



Investment budget for 2022

The Investment Program of CHIMCOMPLEX SA Borzești for 2022 is of EUR 118.6 million, a value that includes the investment projects allocated on the two platforms, as described below.

The implementation of the investment budget is conditioned by obtaining the necessary financing sources (internal and attracted resources), by the evolution of the general economic framework post-pandemic, as well as by the effects of the current geo-political situation generated by the war in Ukraine.

The Investment Program of **the Râmnicu Vâlcea Branch** of CHIMCOMPLEX SA Borzești for 2022 is 99,500,000 euros (from which 4,000,000 euros for closing the hazardous waste landfill) and contains the following investments:

DGL-DLI refurbishment - 2,800,000 euros

- ✓ Ethyleneoxide deposit - 800,000 euros - acquisition of two vessels for ethylene oxide storage and increasing the storage capacity to increase the degree of safety in operation
- ✓ The propylene sphere of 3000 cubic meters - 2,000,000 euro- the continuation of the assembly works of the 3000 cubic meter propylene sphere for increasing the propylene storage capacity and for increasing the degree of safety in operation

Modernization and increase of the installation capacity Propenoxide - 13,500,000 euro

- ✓ Capacity consolidation of Propenoxide installation (PO) – 1,500,000 euro - works for the consolidation of the capacity of 110KTPY PO and for the reliability of the operation
- ✓ New Installation of Propenoxide -12,000,000 euro- realization of a new PO production capacity of 65KTPY to reach the capacity of 175KTPY PO for the manufacture of a quantity of 200 KTPY polyols

Installation Special Polyols– 3,000,000 euro

The work is opportune considering the increase of the market demand for special polyols (diols, trioli) and rigids, simultaneously with the need to reduce the cost of their manufacture in the existing installations.

During 2022, expenses of 3,000,000 euros are foreseen for the completion of the diol and triol manufacturing plant and for acquisitions and works at the U100 installation (polyols mellitus / sorbitol / Mannich / Aminici) - acquisitions automation and control equipment and apparatus, construction-assembly works of equipment, electrical, automation, technological samples in order to start the installation of special polyols



Utilities networks - 3,000,000 euro: fiabilization of water installations for the production of demi water, modernization of the final control station and of the biological station

Increase of the installation capacity Plasticizers (DOTP) -2,500,000 euro- conversion of the PDO installation into a DOTP installation - a plasticizer to value the octanol to a more ecological plasticizer

Increase of OXO II installation capacity – 1,000,000 euro- reliability of Di chloropropane storage and modernization of gas synthesis installation

Thermal Pump CT III – 3,500,000 euro- completion of stage 1 and continuation with phase 2 (2nd steam boiler of 25 t /h)- for reliability of steam production necessary for the operation of technological installations. Contribution to Cogeneration 6MW: 8,24 mil Euro, of which in 2022 1,2 mil Euro and rest for 2023 7,04 mil Eur.

Cogeneration installation CHP 49MW – 30,000,000 euro - completion of stage 1 and continuation with stage 2 (3rd influx for the production of electricity, steam and hot water)- for reliability of electricity and steam production necessary for the operation of technological installations **Electrolyze with Membrane – 17,500,000 euro** -

- ✓ **Rehabilitation of electrolysis electrolyzers for membrane electrolysis – 500,000 euro** – rehabilitation of 2 electrolyzers of the current membrane electrolysis installation
- ✓ **New membrane electrolysis installation - 7,000,000 euros** - The work envisages initiating the replacement of electrolyzers with the latest generation ones, with energy consumption reduced by about 14%, which will lead to savings by lowering electricity costs.
- ✓ **Installation Electrolysis with Membrane II – 10,000,000 euro** - conversion of mercury electrolysis into a new production capacity of soda, green hydrogen, and chlorine to increase the production capacity at PO and polyols

Propenoxide / Polyol logistics – 1,000,000 euros: increasing the fleet of transporting raw materials (propylene and EO) and finished products through the acquisition / execution of new wagons.

Soda /propylene wagons – 6,000,000 euro - acquisition/execution of new wagons

Software maintenance - 700,000 euros - acquisition of a software for tracking maintenance services

Investments Environment – Treatment of wastewater from Propenoxide Section – 1,000,000 euro - implementation of slam dewatering solutions from wastewater from PO manufacturing

Other and maintenance - 10,000,000 euro - works to ensure the general revision for the safety in operation of the installations



Closure of **landfills**: completion of the closure of the hazardous waste landfill by 01.09.2022 and preparation of the opening of a new landfill for non-hazardous waste.

