



ENVIRONMENT AND SOCIETY 2008

Our Corporate Social Responsibilities



TOTAL

Downstream

spans the refining, marketing, trading and shipping of petroleum products, which include automotive and other fuels and specialty products like liquefied petroleum gas (LPG) and lubricants.

Downstream is organized into **Refining & Marketing** and **Trading & Shipping**.



Upstream

includes oil and natural gas exploration, development and production, as well as the production of liquefied natural gas. Developing new energies is also one of the segment's core commitments.

Upstream is organized into **Exploration & Production** and **Gas & Power**.



TOTAL, A WORLD-CLASS ENERGY PRODUCER AND PROVIDER

The world's **fifth-ranked listed, integrated oil and gas company** and a top-tier chemical producer, Total has nearly 97,000 employees and operations in more than 130 countries worldwide.

To **meet rising energy demand for the future**, our sustainable growth model consists of ensuring the acceptability of our operations and engaging in sustained, profitable capital expenditure.

Our ambitions are to:

- ▣ **Secure the future of energy** through innovation and ongoing R&D to support the development of new energies and help moderate demand
- ▣ **Expand our human resources policies, based on responsibility**, diversity, mobility and fairness wherever we operate
- ▣ **Meet sustainable development challenges** by unlocking the value of natural resources, protecting the environment, adapting our operations to the cultures of our host countries, and maintaining dialogue with society as a whole
- ▣ **Nurture and consolidate our relationship with stakeholders** through transparent, regular communication



Chemicals

comprises Base Chemicals, which encompasses petrochemicals and fertilizers, and Specialties, which covers rubber processing, resins, adhesives and electroplating. Its products cater to both industry and consumers.



Oil and Gas
2.34 Mboe/d
produced in 2008

10.5 Bboe
of proved reserves

96,959
employees

Adjusted net income
€13.92 billion

Capital expenditure
€13.64 billion



Refining

No. 1 refiner-marketer
in Western Europe¹

No. 1 marketer in Africa²

Refining capacity of around
2.6 Mb/d at December 31, 2008

1. Source: Based on publicly available information on refining capacity and/or sales.
2. Source: PFC Energy, September 2008, based on quantities sold.

Marketing

16,425 service stations
at December 31, 2008

Around 3.7 Mb/d
of products sold in 2008

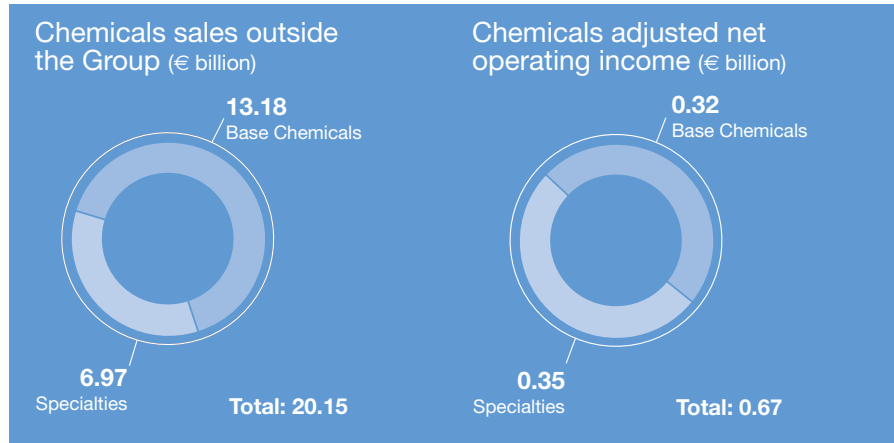


Photovoltaic Solar Energy

80 MWp of
photovoltaic cell production
capacity for Photovoltech¹
at December 31, 2008

1 million square meters
of solar panels installed
by Tenesol² since 1983

1. Total 47.8% 2. Total 50%



MAIN PERFORMANCE INDICATORS

		TARGET	INDICATOR	PERFORMANCE		STATUS
				2007	2008	
Environment		All environmentally sensitive sites ISO 14001-certified in 2009	Environmentally sensitive sites certified ISO 14001	76%	80%	2009 target extended to sites accounting for 90% of key environmental performance indicators, including freshwater withdrawals
		Reduce SO ₂ emissions from refineries by 20% between 2004 and 2010	SO ₂ emissions in thousands of metric tons per year	81.1	79.8	Down 14.9% at end-2008
		Maintain E&P's hydrocarbon discharges at less than 30 ppm per subsidiary	Hydrocarbon discharges in water (in parts per million, E&P average)	27	28	New target: 10 ppm for inshore/onshore discharges in 2010
Safety		Reduce TRIR by 10% in 2008	TRIR per million hours worked	4.2	3.6	Down 14% at end-2008
		95% of sites presenting technological risks with an audited SMS in 2009	% sites presenting technological risks with an audited SMS	83%	88%	88% of sites presenting technological risks have an audited SMS, versus 58% at end-2004
Human Resources		12% women executives in 2010	% women executives	9%	10%	10% women executives, versus 6% in 2004
		25% non-French executives in 2010	% non-French executives	21%	20%	20% non-French executives, versus 19% in 2004

Target exceeded
 In progress



Since 2002, the ten principles of the UN Global Compact have served as templates for Total's business principles and corporate social responsibility initiatives.

The sidebars highlighting 2008 initiatives related to one or more of these principles are identified in this report by a dedicated pictograph that specifies the number(s) of the relevant principle(s).

To learn more, go to the UN Global Pact page on our Web site.





CONTENTS

Page 2

02 // Pointers 06 // Interview with Christophe de Margerie
09 // Total attitude 10 // Meet the Presidents of Our
Businesses 12 // Our Main Corporate Social and
Environmental Responsibility Challenges

Page 13

OUR BUSINESS PRINCIPLES

14 // Ethics and Compliance 15 // Financial Transparency
16 // Human Rights 18 // Governance 18 // Competition
19 // Procurement Policy 20 // Implementing Our Social
and Environmental Responsibility in Our Operations
22 // Listening to Our Stakeholders 24 // Our Public Positions
on a Few Major Issues

Page 26

OUR MAIN CHALLENGES

28 // Meeting Energy Demand Through Responsible
Development of Non-Renewable Resources 34 // Managing
Our Production Facilities' Direct Greenhouse Gas Emissions
40 // Helping Our Customers Save Energy and Reduce Their
Environmental Footprint 44 // Moving Toward a Diversified,
Sustainable Energy Supply 50 // Federating Our Teams and
Harnessing Talent to Pursue Growth 58 // Improving Safety
and Protecting Personal Health 66 // Managing and Reducing
Our Environmental Impact 72 // Preserving Biodiversity
76 // An Ongoing Contribution to the Development of Our Host
Countries

Page 87

APPENDIXES: 2008 PERFORMANCE INDICATORS

88 // Reporting Scope and Method 90 // Assurance Report
92 // 2008 Performance Indicators 98 // IPIECA Index



Click TO LEARN MORE

To learn more about a specific subject, get updates
or let us know what you think, go to the sites that
we recommend in this report. The *Environment
and Society* 2008 report can be downloaded
from our corporate Web site, which also provides
additional information in the *Environment and Society*
section. Happy browsing!

www.total.com/csr



GLOSSARY AND ABBREVIATIONS

The abbreviations, acronyms,
units and certain words
and expressions used throughout
the report are explained
on pages 99 and 100.

In this Time of Major Crisis, Total Can Leverage **Solid Fundamentals** to Secure the Future

We cannot imagine reporting on our corporate social responsibility initiatives and priorities without taking a moment to talk about the past 18 months of exceptional turmoil. Below are a few brief explanations to help you better understand how we are dealing with the crisis and approaching the future.

CRISIS, DEVELOPMENT AID AND POVERTY ALLEVIATION

Insights Esther Duflo

Economist and the Abdul Latif Jameel Professor of Poverty Alleviation and Development Economics at the MIT in the United States; holder of the Knowledge Against Poverty International Chair at Collège de France



In the current crisis, wealthy nations may decide to focus on protecting themselves at the expense of aid to developing countries. Does this make rigorous scientific evaluation of aid and poverty alleviation projects even more essential?

Yes, for two reasons. First, the amounts allocated to development aid are sure to be cut, which means they will have to be spent more wisely. Second, the temptation to focus inward is, in fact, strong and may have an even greater effect on aid budgets. That said, even during this recessionary period, people in wealthy countries will not want to be seen as selfish. A lack of evaluation is a convenient excuse for squeezing budgets, purportedly to trim waste. It's always harder to cut the programs known to be effective.

Do you see any difference in the way this type of evaluation is perceived in Europe and North America?

Less and less all the time. The experimental method for evaluating social policies was invented in the United States. But a number of European government departments and agencies, such as the Department for Work and Pensions in the United Kingdom and France's *Agence Française de Développement*, a bilateral development finance institution, and the *Haut Commissaire aux Solidarités Actives contre la Pauvreté*, which focuses on alleviating poverty, are now taking an interest in this process.

The Millennium Development Goals (MDGs) set by the United Nations for 2015 will not be achieved. In spite of that, do you see reasons for satisfaction or hope on this front?

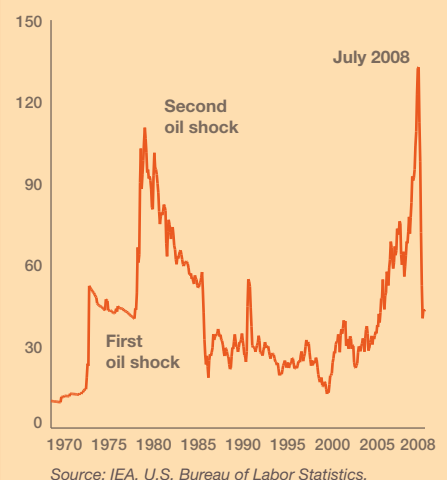
The MDGs were not really achievable. But they did draw attention to the critical problems of the poorest countries. The very fact of admitting that they will not be achieved is already a step in the right direction. The important thing now is to recognize that it takes a lot more than good intentions to make real headway on poverty and development. You need to have a clear idea of the policies that can be implemented effectively, both via international aid and by the developing countries themselves. Too often, we forget that they are the main financial backers of social policies in poor countries.

A Deep, Unexpected, Fast-Spreading Crisis

The subprime mortgage crisis that began in the United States in 2007 quickly spread to the financial sector as a whole. First it caused a liquidity crisis, creating severe problems for a number of world-class financial institutions, necessitating bailouts and sometimes even forcing them to shut down some or all of their operations.

The crisis infected other countries and the 'real' economy. Once global, it triggered a sudden slump in demand — especially in the automotive industry, to give just one example — and a very sharp drop in GDP beginning in fourth-quarter 2008. As the year began, it was still impossible to predict with any reasonable certainty when a recovery will begin.

Oil Price Volatility (\$ 2008/b)



➔ 1.4 billion working poor

Under the worst case scenario of an International Labour Organization report published in January 2009, the number of working poor — defined as people who are unable to earn enough to lift themselves and their families above the \$2 per person, per day poverty line — could rise to 45% of all the world's employed in 2009.

An Uncharacteristic Year For Oil Markets

In the first half of 2008, markets were at the top of the cycle, with tighter oil supply offsetting already flagging demand in the United States. Oil retained its appeal as a safe haven investment for a while, as the dollar weakened and property and financial markets contracted. But as the economy weakened midyear, the rug was pulled out from under the market. Extremely volatile commodities prices made 2008 a study in contrasts. The price of Brent, the marker crude for Europe, soared to nearly \$150 a barrel in July, before plummeting to \$35 a barrel in December. Demand for petroleum products is expected to further diminish in 2009. Unprecedented since the early 1980s, the situation can fairly be described as a sort of “third oil shock.”

Staying Focused on the Long Term

A welcome development for consumers, sliding oil and gas prices only partially offset the impacts of a crisis that in some cases has devastated employment and living conditions in wealthy and poor nations alike.

A result of the current crisis, this price decline creates risks for the future, for it may contain the seeds of new medium and long-term pressures. Cheap oil means that efforts to save energy and develop renewable energies may fall by the wayside, and limits the borrowing power of some independent and state-owned oil companies. The crisis is also keeping prices farther away from the levels needed to support the most complex projects — even though their costs are also forecast to fall — which could delay necessary investments to develop the new resources the world still needs. These weak prices could be followed by an even more abrupt rebound when demand starts growing again.

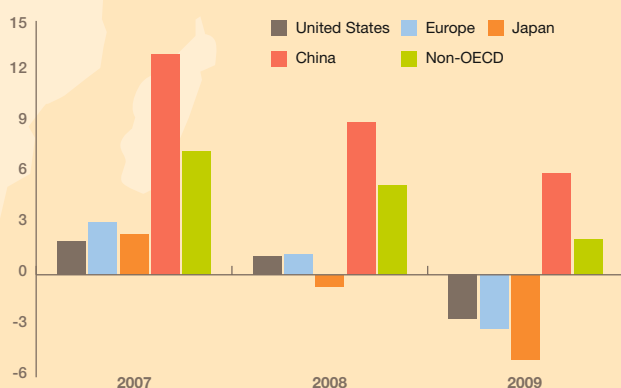
Armed for Tough Times, We Will Continue to Meet Our Responsibilities

Total has a number of strengths, including the solid fundamentals of its growth model, prudently invested cash now subject to even stricter transaction rules, a reputation that gives us continued satisfactory access to credit, and a healthy cash flow. While continuing to apply disciplined cost control, we plan to maintain a high level of capital expenditure and commitment to replace our reserves, conduct R&D, secure the future of energy, limit our footprint, and help drive development in host countries.

A Third Wave Further Weakening the Most Vulnerable Countries

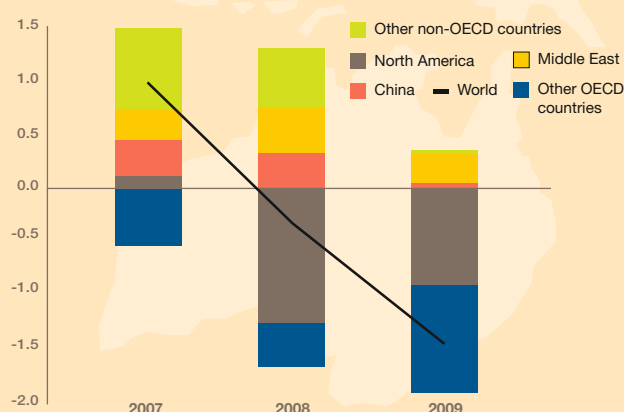
After first striking the advanced economies and then emerging markets, the crisis has now begun to hit the world's worst-off nations, according to the findings of an International Monetary Fund (IMF) study of low-income countries. Growth is forecast to be just over 4% in these countries in 2009, two points below what had been projected a year ago. And the new figure is very likely to be revised downward. In many of the poorest countries, per capita income will stagnate in 2009, or even decline. The IMF also predicts that a continued slowdown in global growth and tighter financing conditions could see the number of vulnerable countries nearly double.

Annual GDP growth (%)



Source: IMF.

Annual growth in oil demand (Mb/d)



Source: IMF.

Energy Transition: Our Vision for 2020-2030

Planning for the future, always a tricky exercise, is even more difficult at a time when conventional wisdom is being challenged in a number of areas. As far as we are concerned, that just makes it even more necessary. We consider it our responsibility to explain the foundations of our strategy and share our vision of current changes in the energy environment.

The energy order is poised to change dramatically in the coming years. Yet oil, gas and coal will still be dominant 20 years from now. For a number of reasons, renewable and other alternative energies will not really be ready to make a full contribution until much later.

Demand Driven by the Growth of Tomorrow's Giants

Over the next 30 years, non-OECD countries will be responsible for more than 80% of the increase in energy consumption. Population growth in China, India and Brazil means that non-OECD countries will be home to roughly 85% of the planet's inhabitants at that time. What's more, they legitimately aspire to living standards closer to those in industrialized countries. This rise in demand will be slowed only by efforts to improve energy efficiency, and will run up against persistent supply tightness.

Oil Supply Transformation and Peak

Despite reserves that are still abundant, oil will only be able to meet just over 30% of global energy demand in 30 years, compared with 35% today. As a result of naturally declining production from fields already on stream, fewer major reservoir discoveries, growing difficulties, especially technological, in accessing new reserves, and the interests of producing countries, world supply is expected to peak sustainably at 90 million to 95 million barrels per day before 2020, a modest increase over the current 85 million barrels per day.

