	11.66	10.64	-9
Rain water collected and stored by the company	-	-	-	-	-
Sewage waters of other companies;	-	-	-	-	-
Municipal and other water supply systems.	Nizhny Novgorod Water Channel, the Oka river, Belarus NPP RUE, Mezofold Paks, Zrt., Moskvoretsko-Vazuzskaya and Volzhskaya water systems, Northern water treatment station of Moswaterchannel JSC, Moswaterchannel JSC, Balakovo Vodokanal MUE; Volgograd Gorvodokanal;	122.84	121.34	158.93	+31

List of water supply sources	Name of water supply source	Water consumption (intake), thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
	Desnogorsk Public Utility MUE; MUE GTS; Vodokanal MUE; Aquaservice MUE, Vodokanal SPb SUE, Vodokanal MUE, Obninsk, Seversk Vodokanal JSC				
Total (not considering the natural water inflow)		165.58	160.60	246.49	+53.5
Natural water inflow	Header drainage water in the pit of units under construction No. 1 and 2 of Kursk NPP-2		7,420.40	10,430.20	+40.6
Total (considering the natural water inflow)		165.58	7,581.00	10,676.69	+40.8

Increase in the surface water consumption by 179% by the Engineering Division's companies in 2018 as compared to 2017 is related to water withdrawal by JSC ASE EC Representative Office in the Republic of Belarus from the river Vilia.

Water withdrawal from underground sources has reduced due to organizational and technical measures aimed at the water intake reduction in JSC ASE EC, as well as decreased number of staff of JSC ASE EC Baltic Branch Office. Water intake structures of underground sources are provided with water metering equipment. The water taken from wells is used for domestic and production consumption (fire-fighting pipeline).

For water supply of Kursk NPP-2 construction site, delivered bottled water is used in JSC ASE EC Kursk Branch Office. The water intake structures have not been put in operation.

There is no water withdrawal by TREST ROSSEM LTD. and PJSC ESM.

In the majority of the Engineering Division's companies, water is supplied from urban water supply utilities under contracts.

Water withdrawal at overseas construction facilities is provided by customers.

The water used for water supply is classified as fresh water.

(GRI 303-4) Table 11.5 - Total volume of water discharge with a breakdown by regions of operation and by destination

Type of destination of water discharge	Name of destination of water discharge	Discharge volume, thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Nizhny Novgorod Water Channel	27.83	20.53	20.87	+1.6
JSC ASE EC Volgodonsk Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	Central treatment facilities of Rostov NPP	27.10	25.40	6.80	-73
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and	-	-	-	-	-

Type of destination of water discharge	Name of destination of water discharge	Discharge volume, thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
the volume of water supplied to other companies:					
JSC ASE Kursk Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	the Seym river (CHER/DNEPR/892/360)	-	7,420.40	10,430.20	+41
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	-	-	-	-	-
JSC ASE EC Baltic Branch Office					
Surface waters, including swamps, rivers, lakes and oceans	In-18-8 channel	40.50	108.66	104.06	-4
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	-	-	-	-	-
JSC ASE EC Representative Office in the Republic of Belarus					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Ostovets RUE for housing and community amenities	9.20	7.00	50.36	more than 200
JSC ASE					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Moswaterchannel JSC Mosvodostok SUE	23.83	24.34	26.34	+8.2
JSC ATOMPROEKT					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other	Vodokanal SPb SUE	49.05	40.68	34.58	-15

