

Ministry of Energy

Economic operator: S.N. Nuclearelectrica S.A.

Registered office / address: 65 Polona St., district 1, Bucharest

Sole Registration Number: RO10874881

Annex no. 4

Investment program, fittings and financing sources

thousand lei

Indicators		Investment completion date	Investments Program 2018 Approved according to OGAS no. 3/March 02, 2018	Achieved 2018	Investments Program 2019	Proposal 2020	Proposal 2021	
0	1	2	3	4	5	6	7	8
I		Investment financing source, out of which:		515.258	558.979	553.410	583.184	599.250
	1	Own sources, out of which:		515.258	558.979	553.410	583.184	599.250
		a) amortization		500.800	544.521	553.410	567.245	580.292
		b) profit		14.458	14.458	-	15.939	18.958
	2	State subsidies		-	-	-	-	-
	3	Bank credits, of which:		-	-	-	-	-
		a) internal		-	-	-	-	-
		b) external		-	-	-	-	-
	4	Other sources, of which:		-	-	-	-	-
		- stock exchange listing		-	-	-	-	-
		- carried forward amortization		-	-	-	-	-
		- SNN own sources		-	-	-	-	-
II		Investment expenses, of which:		461.997	351.043	466.005	552.801	453.883
	A	Ongoing investments, of which:		96.000	30.977	94.462	200.439	183.704
		a) for goods privately owned by the economic operator:		96.000	30.977	94.462	200.439	183.704
	1	SNN Headquarters		21.439	3.088	3.709	94.903	44.050
	1.1	CNE Cernavoda (U3-U5), of which	2019	9.100	-	44	-	-
		- Initial contribution to the share capital of JVCo	2019	9.100	-	44	-	-
	1.2	Capitalization of the expenses with financial and legal consultancy U3&U4	2018	1.966	611	-	-	-
	1.3	Extension of the life cycle of Unit 1 by re-tubing the reactor and refurbishing the main systems (studies)	2021	10.373	2.477	3.665	94.903	44.050
	2	CNE Cernavoda branch (U1+U2)		74.436	27.889	90.633	105.300	139.654
	2.1	Intermediary used fuel storage (including SICA U#2)	2047	14.177	8.624	12.925	18.271	14.023
	2.2	Modernization and expansion of physical security system	2021	16.600	8.192	19.736	7.500	36.826
	2.3	Tritium removal installation	2025	-	2	400	5.400	59.714
	2.4	Emergency control alternative center U1+U2 (Design services for extending the review system and TVCI U#2, CR 23313)	2021	1.000	-	827	55	9.953

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2.5	Increasing the safety in the operation of the power discharge system of CNE Cernavoda, by refurbishing the power discharge transformers and providing a spare trafo for two units	2021	4.644	-	10.000	9.721	5.007
2.6	Improving of CNE Cernavoda response, namely of nuclear security functions in case of events outside the projection bases due to the nuclear accident occurred at the nuclear plant Fukushima 1, Japan (U5 fitting)	2021	26.241	8.733	30.000	39.433	772
2.7	Improving of CNE Cernavoda response, namely of nuclear security functions in case of events outside the projection bases due to the nuclear accident occurred at the nuclear plant Fukushima 1, Japan (implementation of MPA EC 1094 and MPA EC 1192)	2019	-	-	1.270	-	-
2.8	Equipment for extracting horizontal and vertical flow detectors of HESIR type (*)	2019	-	-	3.181	-	-
2.9	Fitting of the land owned by CNE and relocating the necessary buildings for the proper operation of the Seiru warehouses on the territory of CNE Cernavoda	2020	4.625	504	-	5.021	-
2.10	Rehabilitation and modernization of the fire water pumping station - SPAI (*)	2021	-	-	-	4.650	1.185
2.11	Purchasing lands / buildings and works for the rehabilitation / modernization / extension	2021	1	-	-	250	250
2.12	Expenses for drafting pre-feasibility studies, feasibility studies and other studies related to the investment units	2021	6.629	-	7.650	15.000	11.925
2.13	Replacing the control section of the excitation system 2-41280-PL 1615 from Unit 2	2019	-	811	4.644	-	-
2.14	Installing stainless steel supports, for storing containers loaded with burnt fuel, in Burnt Fuel Storage Tanks at Unit 1 and 2 (S1-126 and S2-126), in order to extend the storage capacity of these tanks	2018	176	704	-	-	-
2.15	Installing on line measuring systems of gas concentrations dissolved in the electro- insulating oil of power transformers for 5144-T03/T04, 5134-T05/T06 from U1 and U2 and 0-5134-T1/T2 and 0-5135-TC01/TC02 from U0	2018	344	320	-	-	-
3	FCN Pitesti Branch		125	-	120	236	-
3.1	Integrated computer system for managing the production of nuclear fuel (SIMP)	2020	125	-	120	236	-
	b) for the goods from the public domain of the state or of the administrative-territorial unit:		-	-	-	-	-