The type of oil extracted will also change and will come increasingly from deep offshore and non-conventional reserves. One key resource is extra-heavy oil, which poses significant development and production challenges.

Gas Still Vital, But Affected by Geopolitical and Supply Chain Constraints

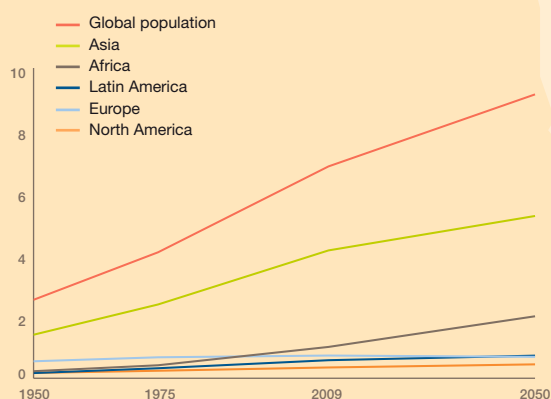
Gas represents 21% of the current energy mix. It will remain essential for

power generation. Except for the more than 50% concentrated in Russia, Iran and Qatar, available reserves are located farther from consumption centers and are harder to produce. Although liquefied natural gas (LNG) is playing a growing role, costly, complex facilities that take time to build are always needed to bring gas to market. And while gas-to-liquids processes have been successfully demonstrated from a technical standpoint, they have yet to achieve economic efficiency on a large scale.

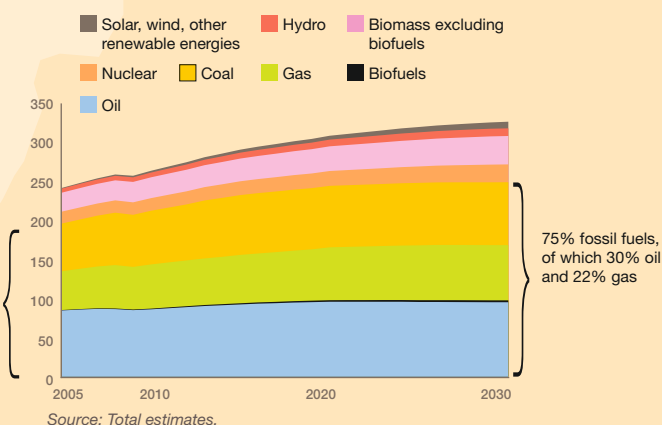
Coal's Potential Contingent on Reducing Environmental Impact

Coal makes up 26% of the current energy mix. Resources are plentiful — 150 years of proved reserves and two to three times that amount in probable and possible reserves. It is fairly evenly distributed throughout the world, easy to store and relatively cheap. In addition, it raises few geopolitical or production security problems. Coal is expensive to haul by road, making it most suitable for regional use in

Average population growth
(billion inhabitants)



Fossil fuels will account for around 75% of the energy mix in 2030 (Mboe/d)



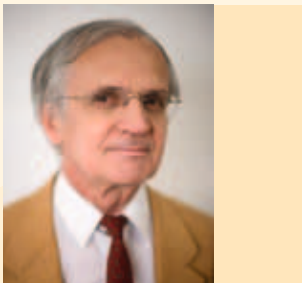
➔ 1.5 billion people have no access to electricity.

➔ China currently has 30 cars per 1,000 people, compared with 800 per 1,000 in the United States.

POPULATION, RESOURCES AND ENERGY DEMAND

Insights Henri L  ridon

Director Emeritus of Research at France's National Institute for Demographic Studies (INED), corresponding member of France's Academy of Science, and holder of the European Chair of Sustainable Development – Environment, Energy and Society at Coll  ge de France¹



People routinely talk about a world population of nine billion people in 2050. How scientifically solid is that prediction today?

That figure corresponds to the medium-fertility scenario of the United Nations. It is very well founded, because projections have proven to be quite accurate over the last 30 years. According to the UN

forecasts, fertility will continue to decline wherever it still exceeds two children per woman, until it reaches 1.85, which is below the generational replacement level. Some countries are still lagging far behind, but that has hardly any impact globally. This shift, remarkably fast in some regions, took a century and a half in developed nations!

The increase in life expectancy will continue at the current pace, but without any narrowing of the gap between developed and developing countries. So the nine-billion figure is the start of a leveling off, the end, in fact, of the unsustainable growth of the last 50 years.

However, the combination of about two children per woman and a life expectancy of 70 will inevitably lead to a population consisting of 25% seniors, which will create serious problems for countries that don't prepare for it.

What are the possible consequences in terms of resources, especially food?

On the whole, research is reassuring on this point. We have sufficient resources to feed ten billion people, subject to certain conditions. If we use more

fertilizer to boost productivity, there will be an environmental price to pay. And yields can't be expanded indefinitely. If we opt for less polluting growth, we'll have to use more sophisticated techniques, and thus have better educated farmers. Habits will also have to change in developed countries — lower consumption of meat, for example.

And energy?

Energy consumption is growing a little faster — 1.6% a year, according to IEA forecasts — than the population, at 1% a year. It is in emerging economies, especially China, that demand is exploding. We can't tell these countries that they have to curb their energy demand and therefore restrict their development. They have vital needs to meet to keep their economies going. However, opting for more efficient, less polluting solutions early on would keep them from repeating our own mistakes. And we have lots of room for improvement, too.

An unabridged version of these remarks can be found at

www.total.com/csr



the absence of practicable inland waterway or sea routes.

Coal-to-liquids processes may be a promising option in the future, but will not be a significant part of the energy mix in the next 20 years, especially given the need to become proficient in every aspect of carbon capture and storage.

Exploiting Other Types of Energy...

Meeting demand therefore involves two challenges: enhancing energy efficiency and exploiting all types of mutually complementary energies, while pushing ahead with the commercial production of non-fossil resources emitting few or no greenhouse gases.

Solar energy will likely account for only about 3% of total power generation capacity in 2030, after which it will play a much bigger role². Biomass, wind energy and hydropower will grow, but none of them can meet the increased demand alone. As for nuclear power — a cost-effective, essential energy option — it will be another 20 years before it represents at least a slightly bigger share of the global mix, about 6% in 2030².

...And Using Them More Carefully and More Innovatively

Producing countries want to better meet their own needs; more diversified, local and flexible solutions are being

developed; and a host of options are being explored, to invent still unknown solutions. We are on the threshold of real change. But avoiding a collective impasse will require doing three things now: keep investing, bring the most promising innovations to commercial viability, and make tackling climate change an essential ingredient of any energy solution.

¹ Chair created jointly with Total.

² Source: IEA, World Energy Outlook 2008 – Reference Scenario.

INTERVIEW WITH CHRISTOPHE DE MARGERIE

Chief Executive Officer

Don't the economic crisis and slump in oil prices call into question Total's strategy of attempting to simultaneously boost your production, manage your impacts and secure the future of energy?

Our industry has not been spared by the crisis. The businesses and households that are our customers are consuming less, traveling less and spending less. The drop in the price of oil and gas automatically erodes our earnings. But that doesn't change the fundamental calculus of our strategy: global energy demand will start growing again because emerging economies have enormous needs in the areas of power and transportation. That means that sooner or later prices will rebound from current levels. We still need to diversify energy sources, and international research published recently on the climate, biodiversity and water underscore how essential it is to step up efforts to protect our environment. So the current crisis does not alter our strategic vision — we are still committed to meeting energy demand sustainably.

“ *Keeping up our efforts now supports the economy and employment. It also helps promote future energy security by developing the production capacity that will be needed to meet demand.* ”

But in the current economic climate, won't you be forced, like it or not, to postpone certain projects, freeze hiring and focus on cost-cutting and budget-tightening until the situation eases?

Staying in the course despite short-term obstacles is something Total has always done, and our refusal to take a short-term view has led to major successes for us in the past. I'm sticking with it.

Our 2009 capital expenditure budget is around \$18 billion, in line with previous years. We also plan to recruit about 8,000 employees in 2009, having hired an average of 9,000 employees annually since 2004.

Our industry demands a long-term outlook, because our projects are capital-intensive, our fields and production

facilities have life spans of several decades, and it takes years to develop top-tier oil specialists.

Keeping up our efforts now supports the economy and employment. It also helps promote future energy security by developing the production capacity that will be needed to meet demand.

But staying in the course doesn't mean that we can take our eye off the ball in terms of costs or upgrading our production base to safeguard its competitiveness. For example, Total's Refining and Petrochemicals businesses in France are having to adapt to structural changes in demand. We will be investing nearly €1 billion to ensure their long-term viability, which will stimulate local employment. The plan will entail job losses around 2012-2013, but there will be no layoffs and we are committed to finding appropriate solutions for the employees concerned.

Given the crisis, was this really a good time to increase the dividend paid to your shareholders, instead of keeping the capital to invest, conduct R&D and create jobs?

We posted very good earnings in 2008. There is no reason why shareholders shouldn't receive their share. The stock market declines make it very clear that investing is not without risk; we need to retain our shareholders through a reasonable dividend payout policy. I would like to stress on this point that 100,000 current and former Total employees hold nearly 4% of our capital.

It's a mistake to assume that dividends hamper our growth. Both are the result of our strategy's success and the calculated risks that we have taken.

As we deal with the current crisis, our very solid balance sheet enables us to pursue our major projects, hire, and step up our R&D.

Most of the billions you invest go to oil and gas. For example, you are involved in oil sands production in Canada and in developing gas fields in the Arctic Sea, both of which alarm environmentalists. What can you say to reassure them?

All serious studies show that fossil fuels will continue to meet the bulk of energy demand for many years to come. We have a responsibility to maintain and increase our oil and gas production; it represents a not-insignificant 2% of global supply.



Among new resources to be developed, oil sands offer substantial potential; their development raises complex environmental problems that we pay careful attention to in our projects. In particular, we are participating in various R&D programs to cut the water use and greenhouse gas emissions associated with oil sands projects.

Environmental impact is also a major concern in the preliminary design we're conducting for the Shtokman project, in partnership with Russia's Gazprom, in the Barents Sea.

You are also interested in nuclear power. Shouldn't the current crisis act as a spur for you to shift your growth model toward greener projects?

We consider nuclear power an effective, available way to meet energy demand while curbing greenhouse gas emissions. Together with solar energy and biomass, it is one of the avenues we have chosen for eventually diversifying our energy solutions.

It is true that most of our capital spending is currently earmarked for oil and gas projects, refining and petrochemicals; they are the bedrock of our operations. But we are working intensively to secure the future.

We have budgeted \$7.5 billion for research and development for the period 2008-2013. The production capacity of our subsidiary Photovolttech, a photovoltaic cell maker, is expected to triple by 2012. In 2008, we acquired a stake in a U.S. startup that makes third-generation carbon film-based photovoltaic components. We're exploring second-generation biomass research. And we're innovating to offer our customers more energy-efficient, lower-emission, cleaner products and services. In partnership with a number of research laboratories and industry and university partners, we're working to develop the energy solutions of tomorrow.



The European Union managed to agree on an ambitious energy and climate change package in late 2008.

Manufacturers put up some resistance, citing their problems staying competitive with rivals outside the EU. What does Total think?

We're pleased and proud that the European Union was able to reach an agreement on the challenging issue of implementing targets to reduce greenhouse gas emissions by 20% and boost the share of renewable energies in the energy mix to 20%.

We have created action programs to address each of these goals. To reduce our greenhouse gas emissions, for example, we are working to gradually eliminate flaring of associated gas in our oil production operations and to increase the energy efficiency of our processes through sustained capital spending.

In 2009, we'll be starting up a commercial carbon capture and storage (CCS) pilot in Lacq, France. This is genuinely critical research: keep in mind that, according to the Intergovernmental Panel on Climate Change (IPCC), CCS could eliminate 20 to 40% of global carbon emissions.

So you can see that Total is fully involved in the fight against climate change. However, we have a responsibility to point out that the efforts of European Union industrial operators will not be enough if the transportation and housing sectors don't do their fair share in this fight too. Our line of more efficient products and services can help them with this.

Since the problem is planetary in scale, we have high hopes for the United Nations Climate Change Conference that will be held in Copenhagen in late 2009.

Plummeting oil and gas prices have put a number of producing countries in a tough situation. Hasn't the crisis exposed the way oil nations — now coping with lower revenues, undiversified economies, and weak political and social cohesion — have wasted their extractive industry revenues?

This is definitely a tough time for producing countries. They had based their budgets on an oil price of \$80 to \$100, and prices were only half that at the start of 2009. So they're being forced to cut back or draw on their reserves.

However, we shouldn't let this rough patch distract us from the very real progress that has been made. On financial transparency, for starters: a growing number of countries are implementing the Extractive Industries Transparency Initiative (EITI).

We consider it vital that our operations help drive local social development. That is our commitment and our best interest, and we have adjusted the way we define and assess our projects accordingly. Several large projects of strategic importance to local and regional economies are currently under way, such as our liquefied natural gas developments in Yemen, Nigeria and Angola.

Some 80% of the staff of Yemen LNG, scheduled to commission its facility this year, are Yemenis hired and trained by Total. In Angola, we financed four new high schools that opened in early 2009. Creating jobs, supporting local small businesses and helping to expand education and health services are essential to building a mutually beneficial relationship with national governments and our host communities.

“ We consider it vital that our operations help drive local social development. That is our commitment and our best interest, and we have adjusted the way we define and assess our projects accordingly. ”



We are well aware that the tensions in some of our host countries overshadow our efforts. Take Nigeria, where the violence is getting worse, including against oil companies, which are experiencing employee kidnappings and attacks on their facilities. This large country, which is very important for Total, illustrates the challenges facing oil companies. Not just slow development given the high expectations created by oil wealth, but also the limits of the initiatives taken by companies, which cannot replace governments. We believe despite everything that our involvement in economic and social development projects helps ease tensions and make us more acceptable.



There were fatal accidents in your operations in early 2009, and you have also seen your fair share of industrial incidents recently, such as the spill from the Donges refinery that polluted the Loire estuary in 2008. How can this happen in a company with your experience?

The fatalities at our industrial facilities that you refer to are genuine tragedies. They affect us all. Our unstinting efforts in the area of safety are designed to prevent situations that can have such serious consequences.

Whenever there is an accident, we always try to understand what happened and learn from the experience so that it never happens again. And we do everything we can to repair and compensate any damage caused, as was the case for Donges.

In a company as big as Total, industrial safety is a never-ending task for which all of us must feel responsible and accountable at our own level. Our safety performance has improved significantly and still is, but we must constantly remain vigilant as part of a continuous improvement process. ■



Totalattitude

Energy and the environment are the two main global preoccupations today, and are core concerns for us. To meet the challenges they bring, we need to adjust our day-to-day behavior. Boldness, listening, mutual support and cross-functionality are the cornerstone behaviors that guide Total's actions and underpin our acceptability.

Listening

Listening is the foundation. It means being attentive to others, whether our colleagues, customers, civil society or producing countries. We can't perform well unless we listen.

Mutual Support

Mutual support means giving back to our host communities and ensuring that our projects further the development of local economies.

Cross-Functionality

Cross-functionality means pooling our resources and our skills to provide an integrated, end-to-end offering in all of our businesses. It also means working more closely with our partners and other energy industry stakeholders.

Boldness

Boldness pervades our DNA. Boldness is daring to suggest, invent and act without taking ill-considered risks. It's being able to break the mold and think outside the box.

Four Takes on a Shared Vision of Our Responsibilities

Our primary mission is without a doubt to keep investing, to satisfy a demand for petroleum products that will continue to grow over the next 20 years — and to do that while reducing our operations' environmental footprint, in the broadest sense. I see supplying energy and managing environmental impact as inseparable aspects of the same commitment.

Practically speaking, the first thing we have to do as a responsible producer is to strengthen our partnerships with resource-rich countries. We have to behave in a way that makes them want to work with us. But their expectations are evolving. In addition to technical proficiency and operational efficiency, they want our activities to do even more to spur the development of their country, their regions and the people who live

“ I see supplying energy and managing environmental impact as inseparable aspects of the same commitment. ”



YVES-LOUIS DARRICARRÈRE
President, Exploration & Production

there, on a permanent basis. Of course, we're already working to achieve that. But we must listen more carefully to the communities around us and, more broadly, to everyone with a stake in our operations.

