

Subject to analysis and endorsement in the BoA meeting dated 30.01.2020 and approval in the O.G.M.S. meeting dated 05.03.2020
Maintenance Development Agreement
Investment Management Department
No. 3874/30.01.2020

ENDORSED**The Board of Administration**

Pursuant to Decision no.
2 dated 30.01.2020

Chairman of the Board of Administration**GHEORGHE Cristian - Florin****SUBSTANTIATION NOTE**

For the approval, by the OGMS, of the Investments Programme for 2020
(containing also the estimates for the years 2021 - 2022)

The Investments programme for the year 2020 and the estimates for the years 2021 - 2022 is an Annex to the Income and Expenditure Budget of 2020 and of the estimates for the years 2021 and 2022, investment spending and financing sources representing elements presented in the budget.

The prices for oil transport charged by the company, approved by NAMR include a modernization quota intended to finance the investment objectives included in the programs of rehabilitation, modernization and development, agreed with the National Agency for Mineral Resources as per "Oil agreement for concession of the operating activity of the national transport system of crude oil, richgas, condensate and ethane, including major pipelines and installations, equipments and annexed endowments".

For the substantiation of the investment program 2020-2022 were analyzed the achievements estimated at December 31, 2019, namely the physical state and the value of the ongoing investments, in order to determine the remaining budgeted expenses in the period prior to completion as well as the new investment proposals developed by entities within CONPET. Inclusion in the investment program of the new objectives was made only for proposals that were based on substantiation notes.

The estimated value of the investments for the period 2020-2022, determined by further investments, under different stages (feasibility studies, design, planning and execution, execution), of the values estimated for new investments and of the transport program is 320 million RON.

In terms of operations, the proposed investment works should aim to provide transport oil in the established parameters - volume, pressure, compliance with technological admitted losses as well as choosing the solutions that allow intelligent pigging, in pipelines replacement, which will ensure operational safety of the major pipelines of crude oil transport, eliminating risk factors.

To ensure optimal conditions for transport of crude oil and avoid the risk of further damage with serious environmental consequences, replacing or restoring crossings shall be necessary.

The new investments objectives, which will start in 2020, representative technically and in terms of value are presented as follows:

- Replacement of the connection lines Danube crossing C1-C2 and C3-C4 Borcea arm
- Intelligent pigging, detection of the condition of pipelines Ø12" and Ø14 Cartojani - Ploiești

- Modernization of the Integrated Information System
- Modernization of Suplac ramp
- Installation of outdoor shelters in 11 locations

One of the main investments goals with major impact on the environment included in the 2020-2022 draft program is the replacement works of replacing the connection pipes over crossing the Danube, namely wires C1 and C2, and Borcea arm C3 and C4 wires.

The current state of the under crossings is a major risk for the environment, for the petrochemical industry and national economy.

By replacing the pipes in the mentioned crossings, the following objectives will be achieved:

- ensure the functioning of the transport pipeline, on the section in question, in safe conditions and designed parameters;
- removing the serious risk of oil pollution, which would have a major environmental impact on the environment;
- safety in exploitation;
- reducing maintenance costs;
- increase of the operational life;
- ensure optimal oil transport conditions at the designed parameters;
- positive impact on the natural and human factors in these areas.

Between 2017-2019, CONPET has finalized the study in view of finding an optimal solution for the design and execution of several new crude oil lines considering the new assembling technologies (guided drilling), the transported crude oil quantity, the use of the same diameter with the tubular material upstream/downstream, waiver of the keyboard system C1, C2, C3 and C4 - other areas with maximum potential on the environment, the correlation with the new technical and legislative requirements.

Following the topographic, hydrological, geophysical and geotechnical studies conducted during November 2017-March 2018, the drawing up of the documentation and the production of the necessary execution permits it was determined that the solution for crossing the Danube river and Borcea arm by horizontal directional drilling is the only technical solution which fulfills cumulatively the possibility of execution, the safety execution conditions and environmental protection, and which is accepted by the signers.

In a global context marked by climate change, global warming, increase of pollution level, and also by the concerns of institutions to combat the effects of these phenomena, the achievement of this investment objective will help improve the quality of the environmental factors by ensuring the functionality of the crude oil transport pipelines in safety conditions and avoid the potential damage that may occur for technical accidents.