Type of destination of water discharge	Name of destination of water discharge	Discharge volume, thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
companies:					
JSC "Atomenergoproekt"					
Surface waters, including swamps, rivers, lakes and oceans	-	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Mosvodostok SUE; Balakovo Vodokanal MUE; Volgograd Gorvodokanal; Desnogorsk Public Utility MUE; MUE GTS; Vodokanal MUE; Aquaservice MUE	25.80	31.12	85.59	+175
JSC "NIKIMT-Atomstroy"					
Surface waters, including swamps, rivers, lakes and oceans	--	-	-	-	-
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Moswaterchannel JSC Vodokanal MUE, Obninsk Seversk Vodokanal JSC Mosvodostok SUE	81.32	75.90	76.12	+0.3
ENGINEERING DIVISION					
Surface waters, including swamps, rivers, lakes and oceans	Central treatment facilities of Rostov NPP, the Seym river (CHER/DNIEPER/892/360), Channel In-18-8	67.60	7,554.46	10,541.06	+40
Underground waters	-	-	-	-	-
Sea water	-	-	-	-	-
Other destinations and the volume of water supplied to other companies:	Nizhny Novgorod Vodokanal; Ostovets RUE for housing and community amenities; Mosvodokanal JSC; Mosvodostok SUE; Vodokanal SPb SUE Balakovo Vodokanal MUE; Volgograd Gorvodokanal; Desnogorsk Public Utility MUE; MUE GTS; Vodokanal MUE; Aquaservice MUE; Vodokanal MUE, Obninsk;	217.02	199.57	293.86	+47.2

Type of destination of water discharge	Name of destination of water discharge	Discharge volume, thousand m3			
		2016	2017	2018	(2018-2017)/2017, %
	Seversk Vodokanal JSC				
TOTAL:		284.62	7,754.03	10,834.92	+40

Table 11.6 - Fuel types used in the Engineering Division

Fuel type	Fuel consumption/ fuel purchase expenses						(2018-2017)/2017, %
	2016		2017		2018		
	t	mln. rubles	t	mln. rubles	t	mln. rubles	
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)							
Motor petrol	266.80	12.18	193.33	8.76	165.97	8.00	-14
Diesel fuel	104.50	3.88	84.76	3.46	103.72	4.65	22
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	104.30	0.52	124.00	0.61	119	0.73	-4
Other	-	-	-	-	-	-	-
JSC ASE EC Volgodonsk Branch Office							
Motor petrol	196.10	8.67	123	5	8.32	4.35	-93
Diesel fuel	158.90	5.59	53	2	28.30	1.30	-47
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Kursk Branch Office							
Motor petrol	25.00	1.00	33.00	1.10	55.00	2.70	67
Diesel fuel	31.00	1.10	177.00	5.80	291.00	12.40	64
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Baltic Branch Office							
Motor petrol	16.09	0.81	13.28	0.68	13.33	0.67	0
Diesel fuel	4.14	0.19	4.95	0.22	4.08	0.18	-18
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Representative Office in the Republic of Belarus							
Motor petrol	98.16	4.42	92.09	4.12	114.09	6.18	24
Diesel fuel	126.83	25.7	138.73	6.15	164.36	8.62	18
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE EC Branch Office in Hungary							
Motor petrol	-	-	27.00	3.26	9.00	1.09	-67

Fuel type	Fuel consumption/ fuel purchase expenses						(2018-2017)/ 2017, %
	2016		2017		2018		
	t	mln. rubles	t	mln. rubles	t	mln. rubles	
Diesel fuel	-	-	-	-	-	-	-
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ASE							
Motor petrol	106.95	4.64	94.08	4.41	93.07	4.67	-1
Diesel fuel	4.20	0.15	5.90	0.23	6.80	0.31	15
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC ATOMPROEKT							
Motor petrol	89.66	3.23	63.49	2.09	64.05	2.88	1
Diesel fuel	76.75	1.38	41.82	1.28	39.16	1.57	-6
Fuel oil	35.07	1.08	-	-	-	-	not applicable
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC "Atomenergoproekt"							
Motor petrol	-	-	105.06	3.15	101.40	3.70	-3
Diesel fuel	7.00	0.21	12.00	0.45	19.00	7.25	58
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	27.00	0.23	-	-	not applicable
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Novovoronezh Branch Office of JSC "Atomenergoproekt"							
Motor petrol	-	-	-	-	-	-	-
Diesel fuel	-	-	-	-	62.80	3.50	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Volgodonsk Branch Office of TREST ROSSEM LTD.							
Motor petrol	13.90	0.57	10.30	0.41	-	-	not applicable
Diesel fuel	184.55	6.46	65.54	2.94	-	-	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Representative Office of TREST ROSSEM LTD. in the Republic of Belarus							
Motor petrol	-	-	-	-	25.05	1.10	not applicable
Diesel fuel	-	-	-	-	214.32	8.98	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-

