

Investment and Challenges in the Petrochemical and Refining Sectors

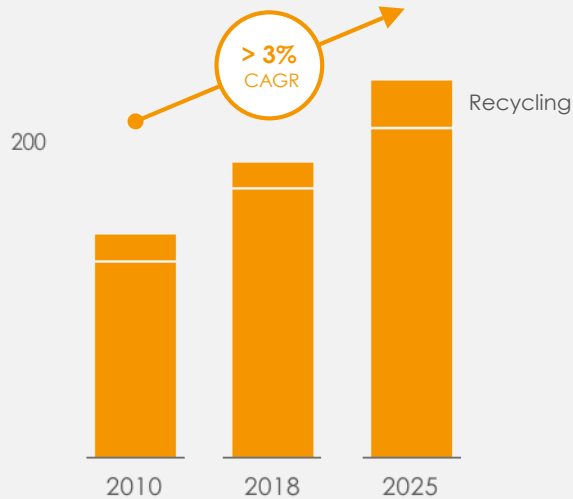
François Good



Growing demand for petrochemicals

More cracker capacity needed to meet rising demand

Main polymer demand*
Mt/y



* polyethylene, polypropylene

Strong market fundamentals

- Growing population
- Lighter weight materials
- Energy efficiency

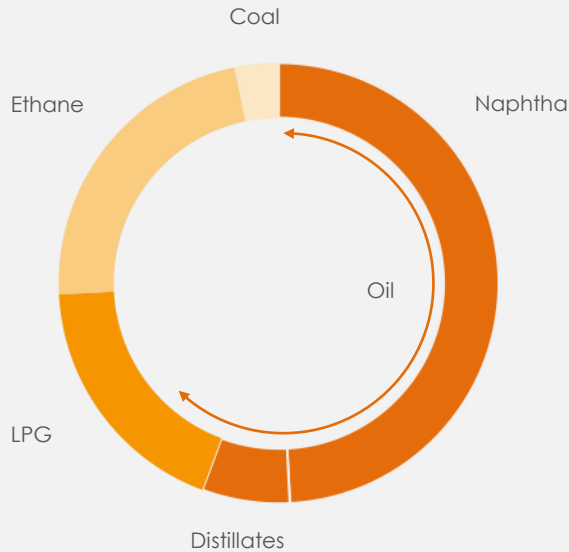
Additional demand ~5 crackers per year

Recycling offers further **growth opportunities**

A clear path to creating value

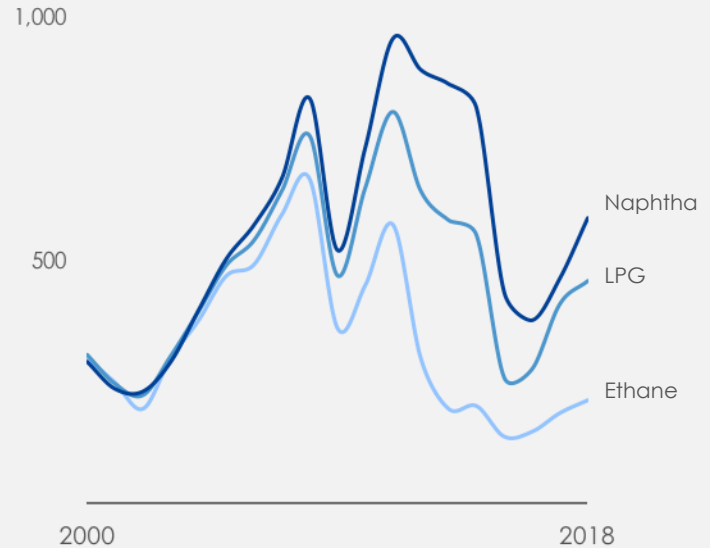
Low cost feedstock key to profitability

Main polymer feedstock



Polymer price is oil-linked

Feedstock prices \$/t



Ethane and LPG discount
driven by US shale growth

Expanding high return petrochemicals

Leveraging world class integrated platforms

Petrochemical projects

US: Total Borealis Nova JV

New **ethane** cracker
PE capacity increase

Start up 2021

South Korea: Hanwha Total JV

Propane cracker expansion
PE & PP capacity increase

Start up 2019-20

Algeria: Sonatrach Total JV

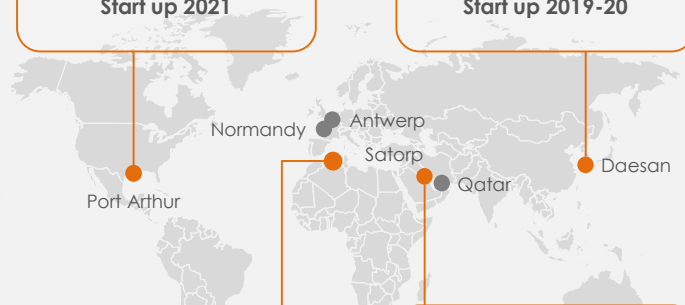
New **Propane** dehydrogenation
+ PP capacity

> 15% IRR, FEED ongoing

Saudi Arabia: SATORP Petrochemicals

New **mixed feed** cracker
New PE capacity

> 15% IRR, FEED ongoing



Investing in **growing markets**

Building on **low cost gas feedstock**

Founding member of new **global alliance to end plastic waste**

Disclaimer

This document may contain forward-looking information on the Group (including objectives and trends), as well as forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, notably with respect to the financial condition, results of operations, business, strategy and plans of TOTAL. These data do not represent forecasts within the meaning of European Regulation No. 809/2004.