The estimated costs to achieve this investment objective were based on price quotations and market prices for materials, equipment, transportation as well as investments with technical characteristics and specific parameters similar to the investment objective.

The projected value estimated for the replacement of connection wires connecting the pipes for transporting crude oil imports 14", 20" and 28", between the stations C1-C2 and C3-C4 including crossing the Danube river and Borcea arm by horizontal directional drilling stages, is of 168.9 million RON, VAT excluded, of which 154.6 million RON C + M. The difference of 14 million RON represents costs of design and technical assistance amounting to 1.1 mil. RON, contingency in amount of 12.1 and 0.8 mil. RON various other expenses (fees, taxes, etc.). In the investment plan it was foreseen the amount of 160 million RON, amount composed of C + M, design and technical assistance as well as compensation expenses, taxes and permits. The estimated execution period of the investment objective is of 30 months. The contracting of the design and execution works for the replacement of the connection wires on the import crude oil transport pipes of 14", 20" and 28" will start in 2020.

In the first stage it is envisaged the replacement of the connecting wires on the import crude oil transport pipe 20", followed by the replacement of the connecting wires on the import crude oil transport pipe 28". The replacement of the connection wires on the import crude oil transport pipeline 14" will be the work to be executed last and only after the completion of the other two. The terms of execution for the replacement of the connection wires from the 20" and 28" pipes may overlap provided that the carried out works should not interfere with the development works carried out in CONPET working sites.

As mentioned above, the value of the ongoing investment objectives, included in the draft of the Investment Program 2020 and estimates for the years 2021 - 2022, was based on information on the physical status and their value on 31.12.2019.

Also, because of some unforeseen circumstances that may occur in the field, throughout the works, eg. additional works or waiver at work, which could lead to changes (additions/decreases) of the budgeted values.

The works from the investment program for the period 2020-2022 are presented in the structure, according to stage, as follows:

The value of expenses with the investment objectives proposed in the Multiannual Investment Programme is as follows:

- Year 2020 – 97,500 thousand RON
- Year 2021 – 142,000 thousand RON
- Year 2022 – 80,000 thousand RON

The investment programme proposed for 2020 has a total value of 97,500 thousand RON, out of which, on financing sources:

- Modernization quota - 70,000 thousand RON
- Own sources – 27,500 thousand RON

INVESTMENTS PROGRAM 2020

Thousand RON

Crt. no.	Name of the Objective	Program 2020		
		Total, out of which:	Modernization quota	Own sources
	Total investments, o/w:	97,500	70,000	27,500
I	OPERATING DOMAIN of which:	70,000	70,000	0
1	Pipelines rehabilitation, out of which:	34,493	34,493	0
1,1	Pipeline replacement	27,272	27,272	0
1,2	Safe disposals	7,221	7,221	0
2	Line replacement C1-C2 Danube over crossing and C3-C4 Borcea, in total length of 24 km.	1,207	1,207	0
3	Modernization and monitoring of the cathodic protection system related to the NTS domestic and import - stage 2	1,000	1,000	0
4	Achievement of a pilot installation (system) for detection and location of product leak from the pipeline system Poiana Lacului - Siliste - Ploiesti - ATMOS, SIM, OFFLINE and ATMOS TRAINER simulation programs	244	244	0

5	Technical support and consultancy	25	25	0
6	Tanks	8,488	8,488	0
7	Energy works	3,376	3,376	0
8	Telecommunication works	2,415	2,415	0
9	Pumping systems upgrade	1,875	1,875	0
10	Stations/ramp upgrade	6,376	6,376	0
11	Buildings, station fences	1,000	1,000	0
12	Automation and SCADA works	8,220	8,220	0
13	Other works	925	925	0
14	Projects, Studies, Technical Appraisals	115	115	0
15	Independent facilities and equipment	241	241	0
II	OPERATING DOMAIN of which:	27,500	0	27,500
1	Pipelines rehabilitation	3,122	0	3,122
2	Buildings, station fences	6,098	0	6,098
3	LDH and wagons	7,000	0	7,000
4	Other works	1,957	0	1,957
5	Intangible investments	1,823	0	1,823
6	Independent facilities and equipment	7,500	0	7,500

The most important investment projects for the National Transport System, contained in the program 2020-2022, are:

I. PUBLIC DOMAIN

I.1. PIPELINES REHABILITATION

The necessity and opportunity have been established following the intelligent pigging inline inspections, the breakdowns history and the soil resistivity measures. The measures required by the environmental and water management authorities, comprised in the compliance programs, represented one of the determining reasons for making the decision to carry out various works on pipelines rehabilitation.