We are an integral part of any community in which we operate. When we strive to expand the local content of our operations, a key development factor in the countries concerned, we hope, with their help, to meet the challenge of cost management. When we contract with a host of small and medium-sized local businesses, it is also our job — an extremely important one as far as I'm concerned — to help this local base of small businesses adopt stricter standards, for ethics, call for tender transparency and quality of service, to make it easier for them to meet international standards.



PHILIPPE BOISSEAU
President, Gas & Power

Whether you're talking about solar energy, nuclear power or, longer term, new ways of converting biomass and coal, our capital expenditure and research priorities for the energies

of tomorrow are guided by three main criteria. One is the profitability of each activity, a legitimate concern for a company like Total. Another is how closely related it is to our current businesses, especially in terms of industrial capabilities, so that we can channel our existing competencies. We don't want to spread ourselves too thin. Finally — and this is crucial — we want to pick energies that do not contribute much to the greenhouse effect. Photovoltech's production capacity is growing faster than the world market

“ Our responsibility is to contribute what we can to all forms of energy in which our expertise can make a difference. ”

for photovoltaic solar power.

Gas & Power is stepping up its R&D, budgeting around €30 million annually. In addition, we intend to invest €80 million a year over five years to support innovative startups addressing all energies. That's a substantial commitment. Our responsibility is to contribute what we can to all forms of energy in which our expertise can make a difference.

Timing is all-important in industrial processes. In less than two years, we have laid out a line of strategy, invested, expanded our teams and started working on real-world projects, all involving fields with ten to 20-year horizons. It's a major push, but I can understand that the public might see it differently. It's up to us to keep moving faster and to better publicize what we do.



It is our responsibility to safely supply our customers with a scarce but vital commodity — energy — and to do our best to conserve it.



MICHEL BÉNÉZIT
President, Refining & Marketing

Conserving energy means chasing down waste at every step in the production chain, right up to the end customer. The main way of doing that in our downstream oil businesses is to make refineries more efficient by lowering both their energy use and greenhouse gas emissions. On the customer end, we never stop working with engine, furnace and other heating plant manufacturers to cut down on fuel consumption. We encourage our customers to adopt energy-saving driving practices, by showing them the tangible benefits of smooth driving and how much it costs them when their vehicles are poorly maintained. Besides improvements that can be felt immediately, we are investing today to develop the automotive and heating fuels of tomorrow.

We are fully committed to a number of biomass research programs, as well as longer-term experiments on hydrogen fuel, especially in Germany and Belgium. Energy efficiency, industrial performance, innovation, energy-saving measures, customer education and, of course, open dialogue with the communities near our industrial facilities are all facets of the same commitment: to sustainably meet the collective economic, environmental and social challenges that face us.

“ We provide our customers with solutions to save energy. ”

Our products, and the polymers and plastics made from them, are the most sophisticated way you can use a petroleum molecule. Why do we see them as products of the future? Well, their strength and lightness make them a critical building block for automotive and aerospace applications for example, two industries facing the challenge of how to design lighter parts. We worked on the construction of a polyethylene pipeline to supply Istanbul with drinking water from Anatolia. We don't think that wider access to water and sanitation — one of the Millennium Development Goals — is attainable without using this kind of material. One of the most effective ways to reduce carbon emissions is to upgrade building insulation. Polymers offer solutions to that problem as well. And solar and wind

“ Polymers and plastics also have a future in a world of sustainable development. ”

power processes involve a strong chemicals component. We're convinced that the materials science R&D conducted by Total is one of the spurs driving sustainable development. At the same time, we're actively exploring resources to replace oil, especially alternatives involving non-food biomass, and ways to reuse plastics. Plastics have a very negative image, no doubt. Yet they can have several lives. Through more selective collection and sorting, we could develop ways to use plastic to serve as fuel for coal-fired power plants.

Like the rest of the industry, we're making it a priority to find more ways to give plastics a second and even third life. It's also a matter of educating the public, which we're trying to do, because that's also one of our responsibilities.



FRANÇOIS CORNÉLIS
President, Chemicals

Our Main Corporate Social and Environmental Responsibility Challenges

Total

Industrial and Financial

- > Manage the industrial, technological, environmental and other risks related to our operations
- > Pursue cost-effective production growth
- > Invest and innovate to meet growing demand for oil and gas
- > Adapt to changing demand and the new global energy order, including lower oil and gas prices and emerging competitors
- > Help diversify energy sources
- > Intensify our research and development

Employees and Community

- > Uphold and advocate for fundamental human rights in our host countries and communities
- > Ensure the safety of employees and people living and working near our facilities
- > Implement human resources policies based on fairness, diversity and employee dialogue
- > Respect neighboring communities and spur their development
- > Promote transparent revenue flows for host countries

Climate Change

- > Reduce greenhouse gas emissions and devise new solutions such as carbon capture and storage
- > Improve the energy efficiency of our processes
- > Help our customers use energy more efficiently

Environment

- > Limit the impact of our operations and related transportation on air, water and soil quality
- > Reduce the noise, visual and olfactory disamenities caused by our operations
- > Protect biodiversity

Exploration & Production

- > Maximize production from existing fields and bring our portfolio of new fields on stream affordably to meet demand
- > Replace our reserves by maintaining an ambitious exploration program
- > Invest in the development of hard-to-produce reserves, such as ultra-deep offshore resources, high-pressure/high-temperature fields and sour gas
- > Strengthen existing partnerships with host countries and national oil companies and develop new ones
- > Respond to the industrial, economic and community expectations of host countries
- > Minimize the flaring of associated gas in our operations, through reinjection, recovery and other methods

Gas & Power

- > Expand our involvement across the LNG chain
- > Help develop energies to supplement oil and gas, including photovoltaic solar, thermodynamic solar, nuclear power, biomass, clean coal and marine energy
- > Bring energy to isolated populations through rural electrification programs

Refining & Marketing

- > Adapt our refineries to keep pace with changing demand trends and legislation
- > Increase the energy efficiency of our facilities and manage their safety and environmental impact
- > Offer our customers products and services that enhance their energy efficiency and reduce their environmental footprint

- > Manage the health and safety impacts of our products across their life cycle, while making their transportation by truck safer

- > Promote dialogue with our local stakeholders and key energy and environmental stakeholders in the transportation and building sectors

Trading & Shipping

- > Optimize sales of our production and supply to Total's refineries
- > Employ a rigorous process for vetting tankers, to ensure optimal transportation safety
- > Ensure crew safety and protect the marine environment
- > Adapt the fleet to the diversification of maritime routes, to handle new flows

Chemicals

- > More effectively integrate our operations and projects into their environment by reducing their energy use, greenhouse gas emissions and environmental footprint
- > Develop innovative products by listening to customers and exceeding regulatory requirements to meet the challenges of the twenty-first century
- > Make sure that our new products are increasingly health and environmentally-friendly across their life cycle
- > Promote the recycling and waste-to-energy recovery of our plastics
- > Develop the plastics of the future, especially plant-derived (polylactic acid - PLA) and methanol-to-olefin (MTO) plastics
- > Educate the public about the benefits of chemicals, and plastic products in particular



Corporate Social Responsibilities OUR BUSINESS PRINCIPLES

For Total, being a responsible corporate citizen means demonstrating professional discipline and unbending ethical conduct, upholding human rights wherever we are, and continuously striving to improve our transparency, performance, and impact management and reduction. These requirements, which are built into our management processes and systems, shape the complex choices we make each day as we prepare the future. Our choices are guided by listening to and dialoguing with all of our partners and host communities, to better meet their expectations. Learn all about our business principles in the following section.



Corporate Social Responsibilities

OUR BUSINESS PRINCIPLES

→ THE REFERENCE DOCUMENTS that guide our conduct:

- Universal Declaration of Human Rights
- United Nations Global Compact
- OECD Guidelines for Multinational Enterprises
- Fundamental conventions of the International Labour Organization (ILO)

ETHICS AND COMPLIANCE

Reaffirming Our Principles with Rules That Apply to Everyone

Entrenched Corporate Values...

In 2000, Total set out in our *Code of Conduct* the intangible ethical principles meant to guide our day-to-day actions worldwide. All of our employees can draw on this foundation, make it their own and refer to it to ensure that their activities, decisions and dealings with others hew to our common framework. The core values of respect, responsibility, integrity and exemplary behavior affirmed in our *Code of Conduct* encapsulate our commitments to all of our stakeholders, including employees, customers, shareholders, suppliers and business partners, civil society, and host country governments and communities.

...Applied in Our Day-to-Day Work

While putting ethical principles into practice is based on the personal commitment of all employees, it is first and foremost the responsibility of the various levels of management at Total. Application requires constant vigilance, and people may have questions. This is why we decided to solidify our organization by creating a Compliance and Corporate Social Responsibility Department in early 2008. Reporting to Legal Affairs, the new organization works closely with the Corporate Audit Department and the Ethics Committee to advise, inform and train employees and supervisors and ensure that our principles, especially those concerning integrity and human rights, are followed.

Whistleblowing and Outside Assessments

An employee who has witnessed or has doubts about situations in possible violation of our ethics guidelines may refer the matter to the Ethics Committee at any time. Reports are held in the



8 new translations of our Code of Conduct, now available in 24 languages, in 2008



33 Ethics Committee presentations in 2008 as part of a comprehensive program to educate and train managers and employees

strictest confidence. As well, people from outside the company can refer financial, accounting and internal control matters to the committee. In addition, Total commissions objective ethical assessments of our operations and practices from specialist GoodCorporation. Seven units were audited in 2008, based on more than 80 evidence points, bringing the total to 48 units since 2002. It reassessed another two, taking the number of reassessments to ten since 2005.

TO LEARN MORE

www.goodcorporation.com



Business Integrity Guide: Pointers for Doing the Right Thing



Employees may wonder about fraud, conflicts of interest or corruption risks; want to find out how to better recognize sensitive situations; or learn



what attitude to take toward non-standard practices. The *Business Integrity Guide* — 20,000 copies published in English and French

in 2008 — has helpful answers to their questions and takes into account a broad diversity of situations and perceptions.

The guide was created by the Ethics Committee and our in-house legal experts, with the assistance of the new Compliance and Corporate Social Responsibility Department. It strengthens the vigilance and prevention system already in place. An interactive version is also available on our main intranets.

➔ **NOVEMBER 2008:** Total helps to promote the Extractive Industries Transparency Initiative (EITI) at the Mediterranean roundtable for North African countries (Morocco, Tunisia, Algeria, Egypt and Sudan), co-hosted in Tunis by the African Development Bank. It was an important event, as none of these countries adheres to the EITI yet.

FINANCIAL TRANSPARENCY

Working closely with host countries and all stakeholders concerned, to share oil revenue fairly.



Promoting Socioeconomic Development by Making Better Use of Extractive Industry Revenue

Too many countries with significant oil, gas or mining resources struggle to convert the revenue from their mineral wealth into drivers of growth, improved living standards and poverty alleviation. For Total, which produces nearly three-quarters of our oil and gas in non-OECD countries, this is a major issue. Committed to long-term partnerships with sovereign host countries, we respond to legitimate changes in their expectations, in particular by agreeing to renegotiate contracts. The new agreements can increase host countries' interests in projects and expand the benefits to local communities.

At the same time, we support multilateral efforts to establish more effective governance in resource-rich

countries and greater transparency concerning how revenue derived from extractive industries is used.

EITI, a Voluntary Process for Companies and National Governments

From the time of its introduction in 2002 at the Johannesburg Summit, Total has supported the Extractive Industries Transparency Initiative. The EITI calls for all private and national extractive companies to publish what they pay governments, for an independent aggregator to consolidate and publish the data, for the confidentiality of existing contracts to be maintained, and for government participation in the process. Long promoted by the Group of Eight (G8) industrialized nations, the EITI was also singled out for mention in a September 2008 UN resolution, which hails the efforts of the countries involved in the initiative. Chaired by Dr. Peter Eigen, the founder of Transparency International, EITI's Board comprises representatives from implementing countries, supporting countries, industry, investment companies and civil society organizations. Like the other 38 companies concerned, Total must provide information that can be used to assess our practices.

As of early 2009, the EITI had 25 candidate countries. Only Azerbaijan has completed the validation process and achieved compliant status, with most of the others facing a deadline of March 2010 for validation. Though aware that some NGOs advocate a more coercive approach, Total, which operates in nine of the 25 countries in question, is very actively involved in the EITI's work and

promotes its development around the world. Our already widely recognized efforts led, in early 2009, to the appointment of Total Exploration & Production's Vice President of Public Affairs to the EITI Board.

TO LEARN MORE

www.eitransparency.org



Country Reports Provide Detailed Information to the Public

Our commitment to transparency is also reflected in the publication of detailed reports about our Upstream operations in several countries, supplementing the annual *Factbook*. These country briefs provide information about our acreage, contract types, local subsidiaries and joint ventures, and the taxes we pay to governments. Five reports, on Angola, Cameroon, Gabon, Nigeria and Norway, are currently available, covering 37% of our production.

TO LEARN MORE

www.total.com/en/group



➔ **DECEMBER 2008:** On the 60th anniversary of the *Universal Declaration of Human Rights*, Total turns the spotlight on heightening our employees' awareness of fundamental human rights, setting aside a day to mark this milestone, which featured in all our internal media.

HUMAN RIGHTS

A stronger system for promoting human rights and ensuring their respect within our scope of operations.

SUPPORTING INITIATIVES TO PROMOTE PROGRESS



Total participates in a number of discussions on the connections between human rights, economic development, the environment and the fight against bribery and corruption. We support the work of Professor John Ruggie, Special Representative of the United Nations Secretary-General, to clarify social responsibility and transparency standards for businesses in the area of human rights.

We are involved in the work of the International Petroleum Industry Environmental Conservation Association (IPIECA) to create guidance on ethics and human rights.

We are also working with the Danish Institute for Human Rights to develop a human rights impact and compliance assessment tool for our type of business, which will undergo a first round of testing in 2009.

Vigilance and Dialogue

The *Universal Declaration of Human Rights* has been part of our *Code of Conduct* since 2000. Upholding and advocating for its principles is an integral part of our stated commitments, valid in every country, without exception. Our human rights commitments are all the more important as our employees are often called upon to work in difficult circumstances that may include political or social unrest, civil wars, fledgling transitions to democracy, and inadequate governance. Our absolute

priority is the safety and security of our employees, their families and our service providers.

We are determined to be a leading advocate of human rights in our sphere of operations, and in this respect meet industry standards. We do not interfere in the workings or political life of sovereign governments, but when necessary we make the case for our positions and beliefs to the governments concerned and constantly pursue dialogue, at all levels

SPOTLIGHT

SECURITY AND HUMAN RIGHTS

Real Risks and Even More Stringent Rules in 2008

The inherent right to life and the right to own property are guaranteed by both the *Universal Declaration of Human Rights* and the *International Covenant on Civil and Political Rights*. Like other companies, Total sometimes uses external security personnel to protect our employees and facilities. To forestall problems, we make it our top priority to ensure effective coordination between security teams and employees in charge of community relations, an outreach effort that promotes good local integration and thereby minimizes risks. From a broader standpoint, our initiatives are shaped by the *Voluntary Principles on Security and Human Rights* (VPSHR). These industry standards guide companies in maintaining the safety and security of their operations while ensuring respect for fundamental freedoms. In January 2008, we supplemented our reference document on the VPSHR with a new guideline citing five priorities: formal relations between subsidiaries and governments, hiring criteria for security personnel, training for security personnel, rules for the transfer of equipment, and procedures for responding to human rights violations. The core objective is to clarify the circumstances under which security forces are authorized to intervene in a dangerous situation.

Total E&P Nigeria, for example, organized a course for VPSHR trainers, who can now draw on this internal resource to develop local capabilities in this area.



TO LEARN MORE

www.total.com/en/group



TO LEARN MORE

www.voluntaryprinciples.org



→ OUR FRAMES OF REFERENCE

- Universal Declaration of Human Rights
- International Covenant on Civil and Political Rights
- Voluntary Principles on Security and Human Rights

Anticipating, Organizing, Training and Evaluating

Human rights, political risks and security considerations are included in the criteria considered when making capital expenditure decisions.

