

ENVIRONMENTAL INVESTMENT

CAPEX: Integrated CAPEX Management Process seeks to allocate the level of optimal investment required to maintain the correct operation of the cement, redymix and aggregates plants and quarries while seeking to stimulate investment in the most profitable projects in order to improve overall business performance. CAPEX gathers and assigns resources required for the capital investments and to warrant the company's current productive capacity and operative performance and investments to leverage the company's growth (all including environmental and safety regulations).

CAPEX INVESTMENT (USD)

	2013	2014	2015	2016	Comments
Growth CAPEX	102,643,311	152,843,566	132,943,628	764,497,573	Mining, Logistics, Expansion and Enhancement. Also, includes the acquisition of Martinsburg (West Virginia, USA) cement plant in the expansion category. *Growth CAPEX with environmental impact : 12.613.211 USD
Replacement CAPEX	152,164,389	99,343,474	103,347,000	92,048,697	Administrative, Maintenance, Assets Replacement, Technology and Safety. *Replacement CAPEX with environmental impact: 5,402.913 USD, which includes mainly the implementation of Energy Roadmap alternatives
Environmental CAPEX	9,458,416	3,741,177	30,402,645	40,159,769	Includes the required investments for regulatory compliance and to warrant the continuity of the operation. For example, these investments include NESHAP/CISWI emissions compliance projects and optimization of existing dust emissions control systems.
TOTAL	264,266,116	255,928,217	266,693,273	896,706,039	
CAPEX with environmental impact	9,458,416	3,741,177	30,402,645	58,175,893	As it is shown in each category there are CAPEX investments in growth and replacement capex which are not included in the environmental category, therefore we show here the total CAPEX with environmental impact. See table below for details.

2016				Comments
ENVIRONMENTAL MATERIAL ASPECT	CAPEX INVESTMENT (USD)	OTHER INVESTMENT (USD)	SAVINGS (USD)	
Water	2,636,847			Include the optimization of water discharge systems, installation of meters, among others.
Other emissions	32,502,558			Include NESHAP/CISWI emissions compliance projects, optimization and dust control emissions systems.
Biodiversity	119,485	624,825		Include implementation of rehabilitation plans in quarries and investment in offset and conservation projects.
Energy , co-processing and CO2 emissions	16,925,270	1,778,130	5,426,279	The projects and initiatives to reduce CO2 emissions involved investments of approximately USD \$18,7 million, also other investment in the Strategic Alternative Resources Projects and savings expected for the implementation of Energy Roadmap alternatives.
Alternative materials	519,750			Includes projects to use of alternative raw materials in order to reduce use of natural resources.
Other	5,471,983		2,693,077	Includes waste management initiatives and implementation of environmental plans and savings by innovation projects.
TOTAL	58,175,893	2,402,955	8,119,356	

Environmental OPEX include expenses for environmental activities such as planning, execution, measurement, communication and others.

OPEX ENVIRONMENTAL (USD)

	2014	2015	2016	Comments
Environmental management (external consulting services)	3,422,898	3,332,989	3,504,662	Includes costs fo monitoring air quality/ emissions, water quality and effluents, and other technical studies including those needed for regulatory compliance.
Environmental management (internal staff)	2,140,564	2,253,180	2,497,774	Team salaries and benefits, environmental training and travel expenses.
Other environmental costs	838,904	478,402	752,275	Insurance and others.
TOTAL	6,402,366	6,064,570	6,754,711	

ENVIRONMENTAL CAPEX | ENVIRONMENTAL OPEX