Fuel type	Fuel consumption/ fuel purchase expenses						(2018-2017)/ 2017, %
	2016		2017		2018		
	t	mln. rubles	t	mln. rubles	t	mln. rubles	
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Kursk Branch Office of TREST ROSSEM LTD.							
Motor petrol	-	-	-	-	46.49	2.04	not applicable
Diesel fuel	-	-	-	-	338.32	14.18	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
Branch Office of TREST ROSSEM LTD. in the People's Republic of Bangladesh							
Motor petrol	-	-	-	-	-	-	-
Diesel fuel	-	-	-	-	30.56	2.53	not applicable
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
JSC "NIKIMT-Atomstroy"							
Motor petrol	252.25	9.06	169.43	5.99	159.81	7.1	-6
Diesel fuel	593.73	20.48	362.81	14.25	383.76	14.76	6
Fuel oil	-	-	-	-	-	-	-
Natural gas	1525.01	9.70	1249.93	9.54	1085.61	8.47	-13
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
PJSC ESM							
Motor petrol	278.44	11.36	282.45	11.57	206.78	9.30	- 27
Diesel fuel	421.08	15.65	336.15	12.84	299.94	13.98	-11
Fuel oil	-	-	-	-	-	-	-
Natural gas	-	-	-	-	-	-	-
Coal	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-
ENGINEERING DIVISION*							
Motor petrol	1,343.35	55.94	1,206.51	50.55	1,062.36	53.77	-12
Diesel fuel	1,712.68	80.79	1,282.66	49.63	1,986.12	94.20	55
Fuel oil	35.07	1.08	0	0	0	0	-
Natural gas	1,525.01	9.70	1,276.93	9.77	1,085.61	8.47	-15
Coal	104.30	0.52	124.00	0.61	119.00	0.73	-4
Other	-	-	-	-	-	-	-

*The data earlier provided in the Public Annual Reports for 2016, 2017 was recalculated for 2016, 2017, 2018 due to the following:

- exclusion of information about Sibirsky Orgstroyproekt JSC caused by the lack of activity from the 2nd half-year of 2017 and the enterprise's being liquidated;
- exclusion of information about VdMU LLC, SMU No. 1 LLC, JSC "Spb EIZ";
- closing/opening of TREST ROSSEM LTD. branch offices;
- separation of information regarding Novovoronezh NPP-2 Construction Directorate in JSC "Atomenergoproekt";

Table 11.7 - Generation of wastes as per hazard categories and ways of processing

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)				
I hazard class waste (extremely hazardous), including:	0.14	0.41	0.41	1
- handed over to other specialized companies for decontamination.	0.14	0.41	0.41	1
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	335.10	342.91	345.63	1
- handed over to other specialized companies for decontamination.	1.70	-		
- handed-over to the landfill site of other company	333.30	342.91	345.63	1
V hazard class waste (no significant hazard), including:	49.00	58.31	52.96	-9
- handed over to other specialized companies for use	7.40	6.69	6.11	-9
- handed-over to the landfill site of other company	41.60	51.62	46.85	-9
Total for I-V hazard category wastes	384.21	401.63	399.00	-1
JSC ASE EC Volgodonsk Branch Office				
I hazard class waste (extremely hazardous), including:	0.19	0.72	0.19	-73
- storage on company site	-	-	0.19	not applicable
- handed over to other specialized companies for decontamination	0.19	0.72	-	not applicable
II hazard class waste (high hazard), including:	0.21	0.73	0.49	-34
- handed over to other specialized companies for decontamination	0.21	0.73	0.49	-34
III hazard class waste (moderately hazardous), including:	-	-	0.01	not applicable
- handed over to other specialized companies for decontamination	-	-	0.01	not applicable
IV hazard class waste (low-hazard), including:	259.90	268.00	126.80	-53
- handed over to other specialized companies for decontamination	-	-	1.0	not applicable
- handed-over to the landfill site of other company	259.90	268.00	125.80	-53
V hazard class waste (no	83.30	85.10	45.00	-47