Such forward-looking information and statements included in this document are based on a number of economic data and assumptions made in a given economic, competitive and regulatory environment. They may prove to be inaccurate in the future, and are subject to a number of risk factors that could lead to a significant difference between actual results and those anticipated, including the price of petroleum products, the ability to realize cost reductions and operating efficiencies without unduly disrupting business operations, changes in regulations including environmental and climate, currency fluctuations, as well as economic and political developments and changes in business conditions. Certain financial information is based on estimates particularly in the assessment of the recoverable value of assets and potential impairments of assets relating thereto.

Neither TOTAL nor any of its subsidiaries assumes any obligation to update publicly any forward-looking information or statement, objectives or trends contained in this document whether as a result of new information, future events or otherwise. Further information on factors, risks and uncertainties that could affect the Group's business, financial condition, including its operating income and cash flow, reputation or outlook is provided in the most recent Registration Document filed by the Company with the French Autorité des Marchés Financiers and annual report on Form 20-F filed with the United States Securities and Exchange Commission ("SEC").

Financial information by business segment is reported in accordance with the internal reporting system and shows internal segment information that is used to manage and measure the performance of TOTAL. In addition to IFRS measures, certain alternative performance indicators are presented, such as performance indicators excluding the adjustment items described below (adjusted operating income, adjusted net operating income, adjusted net income), return on equity (ROE), return on average capital employed (ROACE) and gearing ratio. These indicators are meant to facilitate the analysis of the financial performance of TOTAL and the comparison of income between periods. They allow investors to track the measures used internally to manage and measure the performance of the Group. These adjustment items include:

(i) Special items

Due to their unusual nature or particular significance, certain transactions qualified as "special items" are excluded from the business segment figures. In general, special items relate to transactions that are significant, infrequent or unusual. However, in certain instances, transactions such as restructuring costs or asset disposals, which are not considered to be representative of the normal course of business, may be qualified as special items although they may have occurred within prior years or are likely to occur again within the coming years.

(ii) Inventory valuation effect

The adjusted results of the Refining & Chemicals and Marketing & Services segments are presented according to the replacement cost method. This method is used to assess the segments' performance and facilitate the comparability of the segments' performance with those of its competitors.

In the replacement cost method, which approximates the LIFO (Last-In, First-Out) method, the variation of inventory values in the statement of income is, depending on the nature of the inventory, determined using either the month-end price differentials between one period and another or the average prices of the period rather than the historical value.

The inventory valuation effect is the difference between the results according to the FIFO (First-In, First-Out) and the replacement cost.

(iii) Effect of changes in fair value

The effect of changes in fair value presented as an adjustment item reflects for some transactions differences between internal measures of performance used by TOTAL's management and the accounting for these transactions under IFRS.

IFRS requires that trading inventories be recorded at their fair value using period-end spot prices. In order to best reflect the management of economic exposure through derivative transactions, internal indicators used to measure performance include valuations of trading inventories based on forward prices.

Furthermore, TOTAL, in its trading activities, enters into storage contracts, which future effects are recorded at fair value in Group's internal economic performance. IFRS precludes recognition of this fair value effect.

The adjusted results (adjusted operating income, adjusted net operating income, adjusted net income) are defined as replacement cost results, adjusted for special items, excluding the effect of changes in fair value.

Euro amounts presented herein represent dollar amounts converted at the average euro-dollar (€-\$) exchange rate for the applicable period and are not the result of financial statements prepared in euros.

This document also contains extra-financial performance indicators, including a carbon intensity indicator for TOTAL energy sales that measures the weighted average greenhouse gas emissions of energy products sold by TOTAL, from their production in TOTAL facilities to their end use by TOTAL customers. This carbon intensity indicator covers, besides direct GHG emissions of TOTAL (scope 1), indirect GHG emissions (scopes 2 and 3) that TOTAL does not control (for the definitions of scopes 1, 2 and 3, refer to Total's Registration Document).

Cautionary Note to U.S. Investors – The SEC permits oil and gas companies, in their filings with the SEC, to separately disclose proved, probable and possible reserves that a company has determined in accordance with SEC rules. We may use certain terms in this presentation, such as resources, that the SEC's guidelines strictly prohibit us from including in filings with the SEC. U.S. investors are urged to consider closely the disclosure in our Form 20-F, File N° 1-10888, available from us at 2, Place Jean Millier – Arche Nord Coupole/Regnault - 92078 Paris-La Défense Cedex, France, or at our website: total.com. You can also obtain this form from the SEC by calling 1-800-SEC-0330 or on the SEC's website: sec.gov.