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	c) for the goods from the private domain of the state or of the administrative-territorial unit:		-	-	-	-	-
	d) for goods taken in concession, leased or under administration, excluding those from the public or private domain of the state or of the administrative-territorial unit:		-	-	-	-	-
B	New investments, of which:		37.358	5.657	419	96.815	32.099
	a) for goods privately owned by the economic operator:		37.358	5.657	419	96.815	32.099
1	CNE Cernavoda Branch		31.272	625	324	91.059	30.038
1.1	Rehabilitation and fitting of roads, platforms and underground pipelines (includes the decommissioning of the internal railway, of the black oil unloading ramp and of the ABA boiler; refitting of the land and building holes for unloading CLU from road tankers)	2021	1.000	-	-	3.900	3.000
1.2	Software for the integrated management of the power station	2021	8.000	-	-	20.797	4.883
1.3	Improvements of the underground water system pumps 1-1531-P01, P02, P03, P05, P06, P07	2021	59	-	-	1.210	47
1.4	Equipment for extracting horizontal and vertical flow detectors of HESIR type (*)	2019	3.038	244	-	-	-
1.5	Introducing in the suction tubing of the ventilation system of the U1 reactor building, before 1-7312-ACU1, of an air dehumidification installation with an absorbing wheel	2020	270	-	-	2.813	-
1.6	Software and hardware refurbishing of the full scope simulator	2021	854	-	-	3.920	3.900
1.7	Expanding the coverage area of the system for monitoring the tritium content in the air U1/U2	2021	1	-	-	887	887
1.8	GEM noble gas spectrometer for ensuring the monitoring of the gas emissions at U2, according to CNCAN requirements	2020	113	-	-	1.395	-
1.9	Rehabilitation and modernization of the fire water pumping station - SPAI (*)	2021	1.290	275	-	-	-
1.10	Refurbishing the fire detection systems installed in NSP-U1 and Pavilion 2	2020	225	-	30	1.505	-
1.11	Replacing the ventilation and air conditioning system related to Pavilion 2	2020	473	-	65	4.473	-
1.12	Replacing the ventilation and air conditioning system related to Pavilion 6	2020	-	-	43	3.922	-

Indicators		Investment completion date	Investments Program 2018 Approved according to OGAS no. 3/March 02, 2018	Achieved 2018	Investments Program 2019	Proposal 2020	Proposal 2021
1.13	Rehabilitation of the water treatment station (STA) U1+U2 (2nd stage)	2021	713	-	-	1.465	1.742
1.14	Improving the reliability of the generating Diesel groups SDG U1	2020	1	-	-	6.975	-
1.15	Increasing the reliability of the EVA 8000 storage system that ensures the centralized storage of the production data of the computer system of CNE Cernavoda by replacing it	2020	11.280	-	-	14.576	-
1.16	Refurbishing systems GFP U1 and GFP U2. Replacing the computers and spectrometers GFP U1 and U2 because of their obsolescence and the necessity for improving their reliability	2020	765	-	93	1.186	-
1.17	Increasing the reliability of the class II 220Vca distribution system, at U2 by replacing the voltage stabilizers 2-5542-VR1A/1B/1C	2020	81	-	-	1.804	-
1.18	Installing an air filtering unit on the fresh air suction line of the air conditioning units 1-7342-ACU3/ACU4 related to CCP U1	2021	1	-	-	4.790	4.186
1.19	Rehabilitation of the cellular component warehouse - Quadricell of DIDSR	2020	341	-	-	1.291	-
1.20	Increasing the reliability of SDS#1 by replacing the amplifier. ROPT SDS#1 U1 and filters EMI Tusonix on drawers NIM-BIN, with new EMI amplifier and filters, similar to project ROP SDS#1 U2	2020	2.765	-	-	2.873	-
1.21	Installing additional panels 1/2-55610-BUYA/ BUYB/ BUYC for investigating the grounding (*)	2020	1	106	-	-	-
1.22	Ensuring the supply of the important consumers at U0 from own sources in order to increase the operating safety in case of losing the supply from SEN	2020	1	-	-	2.804	-
1.23	Increasing the production capacity of the primary thermal agent, according to the requests of the local community from Cernavoda, by building at U2 a thermal unit similar to PTU1	2021	1	-	-	1.860	10.928
1.24	Installing an independent system for monitoring the structures for the manual triggering of the power station in case of a serious earthquake	2021	-	-	-	1.023	465
1.25	Improving the performance of the DCC display system by replacing the Ramtek FS2400 graphics system	2020	-	-	93	4.836	-
1.26	Replacing the axle/pump vibration radial displacement measurement panels NSP U1 (*)	2020	-	-	-	391	-