Tested crisis monitoring and management procedures help us to prepare appropriate responses, both to changing local situations and serious events.

At the same time, we provide managers and operational employees with tools and resources to help them meet, on a daily basis, our commitment to respecting human rights. The Ethics Committee, the Human Rights Coordination Committee — a discussion forum for the different departments concerned — and our new Compliance and Corporate Social Responsibility Department act as resource and advisory organizations.

Content on various intranet sites — covering ethics, sustainable development and environment, human resources and security — ethics and human rights seminars and Université Total's courses on these topics keep employees focused on the issue. In addition, 25% of the evidence points used to assess the ethics performance of Total operations (see page 14) concern human rights issues.

TO LEARN MORE

www.total.com/en/group



Insights Arvind Ganesan

Director of the Business and Human Rights Program, Human Rights Watch



Do you see any change or tangible progress in the way the oil industry incorporates human rights in its decision-making and practices?

There is some progress in the industry, as many companies have said that they support human rights. More companies recognize these responsibilities than ever before. However, there are still major challenges. We do not have a system to really see how companies are performing, nor do we have enough information about how companies (in general) incorporate their stated commitments into their policies and practices. Nor do we know whether these efforts are successful. There have to be ways to get better information, other than self-reporting.

Do you think that codes of conducts and standards voluntarily adopted by oil companies have reached their limits? If so, why?

Voluntary standards have not reached their limits, because they still need to be revised and strengthened so that they are better at ensuring companies follow those standards and that the public has adequate information about the implementation of those standards to have confidence that they do effectively integrate respect for human rights into business operations. However, voluntary standards are always going to be inherently limited because they only

apply to companies who choose to follow them and the penalties for noncompliance are much milder than with mandatory measures, which also means they have less of a deterrent effect than they might otherwise have if the standards were mandatory.

You advocate for the implementation of mandatory norms to make sure that companies enforce human rights standards. According to you, what tangible changes would be implied by such a move?

Mandatory norms are important because they would be better at ensuring that more companies follow standards and would potentially make companies more accountable. At the moment, our thinking is that a law like the U.S. Foreign Corrupt Practices Act might be a model. It requires companies to have policies and procedures in place to prevent bribery, and also holds them accountable if they bribe officials. This type of approach, when applied to human rights, would mean that companies must put effective policies and procedures in place to respect human rights and could be subject to penalties if they do not. It could also hold them accountable if abuses occurred in relation to their obligations under such a mandatory standard. This would probably be the most effective way to address the issue. ■

➔ **FEBRUARY 2009:** In accordance with the October 6, 2008 **AFEP-MEDEF** recommendations, the Chairman and the Chief Executive Officer decide to terminate their employment contracts with Total S.A., which had previously been suspended for the duration of their terms.

GOVERNANCE

Rigorous Standards

Clear corporate governance aligned with best industry practices is a cornerstone of the trust-based relationships we forge with our stakeholders. Good governance ensures that our Board of Directors and company officers act in the company's best interest, that we respect the principles and rules that apply to us, that we manage risk effectively, and that we strive for continuous improvement. This process, made even more essential by today's economic crisis, is especially critical in the areas of senior management composition and procedures, company officer compensation and internal control. Our reference for the first two areas is the *AFEP-MEDEF* (French employers' associations) *Corporate Governance Code* for listed companies in France, updated in December 2008. Our internal control organization is based directly on the guidance of the Committee of Sponsoring Organizations (COSO) of the Treadway Commission. Because we are listed on the New York Stock Exchange, we have since 2006 conducted an annual assessment of internal control relating to the disclosure of financial information, in line with the Sarbanes-Oxley Act.

Compensation for Company Officers

On this sensitive issue, which has prompted repeated interventions on the part of French lawmakers, we apply a transparent policy that has always sought to avoid excess. Our *Registration Document* provides detailed information on every item in the compensation package of the Chairman of the Board of Directors, Chief Executive Officer and other directors and explains the procedures used to set the amounts. Our concern for clarity means that we disclose the formula used to calculate the variable components of the Chairman's and the Chief Executive Officer's compensation and severance packages, now pegged to performance.

Likewise, the amount of stock options granted to the Chairman and the Chief Executive Officer and the rules for retaining some of the shares held following the exercise of options are described in detail.

Internal Management Structure

Our internal management structure is designed to work with a combined centralized-decentralized management model. Each individual is responsible for what occurs in his or her profit center, business sector or corporate organization. They must act and report in accordance with clearly established internal procedures. Major investment decisions are made by senior management, with input from corporate departments or the Board of Directors for the most important. Our units are responsible for assessing the business, financial, legal, environmental, political and industrial safety risks to which they are exposed and for deploying the appropriate policies.

The Corporate Audit Department is in charge of effectively implementing internal control procedures and recommending any corrective actions required. It reports to senior management and the Board of Directors' Audit Committee, one of whose tasks is to oversee deployment of these procedures and ensure they are properly applied.

Three Key Elements in Good Governance Standards

- > Clear division of responsibilities among the Chairman, the Board of Directors and the Chief Executive Officer.
- > Competent, working, involved directors, most of whom have no business or other relationship with Total that could compromise their independent judgment.
- > Dedicated Board of Directors' committees, strengthening the Board's ability to make decisions and monitor the company's workings and the reliability of its procedures.

COMPETITION

Ongoing Efforts to Educate Employees About Following the Rules

Our *Code of Conduct* states that we must and want to uphold the rules of free competition. Accordingly, we encourage our businesses to adopt procedures to ensure that business units comply with antitrust laws and regulations.

To apply the principles set out in the *Code of Conduct*, specific instructions for each business are disseminated widely through guides that describe how to act in various situations. These instructions are supplemented by training and education tailored to the businesses and the situation of employees.

Antitrust investigations targeting certain Total companies¹ have spurred us to continue and step up our efforts to heighten our employees' awareness in all businesses, notably Refining & Marketing and Chemicals, which are the most exposed. Nearly 4,500 employees'



received antitrust training in 2008, either in groups at dedicated seminars or individually through e-learning modules.



Good Governance Standards

INDEPENDENCE	➔ Directors	Percentage of independent directors at December 31, 2008	Board of Directors 75% (12 out of 16 directors)	Audit Committee 100%	Nominating & Governance Committee 75% (3 out of 4 directors)	Compensation Committee 100%
		Term of directors	3 years			
	➔ Statutory auditors	- Statutory auditors may not provide non-audit-related services. - Fees are detailed on page 110 of the 2008 <i>Registration Document</i>.				
INVOLVEMENT IN DECISIONS	➔ Directors		Board of Directors	Audit Committee	Nominating & Governance Committee	Compensation Committee
		Number of meetings in 2008	6	7	2	2
		Average attendance at Board and Committee meetings in 2008	88.9%	100%	83%	88%
		Assessment of Board procedures	Annual discussion			
		A summary of the activity of the Board of Directors and its dedicated committees for 2008 can be found on pages 99 to 101 of the 2008 <i>Registration Document</i> .				
	➔ Statutory auditors	- Attended all Audit Committee meetings held in 2008. - Attended all Board of Directors' meetings in 2008, during which Total's quarterly, interim and annual results were reviewed.				
	➔ Shareholders	Attendance at Annual Shareholders' Meeting:	49.47% (quorum reached at the May 16, 2008 Annual Shareholders' Meeting)			
	➔ Employees	Representation on the Board of Directors	2 delegates from the Central Works Committee (advisory capacity)			

PROCUREMENT POLICY

Aligning responsibility requirements for suppliers with our own values

Formally drafted in 2007, the six *Corporate Social Responsibility Principles for Purchasing* set out the social and environmental responsibility criteria to be taken into account by all Total units when selecting suppliers. Naturally, they mirror the obligations we impose on ourselves, including integrity; fighting bribery and corruption;

preventing conflicts of interest; upholding the law and industry human rights standards, such as the UN Global Compact; complying with principles and fundamental rights at work; preventing and managing security, health and safety risks; protecting the environment; and promoting economic and social development.

To ensure these principles are upheld and help companies improve as needed, we may audit suppliers, focusing specifically on safety and environmental issues or, more broadly, other aspects of corporate social responsibility.

1. For more information on competition investigations, see pages 158 and 159 of our *Registration Document* at www.total.com.

IMPLEMENTING OUR SOCIAL AND ENVIRONMENTAL RESPONSIBILITIES IN OUR OPERATIONS

Taking into account the challenges across our cycle of operations, in order to manage the full range of risks and impacts.

Formal Policies and Management Systems

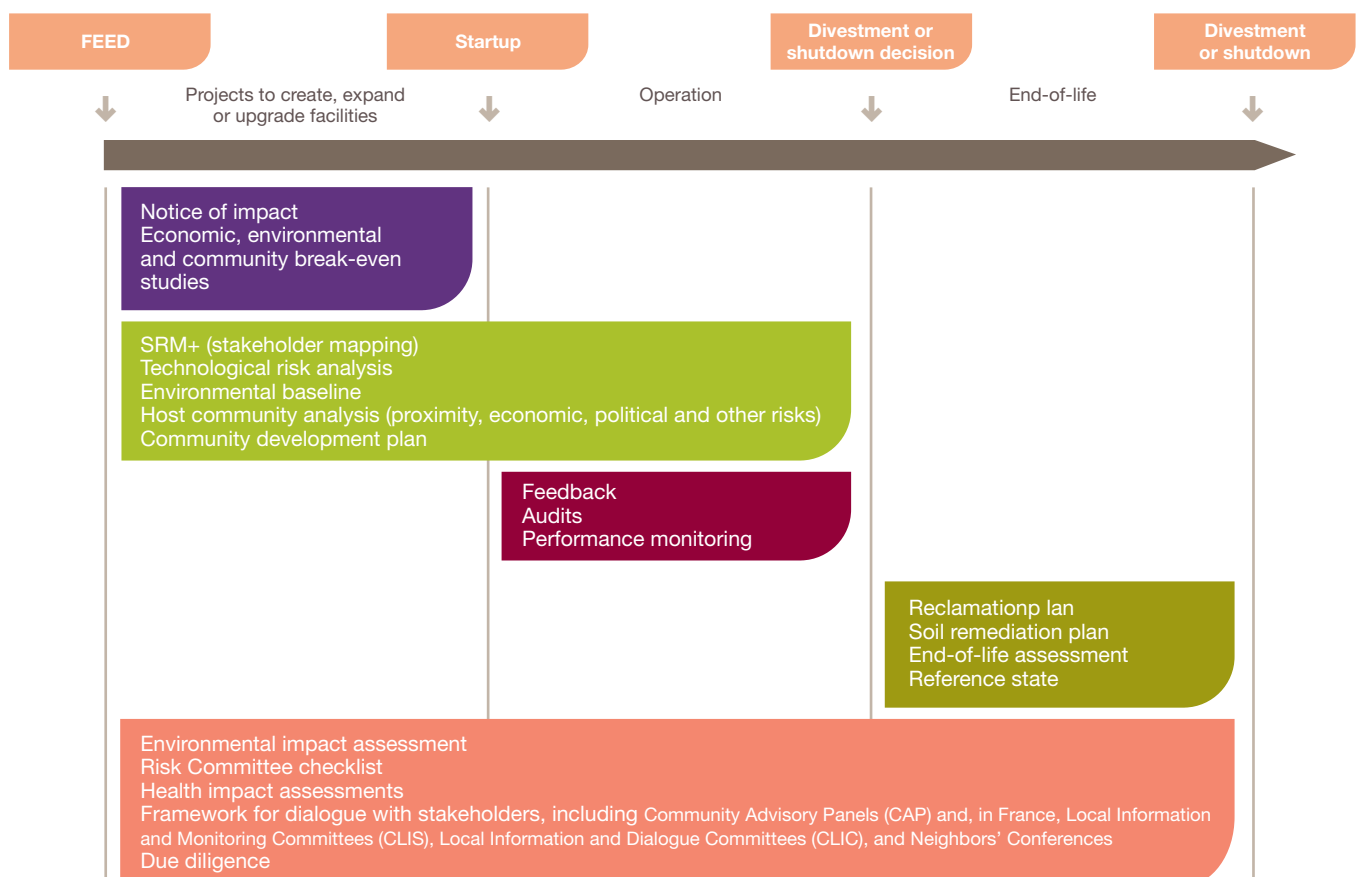
The nature of our operations and scope of their potential impact require us to strive for the highest standards in safety, health, industrial hygiene, the environment, quality, security and community initiatives. In all these interconnected realms, Total has created, adopted or adapted guidance that shapes the actions of front-line employees and is updated regularly, not least in response to employee feedback.

Audited by independent third parties or in line with externally recognized protocols, deployed first at major facilities then gradually more widely, our safety and environmental management systems are simply the most visible examples, because they lead to widely recognized certifications, such as ISRS for safety and ISO 14001 for the environment.

Because they are part of “continuous improvement loops,” management system processes increasingly emphasize the early detection of the

subtle signs that are precursors of more serious incidents or accidents. They also require ever more accurate reporting, with selected key indicators audited internally or by specialists from outside Total. This assessment requirement applies not just to safety and the environment, but to our human resources policies and local socioeconomic development projects as well.

A methodology and management tools, from FEED to site reclamation



➔ **DECEMBER 2008:** In cooperation with Total, Collège de France created the Sustainable Development, Environment, Energy and Society chair. Endowed for five years, the chair will be held annually by an eminent, internationally recognized figure. The first holder is demographer Henri Léridon, member of the French Academy of Science and Research Director at the French National Institute of Demographic Research (INED).

A Multidimensional Checklist Providing an Overview of Risks

All investment proposals referred to Total's Executive Committee are first submitted by the operational department involved to the Risk Committee, which makes sure that all risks have been properly assessed based on the Corisk checklist.

Whether the expenditure involves a new project or a proposal to expand, acquire, divest or wind up an operation, the checklist is designed to verify compliance with Total's standards, especially in the areas of the environment, community development, social responsibility, health and hygiene, industrial safety and security. The checklist takes into account the construction, operating and revamping phases.

Educate, Explain and Train, for a Company-Wide Culture of Responsibility

As essential as they are, these management procedures and systems would serve no useful purpose if employees had no means of implementing them. Education is an essential driver in this regard. Besides the training offered by our businesses and professional specialties, such as HSE, finance, procurement and auditing, we offer our managers a wide range of courses covering all aspects of broader corporate social responsibility, including ethics, safety, the environment and security, providing opportunities for cross-disciplinary discussions among people from all backgrounds (see page 55). The distribution of practical guides on integrity, energy efficiency and biodiversity, to name just a few recent examples, enhances employees' ability to assimilate the key elements of Total's policy and translate them into action in the field.

TOTAL AND INERIS POOL THEIR EXPERTISE FOR MORE ACCURATE IMPACT ASSESSMENTS



Honing our knowledge of accidental or chronic risks to the environment, health and safety is the *raison d'être* of the stepped-up partnership between Total and the French National Institute for the Industrial Environment and Risks (INERIS). A framework agreement

signed in November 2008 stipulates that INERIS's independence will not be infringed and will enable both Total and INERIS researchers to share the benefits of complementary scientific expertise and more effectively consider new industrial issues.

Support for Employee Environmental and Community Outreach Initiatives



The Total Foundation supports Total employees who volunteer in a personal capacity to help out with public interest projects, especially in the areas of health, education, the environment, community development and humanitarian action.

The projects must be sponsored by an association and involve financing from sources other than just the Foundation.

TO LEARN MORE

<http://foundation.total.com>



Sustainable Development at Work

All of us are responsible for the environment, including the impacts of our daily work practices. And our employees are the driving force behind a sustainable development action program implemented at our Paris headquarters. The preparation of a carbon balance sheet expedited the compilation and application of a set of best practices, such as building lights automatically turning off, printing on both sides of sheets to reduce paper use, and carpooling.

LISTENING TO OUR STAKEHOLDERS

We have daily contacts with a wide array of stakeholders — neighbors, host country governments, researchers, NGOs, customers and suppliers — and listen carefully to their expectations and concerns. We have introduced dedicated, sustainable processes for dialogue with many of them.