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
significant hazard), including:				
- handed-over to the landfill site of other company	83.30	85.10	45.00	-47
Total for I-V hazard category wastes	343.60	354.56	172.50	-51
JSC ASE EC Kursk Branch Office				
I hazard class waste (extremely hazardous), including:	0.01	0.08	0.01	- 82
- handed over to other specialized companies for decontamination	0.01	0.08	0.01	- 82
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	23.67	36.05	48.60	35
- handed over to other specialized companies for use	-	0.83	1.90	129
- handed-over to the landfill site of other company	23.67	35.22	46.70	33
V hazard class waste (no significant hazard), including:	-	2.24	11.30	more than +200
- handed-over to the landfill site of other company	-	2.24	11.30	more than +200
Total for I-V hazard category wastes	23.68	38.37	59.91	56
JSC ASE EC Baltic Branch Office				
I hazard class waste (extremely hazardous), including:	0.02	0.01	0.04	171
- handed over to other specialized companies for decontamination	0.02	0.01	0.04	171
II hazard class waste (high hazard), including:	0.08	-	-	-
- handed over to other specialized companies for use	0.08	-	-	-
III hazard class waste (moderately hazardous), including:	0.16	-	-	-
- handed over to other specialized companies for use	0.16	-	-	-
IV hazard class waste (low-hazard), including:	86.80	34.70	14.80	-57
- handed over to other specialized companies for use	0.10	-	-	-
- handed-over to the landfill site of other company	86.70	34.70	14.80	-57
V hazard class waste (no significant hazard), including:	187.70	150.00	-	not applicable
- handed over to other specialized companies for use	0.20	-	-	not applicable
- handed-over to the landfill site of other company	187.50	150.00	-	not applicable

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
Total for I-V hazard category wastes	274.76	184.71	14.84	-92
JSC ASE EC Representative Office in the Republic of Belarus				
I hazard class waste (extremely hazardous), including:	-	0.05	0.06	26
- storage on company site	-	-	0.06	not applicable
- handed over to other specialized companies for decontamination	-	0.05	-	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	2.91	0.70	-76
- handed over to other specialized companies for use	-	2.91	0.70	-76
IV hazard class waste (low-hazard), including:	3.00	1.24	-	not applicable
- handed over to other specialized companies for use	3.00	1.24	-	not applicable
V hazard class waste (no significant hazard), including:	38.31	41.41	46.93	13
- handed over to other specialized companies for use	38.31	0.02	-	not applicable
- handed-over to the landfill site of other company	-	41.39	46.93	13
Total for I-V hazard category wastes	41.31	45.61	47.69	5
JSC ASE				
I hazard class waste (extremely hazardous), including:	0.55	0.50	0.21	-59
- handed over to other specialized companies for decontamination	0.55	0.50	0.21	-59
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	224.60	303.10	244.50	-19
- handed over to other specialized companies for decontamination	2.00	-	1.60	not applicable
- handed over to other specialized companies for disposal	-	1.60	-	not applicable
- handed-over to the landfill site of other company	222.60	301.50	242.90	-19
V hazard class waste (no significant hazard), including:	0.60	11.00	0.70	-94
- handed-over to the landfill site of other company	0.60	11.00	0.70	-94
Total for I-V hazard	225.79	314.60	245.41	-22

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
category wastes				
JSC ATOMPROEKT				
I hazard class waste (extremely hazardous), including:	0.45	0.32	-	not applicable
- handed over to other specialized companies for decontamination	0.45	0.32	-	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	200.50	196.20	228.40	16
- handed over to other specialized companies for use	42.80	-	-	not applicable
- handed-over to the landfill site of other company	157.70	196.20	228.40	16
V hazard class waste (no significant hazard), including:	43.60	2.10	12.49	more than +200
- handed over to other specialized companies for use	20.40	2.10	12.49	more than +200
- handed-over to the landfill site of other company	23.20	-	-	not applicable
Total for I-V hazard category wastes	244.44	198.62	240.89	21
JSC "Atomenergoproekt"				
I hazard class waste (extremely hazardous), including:	0.57	0.45	0.48	6
- handed over to other specialized companies for decontamination	0.57	0.45	0.48	6
II hazard class waste (high hazard), including:	0.05	0.52	0.21	-60
- handed over to other specialized companies for decontamination	0.05	0.52	0.21	- 60
III hazard class waste (moderately hazardous), including:	2.45	1.80	2.00	12
- handed over to other specialized companies for use	0.75	-	-	not applicable
- handed over to other specialized companies for decontamination	1.70	1.79	2.00	12
IV hazard class waste (low-hazard), including:	1,286.89	1,203.31	786.56	- 35
- handed over to other specialized companies for decontamination	1.86	2.07	1.04	- 50
- handed-over to the landfill site of other company	1,285.03	1,201.24	785.52	- 35
V hazard class waste (no	216.70	259.01	133.30	- 49