At substantiation there have been considered the projects execution stages, namely the contracting of the design services and subsequently the contracting of the execution works.

Following the internal analyses performed it was realized a prioritisation of the works according to the breakdown - related risk estimated for each pipeline.

I.1.1 Pipelines replacement - out of which, the most important are:

- Crude oil pipeline replacement Ø 14" Bărăganu-Călăreți resulting following the intelligent pigging, on routes with a total length of 15,972 m having an estimated repair coefficient higher 0.8;
- Replacement of crude oil pipeline Ø 24" Călăreți – Pietroșani (7 sections) in total length of 5.9 km;
- Replacement of Ø 10 3/4" F1 + F2 crude oil pipeline Silistea Ploiesti, L= 2 x 3,481 m, in the areas Ilfoveni-Iuda forest, Racovita valley way, Habeni-Comisani, Mija;
- Replacement of the crude oil transport Ø103/4", F2 Silistea – Ploiesti in the area Brazi Stadium - inside Petrobrazi Refinery, Prahova County, on a length of approx. 1170 m and replacement of the cleaning installation.

I.1.2. Safe disposals – out of which, the most important are:

- Safe disposal overcrossing of Prahova river with crude oil transport pipelines 12 1/4" and 14 3/4" Cartojani-Ploieșt, Stejaru village, Brazi Commune, Prahova county - final stage
- Safe disposal of the overcrossing of the crude oil transport 12 3/4" și 14 3/4" Cartojani-Brazi Refinery of the river Arges, Găiseni area, Giurgiu County.

The aim was to carry out some safety disposal works of the water crossings infrastructure having the role of increasing the safety level in operating the respective pipelines and protection against pollution

of the crossed watercourses. The pipelines composing the crude oil National Transport System overscross various watercourses in two constructive solutions: aboveground and underground. In time, the crossed water beds were either changed by some natural factors, or by the human intervention on the watercourse (gravel pit exploitations).

The safety disposal works for pipeline crossings are being performed by:

- low weirs;
- bank protections upstream and downstream of the low weir
- wave breakers
- piles foundation consolidation;
- bank protections on the route of the pipelines which are parallel with the river bed (damaged bank);
- other works related to pipeline consolidation.

I.2 Line replacement C1-C2 Danube Overcrossing and C3-C4 Borcea Arm, Feasibility study completed.

I.3 MODERNIZATION AND MONITORING OF THE CATHODIC PROTECTION SYSTEM RELATED TO THE NATIONAL TRANSPORT SYSTEM IMPORT AND DOMESTIC - stage 2

Design and execution project for a number of 30 locations.

I.4 ACHIEVEMENT OF AN INSTALLATION PILOT (SYSTEM) FOR THE DETECTION AND LOCATION OF THE PRODUCT LEAKS FROM THE PIPELINES SYSTEM POIANA LACULUI - SILIȘTE-PLOIEȘTI - simulation program ATMOS SIM OFFLINE and ATMOS TRAINER

Ongoing execution contract.

I.5 Technical Support and Consultancy

I.6 TANKS – out of which, the most important are:

- Modernization of Băicoi tank farm
- Crude oil tank with a capacity of 2,500 cubic meters at Poiana Lacului station
- Crude oil tank with a capacity of 2,500 cubic meters at Orlesti station
- Rehabilitation of the crude oil tank R3, with a capacity of 31,500 cubic meters at Calareti station
- Condensation tank with a capacity of 500 cubic meters at Bărbătești station

I.7 ENERGY WORKS – out of which, the most important are:

- Modernization of the heating system and heating network from Baicoi Station
- Modernization of the thermal power plant - Calareti crude oil station
- Modernization of converter from Videle Station

I.8 TELECOMMUNICATION WORKS – out of which, the most important are:

- Cyber Security within the Telecommunication system for similar SCADA channels (UPS monitoring, Air Conditioning etc);
- Installation of outdoor shelters in 11 locations

I.9 PUMPING SYSTEMS UPGRADE – out of which, the most important are:

- Modernization of pumping station Potlogi
- Modernization of pumping station Ochiuri
- Modernization of pumping station Satchinez