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1.27	Refurbishing the fire detection and control and the Deluge valve monitoring sections related to the transformers 0-5135-TC01/TC02, 0-5134-T1/T2	2020	-	-	-	365	-
2	FCN Pitesti Branch		171	-	95	800	-
2.1	Implementing computer applications that would supplement the existing ERP system in FCN (purchases, budgets, contracts)	2020	120	-	-	800	-
2.2	Feasibility study regarding the possibility of increasing the storage capacity for raw materials, direct materials, for finished products and annexes	2019	-	-	95	-	-
2.3	Supply with thermal agent and a.c.m. of FCN Pitesti (feasibility study, technical project and tender books, implementation)	2018	36	-	-	-	-
2.4	Smoke evacuation system in hall IV (feasibility study)	2018	15	-	-	-	-
3	SNN Headquarters		5.915	5.033	-	4.955	2.061
3.1	ELINI capitalization	2018	5.915	5.033	-	-	-
3.2	Modernization of the integration and informational flow security on SNN level (SNN Corporate Intranet)	2021	-	-	-	4.955	2.061
	b) for the goods from the public domain of the state or of the administrative-territorial unit:		-	-	-	-	-
	c) for the goods from the private domain of the state or of the administrative-territorial unit:		-	-	-	-	-
	d) for goods taken in concession, leased or under administration, excluding those from the public or private domain of the state or of the administrative-territorial unit:		-	-	-	-	-
C	Investments made at the existing tangible assets (upgrades), of which:		57.174	69.947	90.669	14.934	2.118
	a) for goods privately owned by the economic operator:		57.174	69.947	90.669	14.934	2.118
1	CNE Cernavoda Branch		50.103	69.354	84.190	11.300	1.465
1.1	Refurbishing the running bridges from the clean room and installing a lifting installation in the welding school building at CNE Cernavoda	2021	318	-	65	865	465
1.2	Refurbishing of a weather tower at Unit 1	2018	371	-	-	-	-
1.3	Replacing the mam machine interface related to 2-52300-DG1/DG2	2020	1	-	-	3.509	-
1.4	Capital repairs on the air compressors at U1	2019	691	410	1.350	-	-
1.5	Capital repairs on the air compressors 2-7510 CP3/CP4	2020	-	-	900	900	-
1.6	Capital repairs (R/K) on the electrical pump	2018	1.100	-	-	-	-
1.7	Capital repairs (R/K) on the pump	2018	2.530	-	-	-	-

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1.8	Redoing the coil of the 4323 rotor	2018	235	-	-	-	-
1.9	Works and services such as investments (replacing motor supply cables 1-7121-PM002/PM003/PM004)	2018	-	2.605	-	-	-
1.10	MPA-EC#2989/Replacing vibration transducers at pumps 1-4323-P01, P02 and P03 (full services: ensuring the parts, assembly and startup testing)	2021	-	-	679	1.000	1.000
1.11	Services associated to the implementation of the immobilizing spare parts in U2 OP 19 (2018: inspections and works on the Turbogenerator OP U2)	2019	15.000	48.984	46.160	-	-
1.12	Capital repairs at Diesel generators U2&1	2018	3.658	-	-	-	-
1.13	Special drainage works on the Danube Black Sea canal	2020	3.108	290	5.026	5.026	-
1.14	Implementation of the fuel channel program (inspection of the fuel channels in U2 OP19)	2019	-	-	21.362	-	-
1.15	Inspections on 3 GA OP U1	2018	10.909	9.452	-	-	-
1.16	Implementation of the buried pipeline program (inspections BP U1 and U2)	2019	1.281	1.234	1.185	-	-
1.17	Inspections on Snubbers OP U1	2018	1.110	-	-	-	-
1.18	Implementation of the Feeder program CR 28786 (Inspection of Feeders in U2 OP19)	2019	4.220	4.536	5.597	-	-
1.19	Inspections ECT HX OP U1/ U2	2019	1.798	1.809	1.865	-	-
1.20	Thermal insulation works on the facades of Bl. A1	2018	660	-	-	-	-
1.21	Installation of the distribution of drinking water of FJ3 for the accommodation complex	2018	265	-	-	-	-
1.22	Remedying the tennis field area of the accommodation complex	2018	346	-	-	-	-
1.23	District heating bus between F39 and F45 connection PT 18	2018	2.500	33	-	-	-
2	FCN Pitesti Branch		6.651	593	6.479	3.634	653
2.1	Modernization of the fuel bundle manufacture line in order to optimize the flow of manufacturing and improving the quality of the finished product	2019	5	-	590	-	-
2.2	Modernization of the communication infrastructure, fitting the data center according to the TIA942-1 standard, and implementing measures for mitigating the information security risk	2021	2.170	-	2.323	2.045	653
2.3	Hydro-insulation works on FCN buildings: hall V, hall IV, administrative pavilion	2018	460	466	-	-	-
2.4	Modernization of offices, work spaces and hatches, cafeterias - design and technical assistance, implementation and fittings	2019	373	-	503	-	-