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
significant hazard), including:				
- handed over to other specialized companies for use	3.43	14.18	-	not applicable
- handed-over to the landfill site of other company	213.27	224.83	133.29	- 41
Total for I-V hazard category wastes	1,507.28	1,466.69	922.54	- 37
Novovoronezh Branch Office of JSC "Atomenergoproekt"				
I hazard class waste (extremely hazardous), including:	-	0.02	-	not applicable
- handed over to other specialized companies for decontamination	-	0.02	-	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	0.62	1.59	0.24	- 85
- storage on company site	-	-	0.07	not applicable
- handed over to other specialized companies for decontamination	0.62	1.59	0.17	- 89
IV hazard class waste (low-hazard), including:	-	-	0.40	not applicable
- handed over to other specialized companies for decontamination	-	-	0.40	not applicable
V hazard class waste (no significant hazard), including:	-	-	-	-
Total for I-V hazard category wastes	0.62	1.61	0.64	- 60
Volgodonsk Branch Office of TREST ROSSEM LTD.				
I hazard class waste (extremely hazardous), including:	0.02	-	-	not applicable
- handed over to other specialized companies for decontamination	0.02	-	-	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	0.11	-	-	not applicable
- handed over to other specialized companies for use	0.11	-	-	not applicable
IV hazard class waste (low-hazard), including:	-	2.10	-	not applicable
- handed over to other specialized companies for decontamination	-	2.10	-	not applicable
V hazard class waste (no significant hazard), including:	346.00	72.40	-	not applicable
- handed over to other specialized companies for use	346.00	72.40	-	not applicable

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
Total for I-V hazard category wastes	346.33	74.50	-	not applicable
Representative Office of TREST ROSSEM LTD. in the Republic of Belarus				
I hazard class waste (extremely hazardous), including:	-	-	0.26	not applicable
- storage on company site	-	-	0.26	not applicable
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	1.96	not applicable
- storage on company site	-	-	1.96	not applicable
IV hazard class waste (low-hazard), including:	-	-	224.03	not applicable
- handed over to other specialized companies for decontamination	-	-	4.06	not applicable
- storage on company site	-	-	220.00	not applicable
V hazard class waste (no significant hazard), including:	-	-	817.00	not applicable
- storage on company site	-	-	349.44	not applicable
- handed-over to the landfill site of other company	-	-	467.54	not applicable
Total for I-V hazard category wastes	-	-	1,043.22	not applicable
Kursk Branch Office of TREST ROSSEM LTD.				
I hazard class waste (extremely hazardous), including:	-	-	-	-
II hazard class waste (high hazard), including:	-	-	-	-
III hazard class waste (moderately hazardous), including:	-	-	-	-
IV hazard class waste (low-hazard), including:	-	-	249.90	not applicable
- handed-over to the landfill site of other company	-	-	249.90	not applicable
V hazard class waste (no significant hazard), including:	-	-	303.60	not applicable
- handed-over to the landfill site of other company	-	-	303.60	not applicable
Total for I-V hazard category wastes	-	-	553.50	not applicable
JSC "NIKIMT-Atomstroy"				
I hazard class waste (extremely hazardous), including:	0.26	0.37	0.61	66