I.10 MODERNIZATION OF THE RAMPS

- Upgrade Ciresu ramp
- Upgrade Berca Ramp
- Upgrade Imeci ramp
- Upgrade Marghita ramp

I.11 BUILDINGS, STATION FENCING – out of which the most important are:

- Rehabilitation of Baicoi station building
- Modernization parking shed Biled Ramp

I.12 SCADA and AUTOMATION works - of which tanks – out of which, the most important are:

- Optimizing the SCADA system and Hard and Software upgrade for the Remote Transmission Unit (RTU)
- Patrimonial geographic information system
- Design and installation of relocated crude oil measuring skids

I.13 OTHER INVESTMENT OBJECTIVES - of which the most important are:

- Rehabilitation of the access road - Bărbătești warehouse
- Vertical systematization in Biled ramp

I.14. PROJECT, STUDIES, TECHNICAL EXPERTISE - of which the most important is:

- Feasibility study rehabilitation of unloading ramp "Crețulescu"

II. OPERATOR FIELD**II.1 PIPELINES REHABILITATION** - of which the most important are:

- Replacement of two pipeline sections from the crude oil transport pipeline Ø 65/8” Urziceni–Albesti Paleologu keyboard, section valve Jilavele-Borna 1, 1900 m in length and Borna 2-valve Armășesti road 400 m in length
- Replacement of the crude oil transport pipeline Ø8½”, NEW, Vega-Brazi Refinery, in the Petrobrazi Refinery area - keyboard SKIDs Prahova County, in length of approximately 800 m and replacement of cleaning installation

II.2. BUILDINGS, STATION FENCING – out of which, the most important are:

- Upgrade of Conpet SA headquarters building in Ploiesti, 7 Independentei Avenue.
- Headquarters 2, CONPET - Electric Power Supply - power addition

II.3. LDH and wagons

- Performance of repair type RR and adaption of a new locomotive LDH 1250 HP for electric drive
- Transformation LDH locomotive, 700HP, in LDE with electric transmission
- RG LDH
- RR LDH
- Electric power supply post LEA loading, Barbatesti ramp
- Electric power supply post LEA loading, Biled ramp

II.4. OTHER WORKS - of which the most important are:

- Integrated technical security system for the protection of the compartment where are being handled and stored classified documents, dispatch, SCADA and the special designated rooms belonging to the Telecommunications Department located at the Administrative headquarters 2 of the company CONPET S.A.
- Video conference system software upgrade
- Modernization of Integrated IT System

II.5. INDEPENDENT EQUIPMENT AND ENDOWMENTS - of which the most important are:

- Crane lorry, 45 tons
- Electric vehicle
- Double terrain utility vehicle with 4X4 wheel-drive
- Pipe material transport semitrailer
- Utility all-terrain car;
- Van;
- Cesspool emptier;
- Lifting installations
- Laptops and desktops;

Considering the above, we hereby propose to the Board of Administration the endorsement and namely to the Ordinary General Meeting of Shareholders the approval of the Investment Program related to 2020 (here included the estimation of the investment expenses for the years 2021 and 2022), in the form and contents provided in Annex no.1 to this substantiation Note.

