

Transform the La Mède Refinery

An investment of €200 million to transform the La Mède refinery and create France's first biorefinery, which will be one of the biggest in Europe, to meet growing demand for biofuels.

In order to sustainably restore the competitiveness of its La Mède site, Total will transform some existing units for activities with strong future prospects. The Group will also maintain certain petroleum product refining operations, but halt processing of crude oil, which is reporting heavy losses, at end-2016.

Meeting Growing Demand for Biofuels

The site's flagship operation will be a world-class, 500,000-ton-per-year biorefinery that will manufacture biodiesel primarily from used oils, as well as renewable feedstock. The hydrotreated vegetable oil (HVO) process selected by Total is a French technology developed by Axens that produces high-quality biodiesel that is easily blended into regular diesel in any proportion, with no adverse impact on fuel quality or engines.

A European Union directive sets a target of 10% renewables in transportation in 2020. In France, the draft bill on the energy transition toward green growth calls for increasing the share of biofuels to 15% in 2030 from 7.7% today.

La Mède's forward-looking transformation reflects Total's determination to play an active role in the development of renewable energies, especially biomass, which will be needed to partner fossil fuels to ensure that energy demand is met while at the same time mitigating carbon dioxide emissions.

Maintaining Synergies with Petrochemicals and Developing Robust Activities

While some of the site's units are transformed and crude oil refining is halted, Total will maintain profitable refining activities and develop new ones:

- **Continuing to operate certain existing refining units** (naphtha reformer) to produce the hydrogen needed for biorefining. The existing synergies between La Mède, Naphtachimie and local petrochemical operations will be maintained and Total is confirming its lasting commitment to Naphtachimie, a 50-50 joint venture with Ineos. The Group will also expand its production of jet fuel for civil aviation, targeting a 30% share of the overall European market from the la Mède site.
- **Developing a logistics and storage hub** (capacity of 1.3 million cubic meters) dedicated to refined product trading operations and supplying Total customers. The hub will generate business for the Port of Marseille Fos.
- **Building an 8 MW solar farm using technology developed by Total affiliate SunPower**, to meet 50% of the site's power needs.
- **Building a unit to produce AdBlue®**, an additive that reduces nitrogen oxide emissions by diesel engines and whose market is expanding strongly.
- Following in the footsteps of the successful Oleum training school created as part of the transformation of the Dunkirk site, **setting up Oleum South**, a center with full-scale instructional facilities that will provide training in exploration and production professions, working in partnership with French public research, innovation and training center IFP Training.

Total will join initiatives by local communities to promote the development of new business in the Provence-Alpes-Côte d'Azur region. In particular, it will set up a support fund to help the contractors and service providers affected by the site's transformation. Total will meet with each company, which together represent about 250 jobs, to jointly explore and plan how to go towards new activities. In addition, construction of the new units will generate additional business for local contractors.

A Solid Industrial Project and Exemplary Support for Employees

Total will implement this industrial reconversion without layoffs or imposed transfers for non-exempt employees (operators, office employees, technicians and supervisors). Of the **430 jobs** currently at the La Mède site, **250 will be maintained**.

The workforce will be gradually scaled back through **early retirements**, job offers without imposed geographical mobility **for non-exempt employees**, mainly within Total and its affiliates, and **manager transfers**.

Under French law, the project is subject to the process for informing and consulting employee representatives.

Upgrade the Donges Refinery

An investment of €400 million to upgrade the Donges refinery to capture profitable new markets with low-sulfur fuels that meet the evolutions of European Union specifications.

Total will build units at Donges to win new markets for the site in Europe. This substantial investment will significantly improve the refinery's profitability and secure its long-term future. **The construction of new refining units on the site will go together with the rerouting of an existing rail line** that cuts through the refinery and adversely impacts its competitiveness.

New Units for New Markets

Currently, the Donges refinery lacks desulfurization capacity. That means that a significant proportion of its fuels are exported, because they no longer meet the evolutions of European Union specifications. This situation undercuts the economics of the Donges facility. To ensure new markets for the site, the project entails building:

- **A new desulfurization unit for intermediate feedstock** used to produce low-sulfur fuels that meet the evolutions of E.U. specifications.
- **A steam methane reformer (SMR) to produce hydrogen** needed for the desulfurization unit. The SMR will be built by a contractor under a long-term hydrogen supply contract with the refinery.

The Upgrade of the Refinery Will Go Together with the Rerouting of the Existing Rail Line.

A rail line runs through the refinery site, which is an upper-tier Seveso facility, with trains moving close to the units. Total puts safety ahead of everything else at its industrial facilities and considers that this specific situation — which also undermines the site's competitiveness — is a critical priority that must be addressed. The rail line's existing route is not compatible with developing new refining units. Its rerouting is necessary to ensure the refinery's future.

To that end, Total is engaged in ongoing talks with the French government and local communities to ensure that a decision to reroute the rail line is confirmed as quickly as possible. The aim is to finalize these discussions before the end of this year. The Group has already agreed to finance one-third of the total cost of this public infrastructure project, with the government and local communities funding the remaining two-thirds as this is standard practice under technological risk prevention plans in France.

This timetable will enable the process design package and FEED to be finalized in 2016. Depending on the progress of procedures concerning the rail line, the contracts to build the new units will be awarded in 2017, with a target commissioning date of 2019.