The Investment Program on **the Onesti Platform** of CHIMCOMPLEX SA Borzești for 2022 is 19,100,000 euros and contains the following investments:

- **Installation of calcium chloride granules 30.000 to / year – 1.600.000 euro**
(investment started in 2018)
 - ✓ Construction-assembly works superstructure production hall, trestle, gas basket
 - ✓ Construction works - assembly of the packaging and storage hall
 - ✓ Architectural, room and electrical works
 - ✓ Installation of pipelines and equipment, including utilities pipelines
 - ✓ Works of electrical installations of force, c-da, automation
 - ✓ Electrical installation works related to constructions
 - ✓ Samples, assistance, performance test -Nuberg

- **Installation of silicates Na / Mg / Precipitated silicates – 5.000.000 euro:**
 - ✓ engineering, advance equipment, etc.;

The investment aims to manufacture a new class of products: Sodium silicate (45000 t / year) and its derivatives - Magnesium silicate (3500 t / year) and precipitated silica (8300 t / year) - aiming at superior capitalization of electrolysis products (lye and chlorine), increasing the company's stability by diversifying the range of products and increasing the turnover and profit.

- **Recrystallized salt installation – 3.000.000 euro:**
 - ✓ Engineering, advance for equipment, etc.

The objective of the investment consists in the realization of a manufacturing plant for recrystallized salt (55000 t / year) and sodium sulphate (~ 4000 t / year) – two goods with wide use - by superior capitalization of a part (about 40mc / h) of the ultra-purified diluted brine flow (about 200 g NaCl / l) resulting from the electrolysis process.

The investment ensures a constant and efficient consumption of the steam generated on the Borzesti platform and the improvement of the electrolysis processes on both platforms, by removing from the technological flow about 4000 tons / year of sodium sulfate.

- **Electrolysis modernization – electrolyzers gen. VI – 7.000.000 euro:**
 - ✓ Engineering, advance equipment (electrolyzers, auxiliary equipment automatization), etc.; The project consists in the acquisition and installation of



five new gen 6 electrolysers (replacing gen.2 and gen.5 electrolysers) and of some auxiliary equipment to ensure the operation of the electrolysis inst. at the designed capacity and the increase of the current efficiency respectively the decrease of the energy consumptions on the electrolysers by about 0.3-0.4 MWh/t lye.

- **Modernization of power stations – 1.000.000 euro**
 - ✓ Completion of modernization of the sd 0.4 KV A13b electrical station
 - ✓ Restructuring/modernization of electricity distribution stations 6 Kv/ 0.4 kv (SD6 KV Captan, SD 6KV Soda M, SD 6KV Chlorine, etc.)
 - ✓ Replacement of switches 110 kv – SRA1
 - ✓ Other modernization works

- **Tarcau Fish Complex – 100.000 euro:**
 - ✓ Completion of construction works; samples and BIP

A project with non-reimbursable financing through the Operational Program For Fisheries and Maritime Affairs / Measure II.2 started in 2019

- **Other and maintenance – 1.400.000 euro, of which:**

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|--|--------------|
| <input type="checkbox"/> Extension of the plant capacity Calcium solution to 120,000 tons / year + Bachmann chlorination chamber no. 4 | 74.000 euro |
| <input type="checkbox"/> Modernization of Soda M – tanks, H2 filters; remembranations; rehabilitation of HCl III | 500.000 euro |
| <input type="checkbox"/> Alkylamine installation – pumps; H2 compressor; valves; cooling tower rehabilitation; NH3 vessel | 150.000 euro |
| <input type="checkbox"/> Chlorine Department – heat exchanger; hypo R3 tank; pump; extension Cl. Ferica | 200.000 euro |
| <input type="checkbox"/> PSI water network | 50.000 euro |
| <input type="checkbox"/> Logistics and transport – CF tanks; axle retrieval; RK locomotives; means of transport by car | 100.000 euro |
| <input type="checkbox"/> Rehabilitation of infrastructure – buildings; trestles; rehabilitation of constructions at Tarcau | 25.000 euro |
| <input type="checkbox"/> Investments for the environment – PEHD sale-duct; sewerage; Phoenix cocks; Modernization of station 019 | 125.000 euro |
| <input type="checkbox"/> Equipment endowments / replacements | 100.000 euro |



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|---|-------------|
| <input type="checkbox"/> Other investments – PHOTOVOLTAIC PARK PREPARATION; green energy | 50.000 euro |
| <input type="checkbox"/> Studies, research – phosphates, biocides, carbonate Ca pp; silicates | 26.000 euro |

It is considered the acquisitions / replacements of equipment for the continuation of the modernization, of the capacity extensions and ensuring the reliability of the operation of the manufacturing and commercial flows.

In the annex there is the centralized presentation of the investment expenses scheduled for 2022.

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