

## MEDIA COVERAGE

### Low Carbon Technology Partnerships initiative

## Advances in the reduction of CO2 emissions: part three

### Thermal substitution

Simultaneously, Votorantim Cimentos has invested in technologies that optimise the thermal and electrical efficiency in its units. One example is the investment in cutting-edge equipment with high-energy efficiency. For example, the company opted to use vertical mills in its units. The equipment is more expensive, but reduces the consumption of electricity by 30%. Moreover, the new kilns installed in the company's units have less heat consumption: the reduction is 6% over conventional processes.

Many results of thermal substitution actions have already been measured in some of the largest units of Votorantim Cimentos in Brazil. In Rio Branco do Sul (PR), the index is already 27%; in Pinheiro Machado (RS), 34% and Itaú de Minas (MG), 37%. The units mentioned are on track to achieve what the Nobre (MT) unit already has in practice: a thermal substitution rate of 40%, the company's target. This unit, located in the country's North Central region, has been replacing fossil fuels with biomass for over 10 years, using raw material generated by the timber, agriculture and sugarcane industries. For the last three years, 24% of fossil fuels were replaced by biomass. Much of the material used is carbon neutral, which avoids the emission of 253 000 t of greenhouse gases, equivalent to a 20% reduction in CO2 emissions.

Considering the overall balance of the company's thermal consumption, Votorantim Cimentos ended 2014 with 3467 MJ per t of clinker, beating the pre-set target of 3560 MJ per t of clinker. Around R\$450 million will still be invested by 2020, so that the goal of 40% thermal replacement level is reached in Brazil. Similarly, actions to develop the co-processing technique are being implemented in other Votorantim Cimentos cement manufacturing plants in the world.

The image shows the acronym 'LCTPI' in large, stylized letters. The 'L' is a vertical bar with a colorful fiber-optic pattern. The 'C' is a circle filled with a blue and white circuit board pattern. The 'T' is a grid of blue and white squares. The 'P' is a 3D wireframe structure. The 'I' is a vertical bar with a green and white circuit board pattern. To the right of the letters is a white silhouette of the Eiffel Tower against a blue sky with white clouds. Below the letters, the text 'Low Carbon Technology Partnerships initiative' is written in a blue, sans-serif font.

## Low Carbon Technology Partnerships initiative

### Global action

With the gradual internationalisation of Votorantim Cimentos, the company also expanded its presence in international sustainability forums. The company was one of the founders of the Cement Sustainability Initiative (CSI) in 1999, which has placed great emphasis on climate change. The CSI is part of the World Business Council for Sustainable Development (WBCSD), an organisation dedicated to the development of sustainable business practices globally.

Among the main actions developed by Votorantim Cimentos in this global forum, is the Cement Technology Roadmap study, developed in partnership with the International Energy Agency (IEA), which aims to develop more efficient processes in the cement industry. Another major initiative is being developed under COP21: the Low Carbon Technology Partnership Initiative (LCTPI), whose goal is the definition of voluntary initiatives among cement producers between 2030 and 2050, based on COP-2009 reports from Copenhagen. This initiative is also developed by the IEA and the WBCSD and Sustainable Development Solutions Network (SDSN).

Because of all the actions in progress, one of the main goals of Votorantim Cimentos and the cement industry is close to fruition. The company has committed to reducing CO<sub>2</sub> emissions by 25% compared to the levels recorded in 1990. The reduction reached 23.3% last year and can be beaten still in 2015.

Votorantim Cimentos believes it is possible to grow while still focusing on sustainability, adopting more efficient processes that benefit both the planet and the company, such as reducing CO<sub>2</sub> emissions, and responsibly using energy and water. All stand to gain, particularly the planet.

**Worldcement.com** - <http://www.worldcement.com/the-americas/01122015/Advances-reduction-CO2-emissions-part-three/>