Our Primary Dialogue Processes¹

▣ Employees and Employee Representatives

- Total SURVEY, our employee satisfaction survey
- Intranet chats
- Employee dialogue processes that comply with national legislation, often introduced voluntarily

▣ Governments and International Institutions

- Contracts, agreements, partnerships
- Regular dialogue at headquarters and each site

▣ Customers

- Satisfaction surveys
- Customer conventions, trade shows
- Regular consultation and/or input about specific topics

▣ Shareholders and Investors

- Annual Shareholders' Meeting, trade shows, Shareholders' Club and the Consultative Shareholders' Committee
- Annual roadshows and information meetings
- Meetings with individual shareholders in different regions of France

▣ Civil Society, NGOs and Associations

- Corporate funding agreements and partnerships, to pool capabilities and resources
- Regular contacts near industrial facilities and at our headquarters

▣ Host Communities

- Consultation, dialogue and information resources
- Consensus-building programs

▣ Scientific and Educational Community

- Partnerships with research organizations, schools and universities
- Université Total conferences and seminars

Major Stakeholders Expectations

▣ Financial performance and dividends

▣ Long-term strategy

▣ Transparency

▣ Business principles and good governance

▣ Risk identification and management, and specific information on the nature of our risks and how we manage them

▣ Impact management and reduction

▣ New energy development

▣ Investment in R&D

▣ Economic development of our host regions

▣ Innovative, socially responsible, environmentally friendly products

▣ Support for civil society

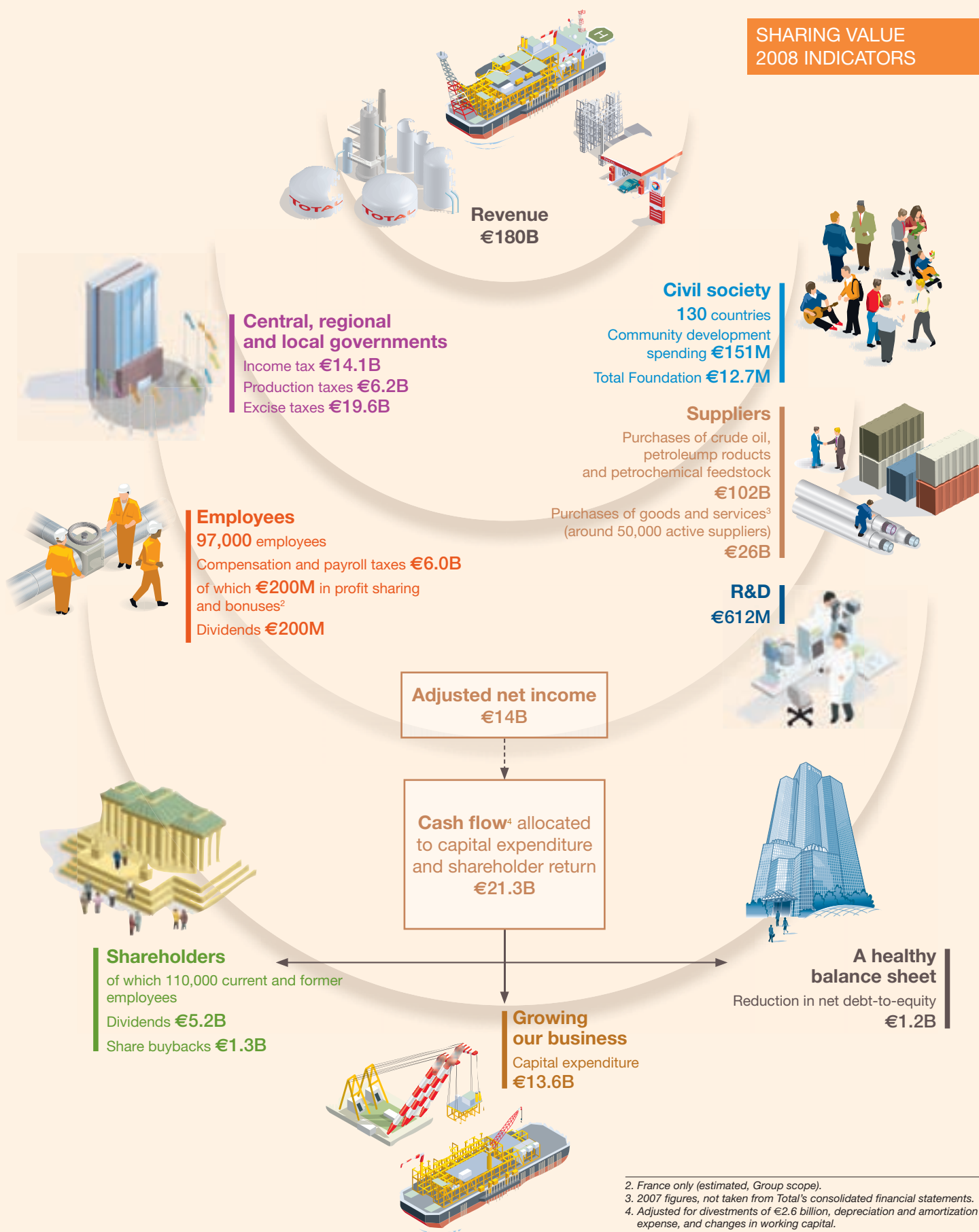
▣ Willingness to listen and dialogue at all times

▣ Competitive compensation

▣ A variety of career development options

¹. This list of stakeholders is not exhaustive; it excludes such key stakeholders as suppliers, rating agencies and industrial partners.

SHARING VALUE 2008 INDICATORS



OUR PUBLIC POSITIONS ON A FEW MAJOR ISSUES

Total takes part in public debates in a number of national and international forums on topics directly related to our operations.

Below is a summary of our positions on certain key topics, discussed earlier in the report and in the next section, *Our Main Challenges*.

AREA	ISSUE	PUBLIC POSITION
→ Human rights	Universal norms on human rights and transnational corporations	Total supports the establishment of universal guidelines. We support the work of Professor Ruggie, Special Representative of the United Nations Secretary-General on human rights and transnational corporations and other businesses. Total and our CEO participated in events celebrating the 60 th anniversary of the <i>Universal Declaration of Human Rights</i> in Paris, in December 2008.
	Operating in countries that do not uphold human rights	Total respects the decisions made by the competent international organizations, but does not believe that boycotts and embargos promote human rights. We are willing to work wherever we can apply our <i>Code of Conduct</i> . We are committed to promoting human rights within our sphere of operations and are careful to ensure that our presence benefits local communities.
→ Financial transparency	Transparent management of oil revenues (EITI)	Total supports the Extractive Industries Transparency Initiative (EITI), of which we have been a member since its creation. We promote it to the governments of our host countries. In February 2009, a Total representative was appointed as a permanent member of the EITI Board.
→ Corporate governance	Corporate Governance Code	Total applies the recommendations of France's AFEP-MEDEF Code, which addresses such topics as the role of the Board of Directors, the selection of directors, and the rules for determining and providing transparent information on the compensation of company officers.
	Compensation of company executives and officers	In France, Total's Board of Directors incorporated the October 2008 AFEP-MEDEF recommendations in this area into our governance principles at end-2008.
→ Climate change	European Union Energy and Climate Change package	Total supports the greenhouse gas emission reduction targets and the provisions approved in December 2008 in the Energy and Climate Change package. Implementation of the directives must not undermine the competitiveness of the companies concerned.
	Post-Kyoto international relations	Total stresses the importance of achieving an international agreement establishing quantified targets and emission reduction stages and fairly distributing the burden among the main emitting sectors and countries. Total hopes that the negotiations at the UN Climate Change Conference scheduled for December 2009 in Copenhagen produce an international agreement.

AREA	ISSUE	PUBLIC POSITION
→ Energy policy	Secure energy supply in Europe	Energy security depends on stable, mutually beneficial, trust-based partnerships between European Union member states and various producing countries. Total, which shares the views of the April 2008 <i>Mandil Report on Energy Security and the European Union</i> , can make such partnerships possible because of our long-standing presence in, and relations with, oil-producing countries. Secure energy supply also requires an appropriate ground-based and maritime shipping supply chain; the capital investments required must provide operators with a reasonable rate of return.
	Energy efficiency	Total considers energy efficiency a priority to more effectively manage energy use and reduce greenhouse gas emissions. This requirement applies not only to industrial operations, but also to service activities and households, where there is significant room for improvement.
	Biofuels and automotive fuel specifications	As a major European biofuel operator deeply involved in second-generation biomass R&D, Total stresses the following aspects, which we deem imperative: > Take account of industrial realities and impact assessments to set the pace for increasing the percentage of biofuels in blends and, more generally, specifying the quality standards applicable to automotive fuels. > Avoid the fragmenting of the European Union market that would result from national policies that are not coordinated.
	Carbon capture and storage (CCS)	Defining a common legal framework and measures is essential for creating the conditions necessary to develop this promising technology.
→ Industrial and transportation safety	French Act on Technological Risk Prevention Plans (PPRT), E.U. directives on maritime safety	Total is actively involved in setting up technological risk prevention plans (PPRT) in France, introduced by the Act of July 30, 2003. These plans meet the need for more effective regulation of future land use around industrial facilities and for adjustments to existing land use. We are pleased that the European Parliament adopted the “third package” of directives to strengthen maritime safety in March 2009. The directives address the safety of ships, crews and passengers and the measures to be taken in the event of accidents. In particular, they ban vessels that do not meet international standards from European Union waters, introduce strengthened vetting, require all shipowners to provide proof of insurance, govern the choices made by the authority that decides where vessels in distress can go, and harmonize accident investigation procedures.



OUR MAIN CHALLENGES

Few companies in the world have a scope to equal ours. Few industrial operators raise as many expectations — sometimes conflicting, but usually perfectly legitimate. We are aware of our obligations and responsibilities. We have attempted to present them here as we perceive them and to show how we strive, every day, to translate them into action in each of our businesses.



Meeting Energy Demand Through Responsible Development of Non-Renewable Resources

We strive to sustainably and responsibly develop oil and gas resources. The cornerstones of our strategy are extending the life of mature fields, optimizing the production of conventional resources and exploring new technological avenues to access the resources of the future.

OUR COMMITMENTS

- Continue to invest substantially to meet future oil and gas demand
- Discover and develop new high-tech resources
- Achieve operational excellence without sacrificing environmental performance
- Take into account and manage all human, environmental and community issues and impacts across the project life cycle
- Maximize the value of existing portfolio assets
- Strengthen our partnerships with producing countries and national oil companies

KEY INDICATORS

▣ **\$1.8 billion** in capital expenditure devoted to exploration in 2008



▣ Proved liquid and gas reserves: **10.46 Bboe**

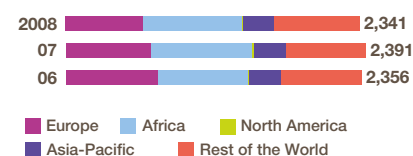


▣ **2.5 Bboe** of potential reserves added

▣ Proved reserve replacement rate: **112%**

▣ Oil and gas production: **2.34 Mboe/d**, down 2% from 2007

Oil and gas production (kboe/d)



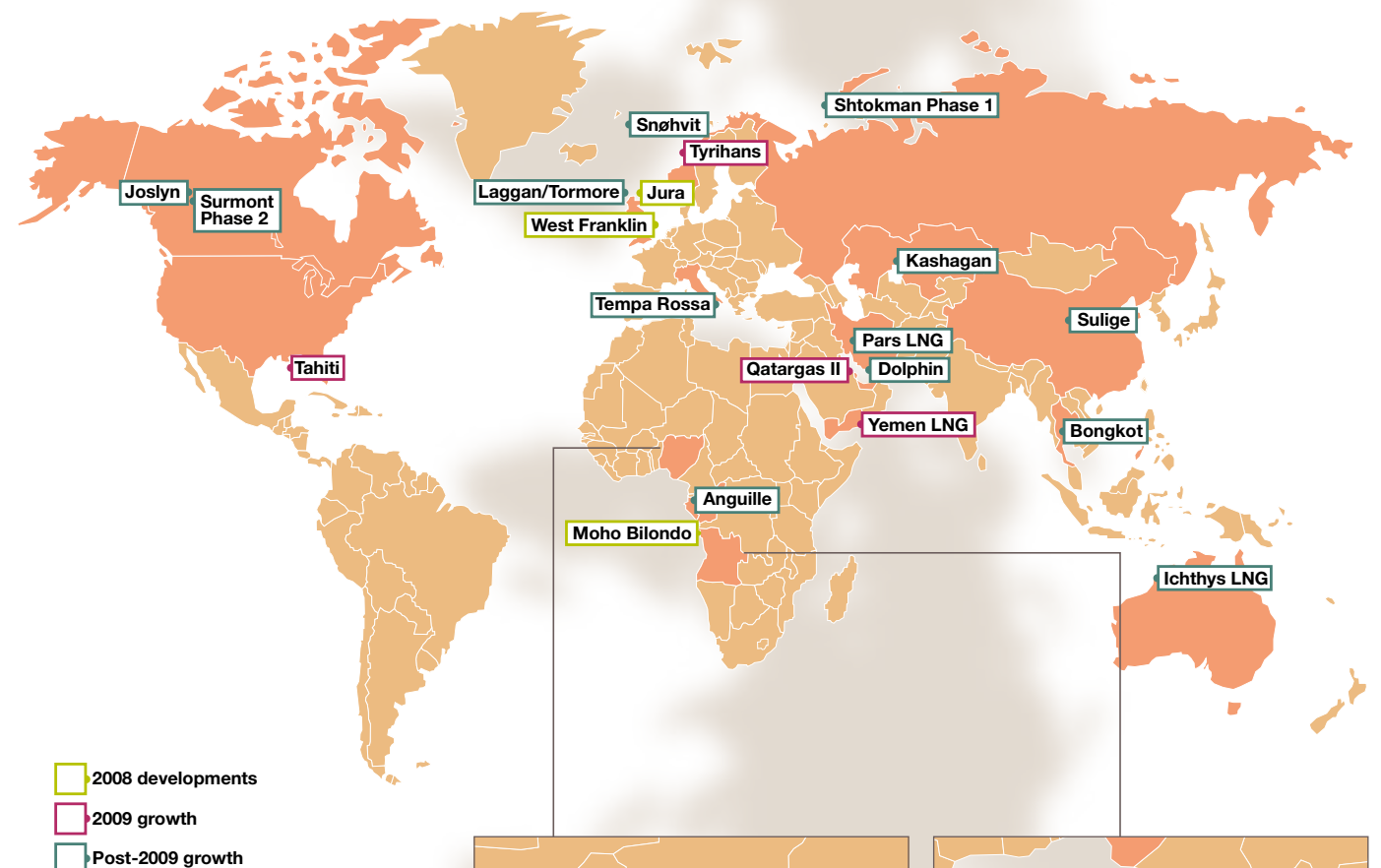
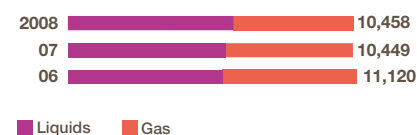
Main Projects for Sustainable Growth

A reserve life of more than 40 years at December 31, 2008¹

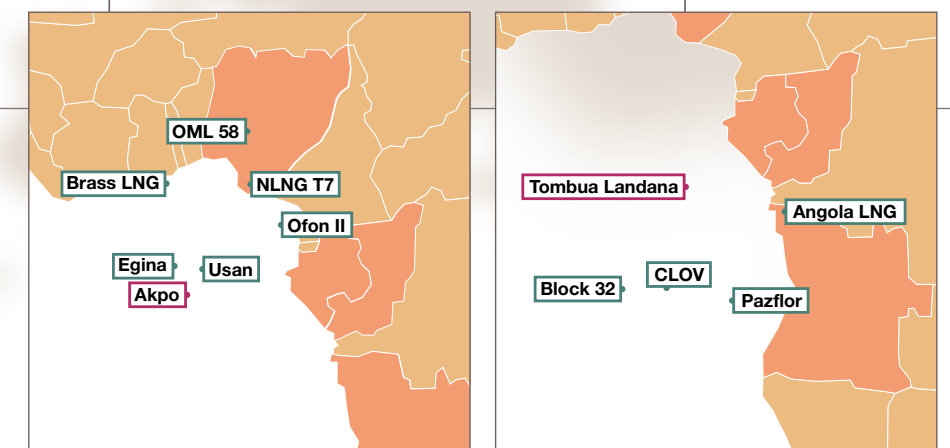
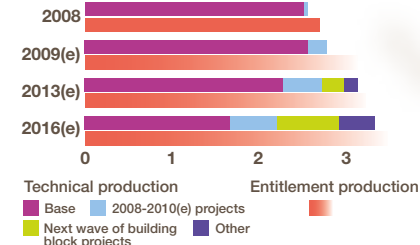
Seven to ten years can elapse between the decision to invest in a major project and the time it comes on stream.