Director General
PhD. Eng. CHIS Timur Vasile

Economic Director
Ec. TOADER Sanda
BUZATU Dan

Head of Maintenance Development Unit
Eng. BUZATU Dan

Head of Investment Management Department
Eng. CÎRLAN Anca

Head of Legal Department
Legal Adviser BĂNICĂ Cornel

2020-2022 INVESTMENTS PROGRAM

ANNEX 1 to the SUBSTANTIATION NOTE

Thousand RON

Crt. no.	Name of the Objective	Objective estimated value	Estimated at 31.12.2019 for the prior contracted objective	Program 2020			Program Quarter I	Program Quarter II	Program Quarter III	Program Quarter IV	Estimated 2021			Estimated 2022			
				Km	total, out of which:	Modernizati on quota					Own sources	Km	total, out of which:	Modernizati on quota	Own sources	Km	total, out of which:
	Total investments, o/w:	599,384	54,595	20	97,500	70,000	17,621	23,742	29,160	26,977	31	142,000	125,000	17,000	80,000	65,000	15,000
I	Public Domain	522,622	47,957	17	70,000	70,000	13,020	19,577	22,959	14,444	31	125,000	125,000	0	65,000	65,000	0
1	Pipelines rehabilitation, out of which:	203,626	13,021	17	34,493	34,493	3,634	11,170	12,818	6,871	29	35,342	35,342	0	24	29,182	0
1.1	Pipeline replacement	192,930	12,740	17	27,272	27,272	2,584	8,005	9,815	6,868	29	34,848	34,848	0	24	28,632	0
1.2	Safe disposals	10,696	281	0	7,221	7,221	1,050	3,165	3,003	3	0	494	494	0	0	550	0
2	Line replacement C1-C2 Danube over crossing and C3-C4 Borcea arm. in total length of 24 km.	160,000	258		1,207	1,207	0	207	0	1,000	2	50,000	50,000		2	15,000	
3	Modernization and monitoring of the cathodic protection system related to the NTS domestic and import - stage 2	6,500			1,000	1,000	0	0	210	790		3,500	3,500			2,000	
4	Achievement of a pilot installation (system) for detection and location of product leak from the pipeline system Poiana Lacului - Silitiste - Ploiesti - ATMOS, SIM, OFFLINE and ATMOS TRAINER simulation programs	428	184		244	244	74	123	47	0		0	0		0	0	
5	Technical support and consultancy	75			25	25	0	0	0	25		25	25		25	25	
6	Tanks	63,432	20,404	0	8,488	8,488	2,538	2,220	1,880	1,850	0	13,847	13,847	0	0	6,900	0
7	Energy works	6,492	116	0	3,376	3,376	920	1,526	530	400	0	3,000	3,000	0	0	0	0
8	Telecommunication works	16,457	7,692	0	2,415	2,415	2,175	0	100	140	0	400	400	0	0	1,450	0
9	Pumping systems upgrade	8,159	284	0	1,875	1,875	50	100	400	1,325	0	6,000	6,000	0	0	0	0
10	Stations/ramp upgrade	40,519	3,894	0	6,376	6,376	2,036	1,433	1,720	1,187	0	9,300	9,300	0	0	9,700	0
11	Buildings, station fences	1,910	235	0	1,000	1,000	150	200	250	400	0	540	540	0	0	135	0
12	Automation and SCADA works	12,445	1,816	0	8,220	8,220	1,238	2,373	4,554	55	0	1,891	1,891	0	0	518	0
13	Other works	2,116	51	0	925	925	0	225	450	250	0	1,140	1,140	0	0	0	0
14	Projects, Studies, Technical Appraisals	223	3	0	115	115	110	0	0	5	0	15	15	0	0	90	0
	Independent facilities and equipment	110			110	110	110	0	0	0	0	0	0	0	0	0	0
II	OPERATING DOMAIN	241			241	241	95	0	0	146		0	0		0	0	
	INVESTMENT OBJECTIVES, o/w:	76,762	6,638	3	27,500	27,500	4,601	4,165	6,201	12,533	0	17,000	17,000	0	15,000	15,000	0
1	Pipelines rehabilitation	56,987	6,638	3	20,000	20,000	4,151	2,765	4,951	8,133	0	9,000	9,000	0	10,725	10,725	0
2	Buildings, station fences	1,450			50	50	0	0	0	50	0	40	40	0	300	300	0
3	LDH and wagons	935			535	535	0	35	200	300	0	400	400	0	0	0	0
4	Other works	450			100	100	0	0	0	100	0	350	350	0	0	0	0
5	Intangible investments	225			0	0	0	0	0	0	0	225	225	0	0	0	0
	Independent facilities and equipment	4,698			1,823	1,823	0	0	643	1,180		2,475	2,475		400	400	

Subject to analysis and endorsement in the BoA meeting dated _____ and approval in the O.G.M.S. meeting dated _____

Crt. no.	Name of the Objective	Objective estimated value	Estimated achieved at 31.12.2019 for the prior contracted objective	Prog. Jan 2020			Program Quarter I	Program Quarter II	Program Quarter III	Program Quarter IV	Estimated 2021			Estimated 2022		
				Km	total, out of which:	Modernizati on quota					Own sources	Km	total, out of which:	Modernizati on quota	Own sources	Km
		19,775		7,500		7,500	450	1,400	1,250	4,400	8,000	8,000	8,000	4,275	4,275	4,275

Director General, - Ph.D. Eng. CHIS Timur Vasile
 Economic Director- Econ. TOADER Sanda
 Head of Maintenance Development Unit BUZATU Dan