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
- handed over to other specialized companies for decontamination	0.26	0.37	0.61	66
II hazard class waste (high hazard), including:	0.90	-	-	-
- handed over to other specialized companies for decontamination	0.90	-	-	-
III hazard class waste (moderately hazardous), including:	3.27	0.08	3.56	more than +200
- handed over to other specialized companies for use	2.25	-	-	-
- handed over to other specialized companies for decontamination	0.50	0.08	3.40	more than +200
- handed-over to the landfill site of other company	0.53	-	0.161	not applicable
IV hazard class waste (low-hazard), including:	437.61	397.94	583.40	47
- handed over to other specialized companies for use	32.91	0.50	-	-
- handed over to other specialized companies for decontamination	45.70	-	-	-
- handed-over to the landfill site of other company	359.03	397.44	583.40	47
V hazard class waste (no significant hazard), including:	714.77	746.43	764.15	2
- used for in-house manufacture	46.85	-	-	-
- handed over to other specialized companies for use	38.84	58.80	11.08	-81
- handed-over to the landfill site of other company	629.09	681.07	753.07	11
- handed over to other specialized companies for decontamination	-	6.56	-	-
Total for I-V hazard category wastes	1157.28	1144.82	1351.72	18
PJSC ESM				
I hazard class waste (extremely hazardous), including:	0.08	0.04	0.30	more than +200
- storage on company site	0.08	0.03	-	-
- handed over to other specialized companies for decontamination	-	0.01	0.30	more than +200
II hazard class waste (high hazard), including:	-	0.31	-	not applicable
- handed over to other specialized companies for decontamination	-	0.31	-	not applicable
III hazard class waste (moderately hazardous), including:	1.58	1.45	-	not applicable

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
- storage on company site	1.58	-	-	not applicable
- handed over to other specialized companies for use	-	1.20	-	not applicable
- handed over to other specialized companies for decontamination	-	0.25	-	not applicable
IV hazard class waste (low-hazard), including:	83.01	131.77	284.99	116
- storage on company site	0.40	-	-	not applicable
- handed over to other specialized companies for use	-	2.76	0.93	-66
- handed over to other specialized companies for decontamination	14.96	-	-	not applicable
- handed-over to the landfill site of other company	67.65	129.01	284.06	120
V hazard class waste (no significant hazard), including:	493.82	374.34	221.13	-41
- storage on company site	1.39	-	-	not applicable
- handed over to other specialized companies for use	41.454	48.88	26.916	-45
- handed-over to the landfill site of other company	450.98	325.46	194.22	-40
Total for I-V hazard category wastes	578.48	507.89	506.42	0
ENGINEERING DIVISION*				
I hazard class waste (extremely hazardous), including:	2.30	2.96	2.57	-13
- storage on company site	0.08	0.03	0.51	more than +200
- handed over to other specialized companies for decontamination	2.22	2.94	2.06	-30
II hazard class waste (high hazard), including:	1.23	1.59	0.70	-55
- handed over to other specialized companies for use	0.08	-	-	not applicable
- handed over to other specialized companies for decontamination	1.18	1.56	0.70	-55
III hazard class waste (moderately hazardous), including:	8.20	7.82	8.48	8
- storage on company site	1.58	-	2.03	not applicable
- handed over to other specialized companies for use	3.27	4.11	0.70	-83
- handed over to other specialized companies for decontamination	2.82	3.71	5.59	51
- handed-over to the landfill site of other company	0.53	-	0.16	not applicable
IV hazard class waste (low-hazard), including:	2,941.074	2,917.32	3,138.00	8
- storage on company site	0.40	-	220.00	not applicable
- handed over to other specialized companies for use	78.81	5.33	2.83	-47

Generation of wastes as per hazard categories and ways of processing	Waste volume, tons			
	2016	2017	2018	(2018-2017)/2017, %
- handed over to other specialized companies for decontamination	66.19	4.17	8.10	94
- handed over to other specialized companies for disposal	-	1.60	-	not applicable
- handed-over to the landfill site of other company	2,795.57	2,906.22	2,907.11	0
V hazard class waste (no significant hazard), including:	2,173.79	1,802.34	2,408.53	34
- used for in-house manufacture	46.85	-	-	not applicable
- storage on company site	1.40	-	349.44	not applicable
- handed over to other specialized companies for use	496.03	203.07	56.60	-72
- handed over to other specialized companies for decontamination	-	6.56	-	not applicable
- handed-over to the landfill site of other company	1,629.53	1,572.71	2,002.49	27
Total for I-V hazard category wastes	5,126.60	4732.00	5,558.30	17