1. Proved and probable reserves and median potentially recoverable amounts from known accumulations.

Proved liquid and gas reserves (Mboe)



Technical and entitlement production (Mboe/d)



Responsible Development of Non-Renewable Resources

OUR MAIN CHALLENGES

- ➔ **FEBRUARY 2008:** Nigeria - The deep offshore **Usan project** is launched.
Venezuela - Two heavy oil agreements are signed with state-owned PDVSA.
- ➔ **APRIL 2008:** Republic of the Congo - Moho-Bilondo comes on stream.
United States - New offshore blocks are acquired in the Gulf of Mexico.

Give New Life to the Production of Our Asset Portfolio

“

PHILIPPE CHARLEZ

*Project Manager, Mature Field Group
Strategy, Business Development,
Engineering and R&D
Total Exploration & Production*



Total is one of the companies most active in the area of mature fields, with results that can be spectacular. Our Resource Development Plan pools innovations and best practices. We anticipate the obsolescence of our facilities, to maintain their integrity and optimal safety conditions. We deploy a wide range of processes — debottlenecking, enhanced oil recovery, electrical submersible pumps, water alternate gas injection and others — to maintain production longer. Because more water is recovered in aging fields, we employ, wherever possible, an array of techniques to optimize output while reducing the volume of produced water requiring treatment and the amount of energy used in the process. These techniques include water drive, in which polymers are injected to reduce the mobility of the water and enhance the mobility of the oil; water shut-off, which prevents water from entering the well by reducing the permeability of the tubing; and downhole separation and produced water reinjection (DOWS + PWRI) using static hydrocyclones. Another priority is developing resources in the immediate vicinity of our production facilities. An increasingly widespread practice, this “cultivation,” to use industry jargon, helps curb the environmental footprint of our operations.

”

Enhancing Production from Existing Resources: A Strategic Key to Energy Supply

Even under the best of conditions, it is impossible to extract all of the oil contained in a field. The average recovery rate at the end of production life is 30 to 35% for oil, 80% for gas. However, the figures for oil vary widely, from a low of about 8% for Venezuela's extra-heavy oil to a high of around 70% for certain fields in the North Sea. That said, mature fields — whose production has already begun to decline or is on the verge of doing so — still have a future. Although the natural decline of fields is inevitable, enhancing oil and gas recovery rates is a priority. On a global scale, a 1% increase in the resources recovered would meet more than two years of consumption, at the current rate of demand. Oil industry engineers are working to lift the recovery rate by around 20% in almost a quarter of the world's fields.

Scouting For the Oil and Gas of the Future

“Easy” oil is largely a thing of the past. Total is marshaling substantial human, financial and technological resources to meet new challenges, such as multiphase transportation of effluent, and tap new kinds of resources, including deepwater fields, heavy oil, sour and acid gas, high-temperature and high-pressure reservoirs and fields in frontier environments like the Arctic. That is especially true for the development of other types of non-conventional oil and gas, for which we are taking a longer-term outlook. Examples include tight gas reservoirs, certain very sour or acid gases, extra-heavy oil and oil shale.

Accelerating the Development of Gas Solutions

As the world's fifth-largest private international producer of natural gas, Total is now a leading liquefied natural gas (LNG) operator. LNG is a key sector, with an average annual growth

SPOTLIGHT

GABON'S ANGUILE FIELD REJUVENATION THROUGH REDEVELOPMENT

1962: Anguille discovered

1966: Anguille brought on stream

2007: Anguille redevelopment launched

The target for 2013-2014 is to boost Anguille's production to around 30,000 barrels per day, compared to a low point of around 8,000 barrels per day in 2007. To meet this challenge, Total

is spending \$2 billion on a two-phase project. Phase 1 involved drilling a dozen wells in 2007 and 2008 and debottlenecking the topsides, while Phase 2 consists of building new offshore infrastructure and an onshore plant, dismantling obsolete units and drilling around 30 additional wells between 2009 and 2014.

The recovery rate is expected to increase to more than 20% from 13%, while environmental protection will be strengthened, in particular through the elimination of flaring by 2013.



- ➔ **AUGUST 2008:** Australia - A new gas discovery is made in the Browse Basin.
- ➔ **OCTOBER 2008:** Nigeria - A decision is made to boost the production capacity of onshore OML 58, to improve local use of the gas produced.



▲ Qatargas II inauguration in April 2009.

rate of 8% over the last 20 years. We are reaping the benefits of a joint effort by our Exploration & Production and Gas & Power businesses, initiated in the early 2000s, to span the entire chain. And the two-pronged trend of portfolio growth and diversification is moving to the next level. In 2010, we will process almost 40% of our gas production into LNG. We have equity interests in nine liquefaction plants, five other planned facilities or facility expansions, and five regasification

terminals. The most recent, the Fos Cavaou terminal in France, is scheduled to be up and running in 2009. The commissioning of Yemen LNG and Qatargas II Train B in 2009 will further increase the volumes that can be marketed by our gas trading and marketing operations, as well as their ability to arbitrage in the markets. The ramp-up of our natural gas operations also provides a partial answer to the dual challenge of energy supply and climate change, thanks to

gas's lower greenhouse gas emissions compared with oil and coal. Reserves are still abundant, flaring is being reduced as associated gas is monetized, and supply sources are diverse.

TO LEARN MORE

www.total.com/csr



SPOTLIGHT

PAZFLOR: A WORLD FIRST

Allying Deepwater Experience and Technological Boldness

Pazflor is a major development for Angola and the biggest Total-operated project currently under way. After Girassol, Jasmim, Rosa and Dalia, we continue to innovate in Angola's deepwater sector, making a pivotal contribution to the country's economy. To extract a resource two-thirds of which is heavy, highly viscous oil, the Pazflor development scheme comprises complete activation systems installed on the seabed, at an average depth of 800 meters. They combine hybrid liquid-boosting pumps and three subsea gas/liquid separation units. Pazflor is the world's first development of its kind. The subsea lines will extend over a total area of almost 600 square kilometers. The entire project cost is around \$9 billion. First oil is expected in the second half of 2011. Projected peak production is 220,000 barrels per day and the associated gas will be reinjected in the reservoir.

SPOTLIGHT

JURA GIVES ALWYN A NEW LEASE ON LIFE

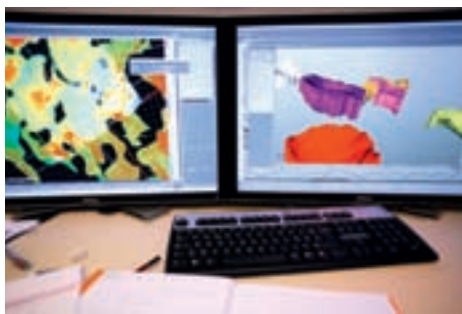
Involving as it did continued investment in mature regions and risk management for complex projects, Jura's coming on stream in May 2008, just 17 months after its discovery, illustrates our approach in more ways than one. A satellite of Alwyn, brought on stream in 1987, the subsea Jura field is operated under high pressure and experiences wide temperature swings of between -60°C and +125°C in its two wells. Its operation involves a groundbreaking subsea protection system that may be used for other deepwater projects. In addition, Jura's natural gas replaces 50% of Alwyn's reserves. The additional resources should make it possible to maintain the area's plateau production at about 140,000 barrels of oil equivalent per day through 2012, or even longer.



- ➔ **NOVEMBER 2008:** Brunei - New gas and condensate discoveries are made.
- ➔ **2009:** Akpo in Nigeria, Tahiti in the U.S. Gulf of Mexico, the Yemen LNG plant, Qatargas II and Tombua Landana in Angola come on stream.

R&D

Geology, seismic imaging, reservoir modeling, production fluid treatment, production and the environment: a cross-disciplinary approach is often the key to innovation. Here are four examples, among many others, of our 2008 accomplishments.



Total, a Powerhouse in Scientific Information Technology

The need to process ever-growing volumes of data faster, refine subsurface images and reduce uncertainty makes computing power more critical than ever to success in the oil industry.

The acquisition in May 2008 of a 123-teraflop¹ computer and increased storage capacity (1 petabyte) opens new horizons for our geoscientists. It also makes us a global leader in terms of scientific computing power. In addition, the heat released by the computer is being used to heat a portion of the *Centre Scientifique et Technique Jean Feger* in Pau, where it is installed.

Subsea Facilities: The Edge Provided by All-Electric

In September 2008, Total inaugurated an all-electric subsea wellhead, developed in cooperation with equipment manufacturer Cameron, in the K5F gas field offshore the Netherlands. A world first that is a step change from hydraulic systems, the new equipment cuts costs, responds quickly, provides more accurate information on valve status and eliminates the leaks associated with a hydraulic system.

Cleaner, More Effective Treatment of Sulfur Deposition

Total and CrystaTech, a Texas-based company specialized in clean energies, have been working together since 2008 to demonstrate in a pilot unit the effectiveness of a new process for the continuous removal and recovery of sulfur, known as downhole sulfur recovery (DSR). This technology is especially promising for sour gas production. Using a solvent regeneration process to absorb the sulfur and remove it from the well bore, it could be an alternative to chemical regeneration or injecting disposable solvents, which requires production to be shut in.

A New High-Temperature Pumping Concept

In Canada, Total is using steam assisted gravity drainage (SAGD) to fluidize essentially immobile bitumen at temperatures ranging from 200°C to 300°C. But bringing bitumen up to the surface puts enormous strain on conventional activation systems. A team of engineers from Total and pump manufacturer PCM has developed an all-metal, elastomer-free progressive cavity pump (PCP). Effective up to 350°C, resistant to sour gas, easier to operate and more energy-efficient, the all-metal PCP could be deployed on a much broader scale. This groundbreaking technology won the French Association of Oil Industry Engineers and Technicians (AFTP) 2008 Award.

TO LEARN MORE

www.total.com/csr



SPOTLIGHT

With estimated reserves of some 600 billion barrels concentrated principally in North and South America, extra-heavy oil is a vital resource as demand for energy soars and production of conventional oil peaks.

In Venezuela, Total is a partner in PetroCedeño, the company that is producing extra-heavy oil in the Orinoco Belt using a cold process.

In Canada, oil sands are recovered by two main methods: open pit mining and in situ. The technology used depends on the depth of the reserves. 20% of the oil sands reserves are close enough to the surface (less than 70 meters) to be mined with large trucks and electric shovels.

The 80% of oil sands reserves that are deeper (in situ) are recovered through advanced drilling techniques that use steam or solvents to heat the bitumen and allow it to move through pipelines. In the Athabasca region of the Canadian province of Alberta, we are involved in several projects. They include Joslyn, which will be mined, and a 50% interest in the steam assisted gravity drainage (SAGD) Surmont project, for which Phase 1 came on stream in late 2007.

The use of SAGD technologies bodes well for future projects that have deep enough resources to use this process, and Total is committed to advancing technology improvements in this area.

Our R&D capabilities and our healthy balance sheet mean we are well positioned to offer robust and workable solutions for this promising segment.

On leases where oil sands must be extracted using open-pit mining techniques, including on our Joslyn and Northern Lights² leases, Total plans to play a leading role by investing significantly in oil sands research

- ➔ **APRIL 2008: Canada – Acquisition of Synenco Energy Inc.**, which is active in oil sands.
- SEPTEMBER 2008: Madagascar – Acquisition of an interest in the Bemolanga oil sands license.**
- ➔ **JANUARY 2009: United States – Total acquires a 50% interest in American Shale Oil (AMSO)**
- ➔ **to use a new in situ technology to produce and commercialize shale oil on a leasehold in Colorado.**



EXTRA-HEAVY CRUDE OIL, A NEW OIL INDUSTRY FRONTIER

to ensure that the resource is mined in the most environmentally responsible manner possible. This includes funding independent research projects and partnering with Canadian universities and other leading organizations in Canada's energy sector.

The economic, environmental and socioeconomic impact of the responsible development of the oil sands poses enormous challenges, yet offers tremendous opportunities. These projects are capital-intensive throughout the value chain — from extraction to upgrading. Economically viable solutions that offer improved energy efficiency, lower carbon emissions, less water-intensive processes

and a smaller environmental footprint must therefore be found. In the current economic climate, the challenge will be significant, as future phases of these very complex projects will only be affordable if oil prices rebound and remain close to \$70 a barrel.



The Differences Between Heavy Oil, Oil Sands and Oil Shale

Total uses a classification broken down into four categories, based on viscosity. Heavy (Class A) and extra-heavy (Class B) oils are mobile enough to be extracted using cold production methods. Bitumen from oil sands (Class C) is immobile at the reservoir temperature and has to be heated using steam injection or extracted using mining techniques. Oil shale (Class D) can be considered parent rock; technologies to extract it need to be further developed and involve a heating process known as retorting.

Working Hand-in-Hand with Local Residents

Total E&P Canada (TEPCA) has implemented a significant stakeholder relations program that relies on extensive impact monitoring, consultation and consensus-building. The subsidiary's community engagement teams have forged close ties with the representatives of the First Nations and Métis communities and work with them to ensure that environmental, cultural and socioeconomic issues are addressed. TEPCA also believes in investing in the communities where it operates, and to date has provided funding for various local initiatives that encourage environmental awareness, promote capacity-building, create local business opportunities and preserve cultural heritage.

Four Interconnected Issues: Energy, Carbon, Water and Biodiversity

Total E&P Canada (TEPCA) is leveraging the expertise acquired on other Total projects to bring the most effective environmental solutions to oil sands development. While our carbon capture and storage (CCS) pilot project in Lacq, France, may offer some direction for our oil sands projects (see page 39), TEPCA is also looking at other options to reduce carbon emissions. Another priority is reducing water consumption. TEPCA is committed to reducing water use in oil sands extraction. It is also committed to progressive reclamation practices. For example, the Joslyn North Mine Project reclamation plan includes the salvage of reclamation soil within the external disposal areas and remediating other infrastructure footprints. It also involves environmental protection at the outset, including setting aside corridors for local wildlife, building a permanent freshwater lake and reconstructing a stream. To address reclamation uncertainty, TEPCA continues to investigate conservation offset opportunities with local biodiversity protection organizations. It will also continue to actively participate in the Canadian Oil Sands Network for Research and Development (CONRAD) Reclamation and Tailings research committee.

1. 1 teraflop equals 1 trillion (10^{12}) floating point operations per second; 1 petabyte equals 1 quadrillion (10^{15}) bytes.
2. A second mining project, in partnership with Sinopec, following the acquisition of Synenco Energy.

Managing Our Production Facilities' Direct Greenhouse Gas Emissions

As an oil and gas producer and operator of production facilities, we strive to deploy a holistic strategy for reducing our climate impact, which means focusing first on managing emissions from our operations. In addition to short and medium-term measures to achieve that goal, we are integrating more stringent carbon requirements in our business model. We also play an active role in developing future solutions, such as carbon capture and storage.

KEY INDICATORS

■ **57.9 million** metric tons of carbon equivalent: Total's global greenhouse gas emissions in 2008

- Between 1990 and 2008, our total emissions grew only **6.9%**, despite respective increases of **31%** and **105%** in Refining activities and Exploration & Production operations
- In comparison, global greenhouse gas¹ emissions soared **24%** during the period 1990-2004 alone
- **~0.1%**: Total's share of direct global emissions
- Europe accounts for **53%** of Total's operated greenhouse gas emissions

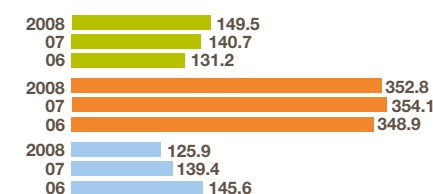
MANAGING OUR DIRECT EMISSIONS

About one-third of the world's greenhouse gas¹ emissions comes from carbon dioxide emissions produced by oil and gas combustion, of which 5% can be attributed to the production, refining and marketing phases. That means the remainder stems from the use of petroleum products, in transportation, building heating and industrial processes (see pages 40 to 43), excluding coal-fired power generation. At our facilities, improving energy efficiency, reducing flaring of associated gas and developing solutions such as carbon capture and storage are priority avenues for managing our emissions.