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2.5	Modernization of the ventilation installation of the physical-chemical laboratories	2019	450	-	765	-	-
2.6	Capital repairs on the Schaublin drilling machine	2018	29	29	-	-	-
2.7	Modernization of the system of collecting the beryllium water	2018	41	25	-	-	-
2.8	Modernization of the drinking/industrial water routes of FCN (partial)	2018	70	45	-	-	-
2.9	Modernization of the cable routes and MEG alarm systems	2018	23	-	-	-	-
2.10	Modernization of the measuring machine in 3 coordinates, DEA	2018	28	27	-	-	-
2.11	Design and implementation of the LED indoor lighting system for the general commodity warehouse	2019	55	-	16	-	-
2.12	Modernization of the training room and the SPPI office	2019	-	-	135	-	-
2.13	Capital repairs on the rotational press R53	2020	1.840	-	1.340	500	-
2.14	Capital repairs of Rolcompacto I	2019	371	-	371	-	-
2.15	Modernization of the tube cutting machine	2020	300	-	-	300	-
2.16	Modernization of the chamfering and burring machine	2020	419	-	-	419	-
2.17	Modernization of the Feintool GKP F-40 press	2020	-	-	-	265	-
2.18	Anti-fire system at the ventilation system of hall IV (design and implementation)	2020	18	-	30	105	-
2.19	Rebuilding the floors of Hall IV (including the annexes) and Hall V	2019	-	-	125	-	-
2.20	Renovation of SMEU workshops	2019	-	-	80	-	-
2.21	Modernization and rehabilitation of the FC Warehouse	2019	-	-	47	-	-
2.22	Modernization and rehabilitation of the Zy-4 Warehouse	2019	-	-	75	-	-
2.23	Hydro-insulation of the roof of the FC and Zy-4 warehouses	2019	-	-	35	-	-
2.24	Rebuilding the epoxy floors of the FC and Zy-4 warehouses	2019	-	-	36	-	-
2.25	Building the concrete platform # 10 cm, 45 sq m	2019	-	-	8	-	-
3	SNN Headquarters		420	-	-	-	-
3.1	Thermal rehabilitation of the outdoor facade	2018	420	-	-	-	-
	b) for the goods from the public domain of the state or of the administrative-territorial unit:		-	-	-	-	-
	c) for the goods from the private domain of the state or of the administrative-territorial unit:		-	-	-	-	-

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	d) for goods taken in concession, leased or under administration, excluding those from the public or private domain of the state or of the administrative-territorial unit:		-	-	-	-	-
D	Fittings (other purchases of tangible assets)		54.336	33.118	70.999	31.157	26.505
1	CNE Cernavoda Branch		47.415	30.021	61.923	23.186	22.178
2	FCN Pitesti Branch		3.698	2.920	7.504	7.971	4.327
3	SNN Headquarters		3.223	177	1.572	-	-
E	Reimbursements of instalments related to investment credits, of which:		217.130	211.344	209.457	209.457	209.457
	a) internal		-	-	-	-	-
	b) external		217.130	211.344	209.457	209.457	209.457

(*) Investment which in 2018 represented new investments, consequently the level achieved for 2018 is shown in chapter B - "New investments"; if not completed in 2018 and continued in 2019, they are shown in chapter A - "Investments in progress" starting with 2019.

Chief Executive Officer
Cosmin Ghita

Chief Financial Officer
Adrian Gabriel Dumitriu