*The data earlier provided in the Public Annual Report for 2016, 2017 was recalculated for 2016, 2017, 2018 due to the following:

- exclusion of information about Sibirsky Orgstroyproekt JSC caused by the lack of activity from the 2nd half-year of 2017 and the enterprise's being liquidated;
- exclusion of information about VdMU LLC, SMU No. 1 LLC, JSC "Spb EIZ";
- closing/opening of TREST ROSSEM LTD. branch offices;
- separation of information regarding the Directorate for Novovoronezh NPP-2 in JSC "Atomenergoproekt";

(GRI 301-1) Table 11.8 - Information about the weight of the disposed paper products

Name of company (object/name of materials used including paper products)	Weight of materials used, tons			
	2016, t	2017, t	2018, t	(2018 - 2017)/2017, %
JSC ASE EC	No data	170.48	91.17	-46.5
JSC ASE	No data	12.00	9.90	-17.5
JSC ATOMPROEKT	No data	49.9	46.70	-6.4
JSC "Atomenergoproekt"	No data	48.10	83.92	+ 74.5
JSC "NIKIMT-Atomstroy"	No data	27.28	30.10	+10.3
PJSC ESM (with account of branch offices)	No data	12.87	1.63	-37.1
TREST ROSSEM LTD. (with account of branch offices)	No data	No data	14.39	not applicable
Total for the Engineering Division	No data	320.63*	277.81	-13.4

* the data is updated

Table 11.10 - Surface of applied and reclaimed soil

Title	Total area of used land, m2				Total area of reclaimed land, m2			
	2016	2017	2018	2018/2017 %	2016	2017	2018	(2018- 2017)/201 7 %
JSC ASE EC Volgodonsk Branch Office	83,747	83,747	-	-	-	-	-	-
JSC ASE EC Kursk Branch Office	997,000	-	-	-	27,667	-	-	-
TOTAL	997,000	83,747	-	-	27,667	-	-	-

Table 11.11 Expenditures for environmental protection measures, mln. rubles

Name of company	2016	2017	2018 plan	2018 fact	(2018-2017)/ 2017, %
JSC ASE EC (Nizhny Novgorod and Nizhny Novgorod region)	2.59	2.73	-	5.44	99
JSC ASE EC Volgodonsk Branch Office	0.31	0.67	0.43	0.43	-36
JSC ASE EC Kursk Branch Office	0.25	2.04	-	1.05	-49
JSC ASE EC Baltic Branch Office	0.77	0.73	2.40	2.40	229
JSC ASE EC Representative Office in the Republic of Belarus	0.11	0.27	0.10	0.04	-85
JSC ASE EC Branch Office in Hungary	-	-	-	-	-
JSC ASE	1.29	2.29	-	1.64	-28
JSC ATOMPROEKT	3.38	1.12	2.40	2.34	109
JSC "Atomenergoproekt"	1.24	1.98	1.93	0.71	-64
Novovoronezh Branch Office of JSC "Atomenergoproekt"	0.73	0.68	0.86	0.84	24
Volgodonsk Branch Office of TREST ROSSEM LTD.	0.03	0.03	-	-	not applicable
Representative Office of TREST ROSSEM LTD. in the Republic of Belarus	-	-	-	0.39	not applicable
Kursk Branch Office of TREST ROSSEM LTD.	-	-	-	0.95	not applicable
Branch Office of TREST ROSSEM LTD. in the People's Republic of Bangladesh	-	-	-	0.38	not applicable
JSC "NIKIMT-Atomstroy"	4.18	5.01	3.50	3.50	-30
PJSC ESM	0.04	0.10	0.02	0.02	-83
Total for Rosatom State Corporation Engineering Division*	14.90	17.66	11.64	20.14	14