Greenhouse gases

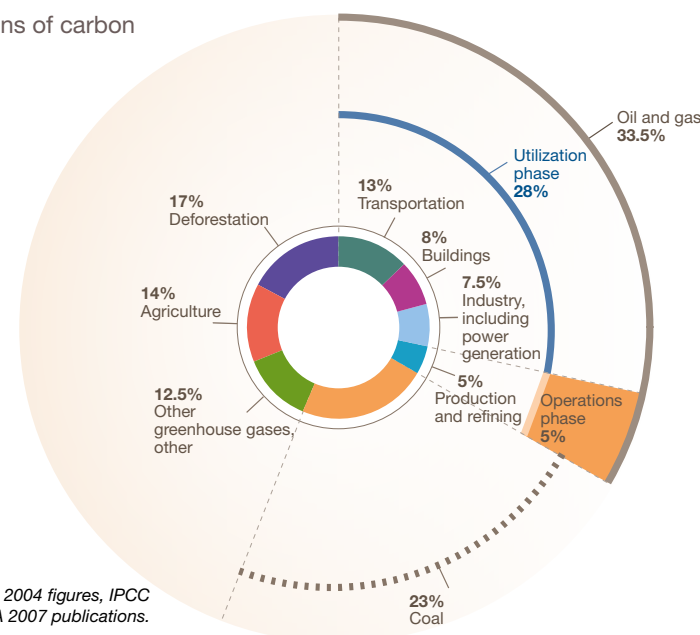
Global emissions: 49 billion metric tons of carbon equivalent in 2004

Primary energy consumption (million gigajoules per year) 2008 total: 628.2 megajoules



■ Upstream ■ Downstream ■ Chemicals

Primary energy includes exported electricity, but excludes flaring, venting and gas for hydrogen and ammonia production.

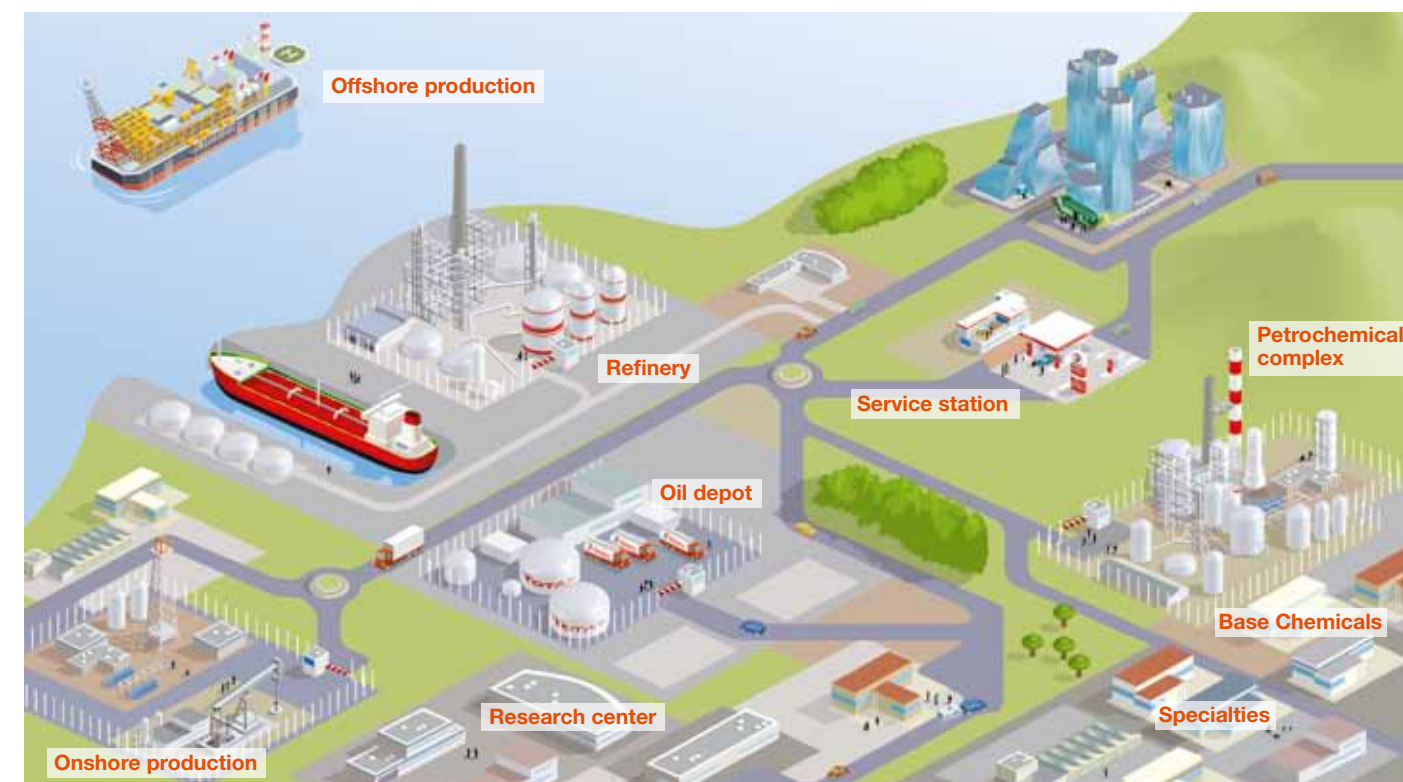


Source: 2004 figures, IPCC and IEA 2007 publications.

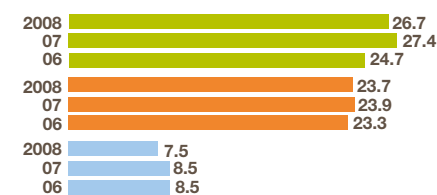
1. The six greenhouse gases covered by the Kyoto Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulfur hexafluoride (SF₆), considering the global warming potential of each relative to carbon dioxide.

OUR OBJECTIVES

- Improve the way we manage our performance reporting
- Enhance the energy efficiency of our facilities through 2012 by 1% a year in Refining and 2% a year in Exploration & Production and Petrochemicals
- Take into account carbon's theoretical economic value when making capital expenditure decisions, from designing new projects to revamping existing facilities
- Continue to reduce flaring of associated gas, halving it between 2005 and 2012
- Contribute decisively to the development of key technologies, such as carbon capture and storage



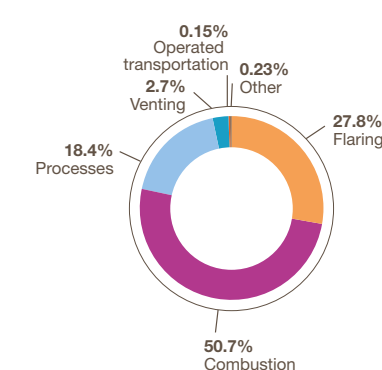
Greenhouse gas emissions (six gases) 2008 total: 57.9 MTCDE



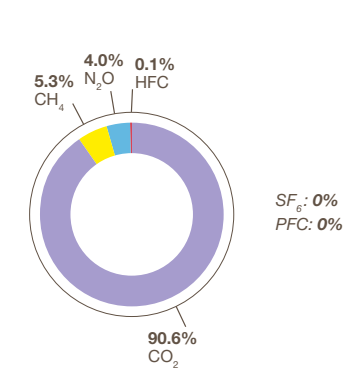
■ Upstream ■ Downstream ■ Chemicals

Upstream includes Exploration & Production (E&P) and Gas & Power (G&P). Here, Downstream refers to Refining & Marketing (R&M).

Relative percentage of greenhouse gas emission sources in Total's emissions in 2008



Relative percentage of the six greenhouse gases in Total's emissions in 2008



Insights

Ronald G. Prinn

TEPCO¹ Professor of Atmospheric Chemistry
Department of Earth, Atmospheric and Planetary
Sciences; Director, Center for Global Change
Science; Co-Director of the Joint Program
on the Science and Policy of Global Change,
Massachusetts Institute of Technology (MIT)



There has been a steady rise in worldwide greenhouse gas emissions in recent years, and some Kyoto signatory nations are having problems achieving their targets. Which of these trends do you consider most alarming, given the Intergovernmental Panel on Climate Change (IPCC) projections that emissions must begin to decline by 2015 to limit global temperature rises to 2°C?

To address the threat of climate change, the issue of greatest current concern is the continuing significant increase in total global greenhouse gas emissions. This increase is being driven by rapid industrialization in developing countries (notably China), by the failure to date of the U.S.A. to join the effort to lower emissions, and to a lesser extent by the difficulties in some Kyoto signatory nations to achieve their agreed reductions. Due to the uncertainties in climate forecasts, the amount of emission reductions needed to limit global temperature rises to only 2°C above pre-industrial levels is not well defined. But even if the U.S.A. vigorously joins the effort, as now seems likely under the Obama administration, the two-degree limit is still highly likely to be surpassed unless the developed nations' efforts are accelerated and the developing nations also join the effort, aided where appropriate by developed nations.

Should companies be getting ready to deal with more coercive carbon constraints than the existing emissions trading systems?

The private sector can and should play a major role in the necessary transformation of the global energy and agricultural systems needed to significantly lower the risk of dangerous climate change. The sooner this effort begins, the more the costs can be contained at levels that will not adversely affect economies. The most economically efficient method to achieve these transformations is to put a price on greenhouse gas emissions, either through a cap and trade or tax system, and then let the market and the private sector do its work. The existing emission trading systems are useful as lessons, but the required new systems will need to be much more extensive and cover all sectors, nations and greenhouse gases.

What role should companies play in adapting to climate change, notably in the countries and regions most exposed to its consequences?

Given the fact that we are already committed unfortunately to future climate change due to the long lifetimes of greenhouse gases and the decades needed to transform the global energy system, adaptation to climate change should accompany global climate mitigation efforts. Large national and multinational companies can play a very significant role in adaptation by helping to protect their existing infrastructure and communities, and by making wise decisions about future location and protection of new infrastructure and the surrounding population. This is especially true for companies operating in poor countries that lack the resources of developed countries and are often at the high end of risk to dangerous climate change. ■

Doing Our Part to Drive the Necessary International Mobilization

We intend to do our part to set up an expanded system for regulating greenhouse gas emissions and are preparing for related deadlines. In 2009, the international community is expected to create a general framework for the post-Kyoto period, covering 2013 and beyond. We hope that the conference scheduled for Copenhagen in December will lead to an international agreement establishing quantified targets, emission reduction stages and a plan for sharing the burden fairly among the major carbon-emitting sectors and countries. With the end of the first phase of the EU emissions trading market, Total is factoring in the expanded European Union Greenhouse Gas Emission Trading Scheme (EU-ETS) and the plans to strengthen it starting in 2013¹. We support the guidelines adopted by European Union leaders in December 2008, while hoping that their implementation does not undercut the competitiveness of the businesses involved. The Energy and Climate Package directives call for a reduction in emissions of at least 20% below 1990 levels by 2020, and as much as 30% under a new global climate change agreement when other developed countries make comparable efforts. It has also set a target of increasing the share of renewable energies to 20% in the energy mix of its 27 member countries.

These three inseparable components of the fight against climate change also structure the approach we take at our own level, including initiatives targeting our customers and users of our products.

Managing Inventories and Reduction Projects

We are continuing to refine the methods we use to track and report our emissions, and bring in outside

1. Tokyo Electric Power Company.

➔ **OCTOBER 2008: France - Total partners with the French Environment and Energy Management Agency (ADEME) on a joint R&D program to make industrial processes more energy efficient.** An offshoot of the Grenelle Environment Forum, it will help small businesses working on energy-saving technologies. **Total is contributing €100 million over five years.**



auditors to verify the consolidated data (see page 90).

Although we are focusing our efforts on carbon, which accounts for 90% of our facilities' emissions, other gases such as methane (CH₄) and nitrous oxide (N₂O), whose global warming potential is higher than that of carbon dioxide (CO₂), are also targeted by specific initiatives. In France, our fertilizer subsidiary GPN is working to improve the catalysts used in its processes at the Grand-Quevilly plant, in order to lower nitrous oxide emissions.

A Comprehensive Energy Efficiency Strategy

Energy efficiency is obviously a critical issue for a company that markets energy in all its forms, especially crude oil, natural gas, LNG, fuel oil, LPG, coal and renewable energies. But we are also a major user, consuming 628.2 megajoules of primary energy² at our operated sites in 2008, of which 71% in our processes. Energy accounts for more than half of the operating costs of Total's refineries and petrochemical plants.

The core priorities of our strategy are cutting our energy bill, lowering consumption and thereby greenhouse gas emissions, and developing alternative solutions that will open up new opportunities.

The overall objective is clear — fostering a genuine culture of energy efficiency. It is common to all our units, and we plan to share it with our customers. Overseen by the Energy Committee, the necessary organization is already in place. Energy efficiency officers have been appointed in our businesses and at our main industrial sites, and each business segment has introduced a program of real-world measures.

Lower-Carbon, Lower-Emission Processes

In 2008, on completion of a trial run in the United Kingdom and Gabon, several other Exploration & Production subsidiaries prepared energy balances for their facilities to identify areas for improvement. Energy efficiency criteria are now included in the assessment of all new projects.

Tracking Down Wasted kWh at Our Service Stations



HANS VAN LIERDE

*Network Optimization Engineering
Department, Marketing Europe
Total Refining & Marketing*



We have launched a Europe-wide initiative that establishes a shared foundation for our capital spending and imposes certain sustainable development invariants.

Each subsidiary is obligated to implement them. Actions involving the extent of energy efficiency are left to the subsidiaries to evaluate, because national legislation can vary widely. But we'd like to go further. We're considering installing submeters for power and lights everywhere — outdoors, indoor customer areas, indoor employee only areas — and introducing a sustainable development rating system for our service stations. The goals are to monitor energy performance trends using key indicators such as the number of kWh per square meter and to segment our network to better target investment priorities. We are also working to centralize the management of total building consumption, to optimize energy use based on business hours, store traffic, weather conditions and other factors.



Energy Performance Management Guide: A Dedicated Method to Achieve Progress



Distributed in 2008 to operational employees, this internal publication starts by defining a common language for discussing the topic, one that cuts across the diversity of approaches taken by the professional disciplines and the different terminologies employed throughout the world. Designed to meet employee needs in terms of organization, methods and work tools, it focuses on four priorities:

- Tracking relevant performance indicators and the impact of optimizing operating conditions.
- Sharing best practices for equipment selection at all sites.
- Enhancing energy efficiency in new projects and capital spending programs.
- Developing innovative solutions with the support of Total's R&D.

1. Phase II is the Kyoto Protocol 2008-2012 commitment period. It expands the scope to encompass additional facilities and tightens allocation plans.

2. Energy that exists in a naturally occurring form, such as coal, oil and natural gas, and that has not been subjected to any conversion or transformation process.

Managing Our Greenhouse Gas Emissions

OUR MAIN CHALLENGES

➔ **DECEMBER 2008:** Total joins the Massachusetts Institute of Technology's **Energy Initiative**, which seeks to help transform the global energy system to meet the needs of the future and to help build a bridge to that future by improving today's energy systems. Our work with MIT will also involve fellowships (Total-MIT Energy Fellows) and support for a fund to finance innovative energy.

TO LEARN MORE

www.web.mit.edu/mitei/



Parsac: The Service Station of the Future



Opened in 2008, the Parsac service station in southwestern France is a precursor of the retail outlets of the future. The facility applies all the energy efficiency expertise currently available, including reinforced building insulation, photovoltaic solar modules (rated at 21 kWp) connected to the EDF grid, hot water produced using solar thermal panels, a heat pump, natural cooling by means of a ground-coupled heat pump, controlled operation of refrigeration units and optimized lighting solutions.

Refining is implementing a multi-facility program to identify the necessary capital expenditure and share best practices. Efforts are focusing on more precise management of steam generators, boilers, and furnaces; improved oversight and audits; optimized fuel and steam systems; upgrading of energy-intensive equipment, such as atmospheric distillation units and catalytic reformers; and expanded use of cogeneration.

