

WASTE



1. WHAT IS WASTE FOR OCP

Considered as waste for OCP, any residue from the activities of our group, arriving at the end of its life cycle which **must be managed so as not to harm health, public safety and the environment**, excluding by Products and co-products recycled in operation, such as steel, paper waste, plastic or expired chemicals or used catalyst, etc.

2. WHY IS MASTERY OF WASTE MANAGEMENT SO IMPORTANT FOR OCP?



Waste management has **strong linkages to a range of other global challenges**: health, climate change, poverty reduction, food and resource security, sustainable production and consumption. The political case for action can be significantly strengthened when waste management is viewed as an entry point to address a range of sustainable development issues, many of which are difficult to tackle.

3. OCP HAS CHOSEN THE CIRCULAR ECONOMY APPROACH AS A CATALYST TO TURN ITS WASTE INTO A RESOURCE.



4. WHAT IS THE OCP STRATEGY ABOUT WASTE

Waste management is a key point of the circular economy strategy of OCP. Integrating the regulatory aspect imposing identification and classification and treatment of waste according to their type, the standard OCP «Waste Management» has been developed in accordance with international good practices. The standard governs the identification and classification of waste, the collection, sorting and recovery phases, infrastructure and resources and the audit and training process. The standard emphasizes waste recovery by aiming at the maximum intrinsic value of the waste. Thus, landfilling is reserved for waste for which the valuation paths are not mature, while incineration is to be abolished in favour of recycling, regeneration and reuse. Subcontractors and service providers are rigorously selected and must have government approvals to be awarded contracts collection and sorting. OCP also requires receipt of recovery and treatment of all waste removed to ensure that it is recycled : traceability (BDS: Bordereau de suivi des déchets).



Make our waste a new source of value

24000 cubic meters of industrial waste to be recovered each year, with potential for job creation



5. OCP GOALS

- **70% of hazardous waste recovered by 2023**
- **80% of non-hazardous waste recycled and valued by 2023**
- **Waste sulfur ash converted to sulfuric acid commercial grade**

Partnership to adapt a hydro process metallurgical for revaluation of ashes sulfur

- **Vanadium recovery**

Partnership for a factory local treatment for recover more than **2,000 tonnes per year** of vanadium in the catalysts used for products with higher added value.

- **Waste to power**

Recovery of **2,000 to 3,000 tonnes / year of hydrocarbon waste** into fuel, electricity, black carbon and steel using clean pyrolysis technology

- **Recovery of organic waste**

Based on its expertise in terms of fertilizer production, OCP will produce, from organic waste and other raw materials, organic and organo-mineral fertilizers in order to feed the world this will also strengthen the leadership of OCP on the sustainable agriculture.

6. SOME WASTE RECOVERY SUCCESS STORIES IN OCP

DEVELOPMENT OF ECO-TECHNOLOGIES FOR THE PRODUCTION OF VANADIUM OXIDE

New prospects are emerging for the OCP Group with the vanadium oxide project carried out with a local company. The results of the new process represent a **better approach to recovering hazardous waste from OCP into products with high added value for OCP and its ecosystem and a great achievement in reducing hazardous waste generated by OCP activities.**

The first promising results of the project thus point to a breakthrough in terms of technical innovations but also in economic and environmental terms. In addition, the availability of new technologies for the recovery of vanadium resources locally would allow Morocco **to reduce its dependence on imports of ferro-vanadium and silica.** It could also enable local company to position themselves in the by-product processing market with the potential for direct and indirect job creation as well as for the **development of the local ecosystem.** This would extend the scope of this production beyond the fertiliser industry in terms of the recovery of vanadium waste from other industries.

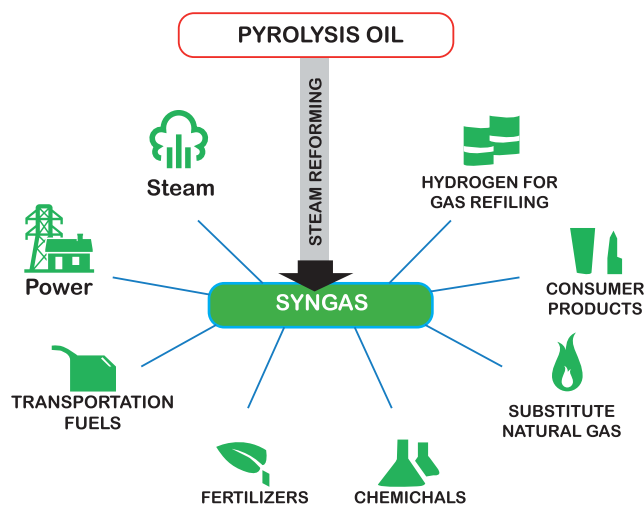
WASTE TO POWER: COMING SOON TO FUEL AND ELECTRICITY FROM OCP WASTE

With its ambitious Circular Economy program and in order to make the most of industrial waste, OCP aims in the near future to **build the first unit pyrolysis in Morocco.**

With avant-garde technology in waste recovery, characterized by its ecological aspect and its high added value, OCP plans to start with a first unit at the **Khouribga** site before being deployed to all operating sites. Through this technology, OCP would be able to treat more than **3,000 tonnes per year of hydrocarbon waste,** including some hazardous waste like used oil, to transform it into fuel, diesel, carbon black, biochar and electricity.

Along the same lines and aware that waste can be an important vector for creating wealth for OCP and its entourage, the project of the pyrolysis unit is built under **the «ecosystem» approach.** This approach wants to be participative inducing **multiple advantages:** a sustainable investment combining both creating jobs, training young people and creating new jobs waste recovery in Morocco.

OCP pyrolysis unit will reach a new milestone not only in terms of circularity and value creation but also in terms digitalization and artificial intelligence, thus ensuring **high efficiency level of waste recovery activities within OCP sites.**



SULPHUR ASH FROM OCP'S INDUSTRIAL SITES: A WASTE TRANSFORMED INTO A HIGH VALUE-ADDED RESOURCE

Sulphur ash from the sulphur smelting and filtering facilities at OCP's processing sites has always been considered a waste. Today, the examination of an innovative solution to treat the ashes by hydrometallurgy to produce **98%** sulphuric acid is well advanced. The latter will be reused at OCP at the **Safi and Jorf Lasfar sites.** A perfect circularity project, it will enable the recovery of **more than 18,000 tons of waste** and will not only generate environmental and economic gains for the stakeholders but will also contribute to the **creation of permanent jobs for the ecosystem.** With this solution and

In addition to other projects initiated, OCP confirms its desire to make its waste a new lever for the development of its ecosystem with the **integration of new sustainable businesses within the framework of its Circular Economy program.**