All of our businesses have confirmed their commitment to energy efficiency, which will see Refining improve its performance by one percentage point a year and Exploration & Production and Petrochemicals, by two percentage points a year for their own indicators. In the last few years, the Carville facility in the United States has boosted its production 30% while using less energy. And the recent construction of a styrene unit in Gonfreville, France, yielded a 30% gain in energy efficiency, reducing the carbon emissions generated by styrene production by a similar percentage.

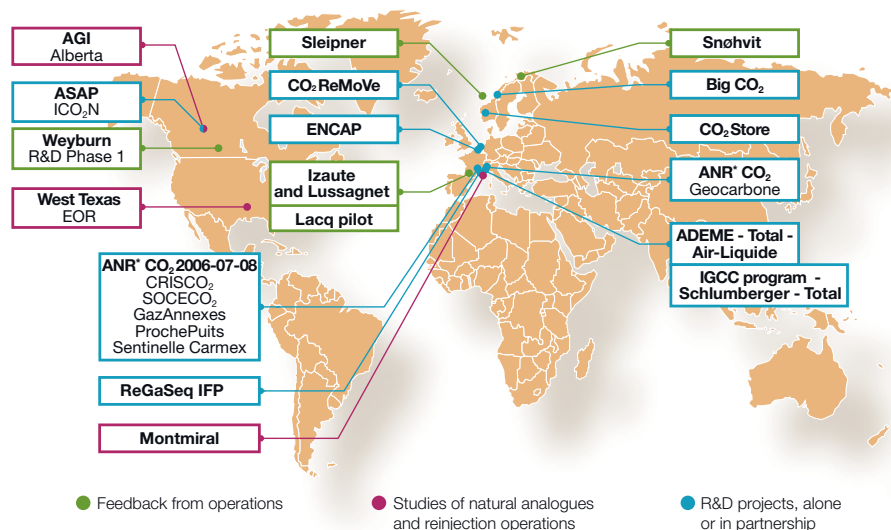
Reducing Flaring: an Environmental and Financial Priority

Flaring of unused associated gas currently accounts for nearly one-third of Total's greenhouse gas

emissions. Since 2000, we have banned continuous flaring in all new projects. In 2004, we joined the public-private Global Gas Flaring Reduction (GGFR) Partnership, initiated in 2001 by the World Bank, and have pledged to halve flaring at our operated sites between 2005 and 2012. To achieve that goal, Exploration & Production teams are implementing a variety of techniques, depending on the local situation. In some cases, the surplus gas is reinjected into reservoirs, with the added benefit of maintaining their pressure and improving oil recovery rates. The gas can also be sold directly, as a fuel for nearby industrial facilities — power plants, petrochemical units, cement factories — or shipped to liquefaction plants, which convert it to LNG to supply global markets.

In 2008, two new projects, the start of construction of the Angola LNG plant and FEED for a reinjection project in Libya, illustrated our comprehensive approach.

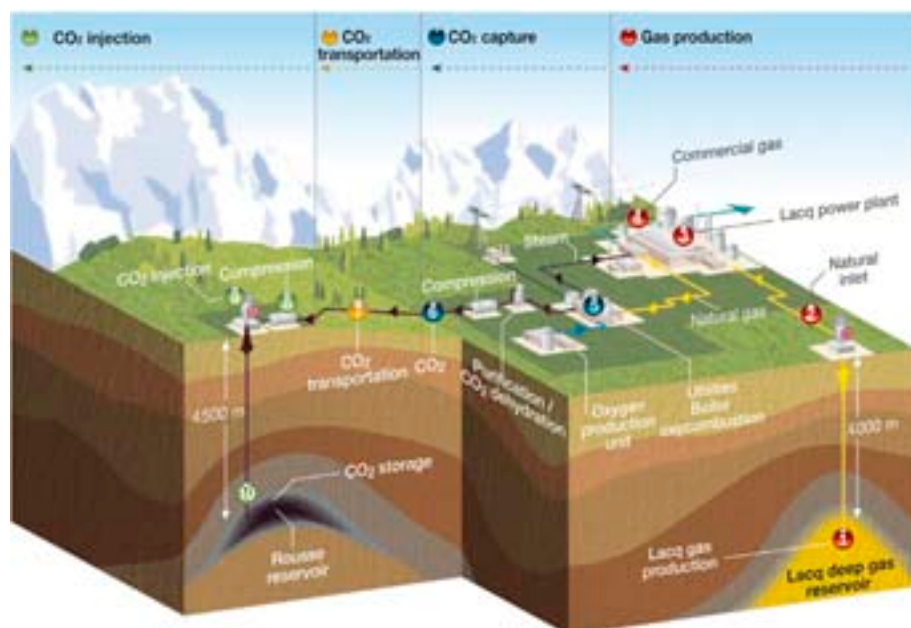
Carbon capture and geological storage, operational and research projects in which Total participates



* French National Research Agency (ANR).



➔ **JUNE 2008: France - Finding new uses for carbon** was the main topic of a symposium in Pau attended by Total's R&D teams and representatives of the international scientific community. Some of the avenues explored include whether carbon dioxide can be converted into carbonate rock and how it might be biologically or chemically converted to a useful feedstock.



Carbon Capture and Storage, a Promising Technology and Core Research Focus for Total

Carbon capture and storage (CCS) consists of separating effluent from industrial units and processing, transporting and storing the carbon obtained in suitable geological formations. According to the Intergovernmental Panel on Climate Change (IPCC), the CCS process could eventually offer a workable solution for dealing with 20 to 40% of the world's carbon emissions.

This promising technology¹ is suitable for concentrated industrial sources of carbon, such as thermal power plants, cement plants, refineries, petrochemical plants and steel plants. It supplements efforts to reduce emissions at source, such as energy efficiency and carbon-free energy. We are applying all our knowledge

and skills to help make CCS effective, sustainable and safe and to prepare for the day when it can be deployed on a large scale.

Launched in 2007, with the first gas injections scheduled for 2009, the industrial pilot built by Total in the Lacq region of France illustrates our commitment. This end-to-end system aims to improve oxy-fuel combustion process proficiency, optimize its energy efficiency, halve capture costs, create appropriate monitoring tools and a method that can be replicated, and provide government authorities with the information they need to prepare suitable regulations.

Moreover, the Lacq pilot is part of an international network of projects in which we are participating, in order to pool expertise and share findings for the benefit of all stakeholders (see map opposite).

FRANCE

Consensus-Building in Lacq through Listening, Discussion and Mutual Understanding

Why do we need to capture carbon, why do it here and how can Total ensure the long-term safety of the gas stored? What are the benefits for our region? To address these legitimate questions and concerns, Total opted, as regulations and legislation allow, to carry out a far-reaching, transparent exercise in consensus-building for the Lacq project. Getting as many stakeholders together as possible, including scientists and national and local NGOs, sharing information backed up with supporting documentation and providing multiple expert assessments and contrasting viewpoints resulted in a rewarding, informed dialogue. This process also helps to reassure the people we speak to that Total is capable of carrying out the project under the best possible conditions. Everyone is clear about the underlying purpose: tackling climate change.

■ **Lacq pilot:**
120,000 metric tons of carbon injected over two years, beginning in 2009

TO LEARN MORE

www.total.com/csr



1. In fact, carbon capture and storage encompasses a variety of processes, including post-combustion, pre-combustion and oxy-fuel combustion.

Helping Our Customers Save Energy and Reduce Their Environmental Footprint

How can the world use energy more sparingly and relieve the pressure on the natural environment? In addition to measures to improve the performance of our own operations, we also help our customers — consumers, businesses, manufacturers and communities — by offering efficient, innovative, lower-energy solutions that are more respectful of our shared environment.

OUR OBJECTIVES

- ▶ Improve our products and expand our line of services, working closely with our industrial and R&D partners
- ▶ Develop new, environmentally responsible solutions across the product life cycle
- ▶ Help customers select the most appropriate products and services, for example by introducing a performance label

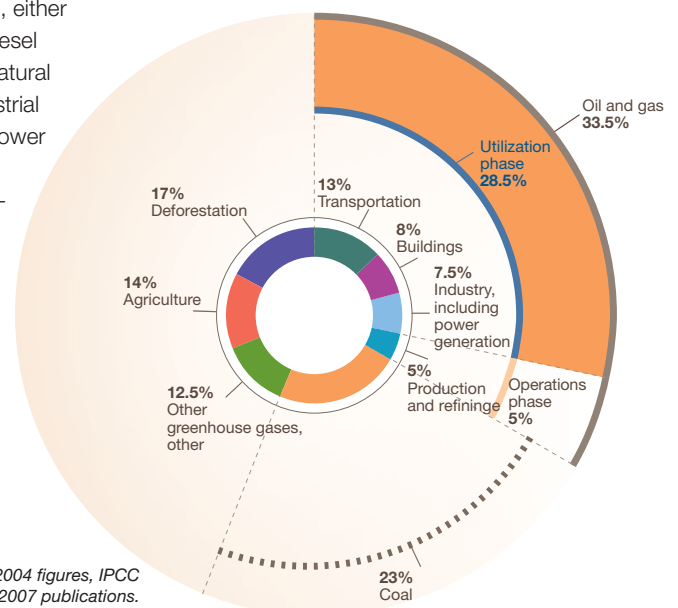
OUR ACCOMPLISHMENTS

REDUCING THE OVERALL IMPACT OF HYDROCARBON UTILIZATION

Of the one-third of the world's greenhouse gas emissions that come from oil and gas combustion, the majority — 28.5% — can be attributed to the use of petroleum products, either for transportation and mobility (diesel and gasoline), building heating (natural gas, LPG and heating oil) or industrial processes, excluding coal-fired power generation. Consequently, developing energy-efficient products and services, including advice, to help our customers curtail their own emissions is a high priority in our commitment to tackling climate change.

Greenhouse gases

Global emissions:
49 billion metric tons of carbon equivalent in 2004



Source: 2004 figures, IPCC and IEA 2007 publications.

Transportation

- ▶ Every fuel in the Total Excellium line offers three advantages: enhanced efficiency, reduced carbon emissions and a smoother, more comfortable ride.



Buildings

- ▶ Total offers a combined liquefied petroleum gas (LPG) and building-integrated photovoltaics (BIPV) dual-energy solution for more environmentally friendly housing.



Industry

- ▶ Total Petrochemicals is developing polylactic acid (PLA), a plant-based, compostable plastic derived from lactic acid, which is produced by fermenting sugar.



➔ **NOVEMBER 2008:** Initial launches in Europe of **Total Excellium Truck Diesel 10 ppm**, an ultra low sulfur diesel fuel for trucks that cuts consumption, emits less carbon and extends engine life thanks to proprietary additives.

TRANSPORTATION AND MOBILITY

Reversing Unsustainable Trends

Around 13% of global greenhouse gas emissions are associated with transportation. Road transportation accounts for around three-quarters of that total globally, and more than 90% in Europe. However, according to the OECD, the automobile fleet, including two-wheelers and trucks, is projected to swell 70% in OECD countries and 400% in the rest of the world between 1990 and 2030, driven mainly by the projected growth of Asian economies. Admittedly, this pace could be slowed by a prolonged recession.

In terms of technology, the world's fleet in 2030 will probably look different from today's.

In addition, regulations are getting stricter, especially in the European Union, where a series of directives has changed fuel specifications, for instance banning lead and setting lower limits for benzene and sulfur content. This trend continues, with new requirements for other pollutants, the introduction of the Euro 5 and Euro 6 emissions standards in 2011 and 2015 respectively, and the eventual establishment of EU standards

for carbon emissions per kilometer. As a result of legislation, average consumption has dropped in the last 15 years. But progress has not been equal in all regions of the world and is not enough to offset the increase in the number of vehicles on the road, especially in Asia, and the number of kilometers traveled. Current issues such as resource availability and global environmental impact make it vital to promote efficient solutions now.

R&D Partnerships Drive Progress on Engines, Fuels and Lubricants

We are a partner of choice of leading original equipment manufacturers and automakers such as PSA and Renault, working alongside them to drive innovation. Total is devising the technologies of the future. We are optimizing our production facilities and investing in R&D to meet the expectations of our partners and of end customers.

Now found in every nook and cranny of vehicles, the polymers and elastomers made by Total's Chemicals business are lightening automotive components.

TRANSPORTATION OFFERING

➔ Products

Excellium fuels	Fuel economy, improved efficiency and extended engine life
Fuel Economy lubricants	Fuel economy, reduced friction, optimized pollution control equipment
Plastics and rubber	Lighter vehicle components
AdBlue diesel additive	Lower nitrogen oxide emissions for trucks

➔ Services

GR fuel cards	Eco-driving instruction for professional drivers
Tire inflation	Underinflated tires mean higher fuel consumption
Car wash facilities	70 to 80% of water is recycled at 40% of our service stations in Europe
Eco-driving	Customized advice means optimal driving practices

Offer More Energy Services That Make a Difference



ALAIN CASTINEL

*Sustainable Development Coordinator,
Sustainable Development & Environment
Department*



We know that a significant proportion of the impact of petroleum products is experienced in the utilization phase. Allowing our customers to reduce their impact is the point of the Total EcoSolutions label that Total decided to launch in early 2009.

We're starting with a few solutions awarded the label from our existing lineups, but our goal is to begin developing others right now. Because our customers expect them. For us, the label is a real driver of progress, involving several of our businesses and a number of types of expertise, including R&D, sustainable development, strategy and marketing. It also involves dialogue with our stakeholders, such as customers, our customers' customers and partners, because we believe that users are the keys to developing tomorrow's solutions.

Through our EcoSolutions label, we aim to create a ripple effect and work even more efficiently on the core issue of managing energy demand.

Helping Our Customers Save Energy

OUR MAIN CHALLENGES

➔ **JANUARY 2009:** Partners for 40 years through the Elf brand, **Total and Renault renew their cooperation agreements**, notably in environmental R&D and innovation.

AFRICA AND THE MIDDLE EAST Total Employees Become Eco-Driving Ambassadors



The leader in the African market, we are the first marketer to offer a complete range of eco-services to help customers juggle environmental concerns and fuel cost reduction. Prepared by thoroughly educating employees, the program was launched in December 2008 and will be phased in gradually in the 50 subsidiaries and 4,500 service stations in our Africa-Middle East scope of operations.

Meanwhile, Refining & Marketing researchers are focusing on the engine-fuel-lubricant triad. Their goal is to adapt formulations to new designs for engines and exhaust gas post-treatment systems by identifying the parameters critical to progress. Based on Life Cycle Assessment (LCA), the search for more advanced eco-design comes down to the efficiency of the fuel-lubricant duet. Blends containing renewable ingredients will have to be tested and potential new ways to save energy assessed. Our Fuel Economy lubricants illustrate the relevance of this approach. Designed to work in engines for all types of vehicles, including cars, trucks, farm machinery, construction machinery and fishing boats, they reduce friction and thus wear and fuel use, boost mechanical component longevity and reliability, and lower per-kilometer or per-operating hour costs.

Changing Consumer Behavior

This technical approach is backed up by an array of services and advice offered by our retail networks, tailored to each type of customer. We cater to our customers' interest in a low-carbon footprint at service

stations. Advice on choosing the right fuel and lubricant, checking tire pressure, adjusting engine settings and driving more smoothly are simple ways to help save fuel and prevent carbon emissions, something we have been promoting more actively through the *Eco 10* campaign introduced in Europe in 2008.

In 2009, Total's retail network will also give priority to tracking fuel use and providing eco-driving instruction for GR payment card users, in initiatives targeting professional truck drivers.

BUILDINGS AND HEATING

Making Qualitative Improvements in Building Environmental Performance

Buildings account for about 8% of the greenhouse gas emissions associated with hydrocarbon use worldwide. In France, for example, the building sector as a whole represents 40% of the nation's energy consumption and almost 25% of carbon emissions. In the wake of the Grenelle Environment Forum, both the construction and renovation industries are gearing up to gradually reach a goal of 50 kWh of primary energy per square meter. That is the current threshold for the Low Consumption Building (BBC – *Bâtiment Basse Consommation*¹) label, but many existing structures consume four to five times that amount. Similar trends exist in a number

of countries. Designers draw on a growing list of labels and standards, including Passive House² and energy-positive³ buildings, BBC, High Energy Performance (HPE) and High Environmental Quality (HQE®) in France; Building Research Establishment's Environmental Assessment Method (BREEAM) in the United Kingdom; Minergie in Switzerland; and Leadership in Environmental Energy and Design (LEED) in the United States.

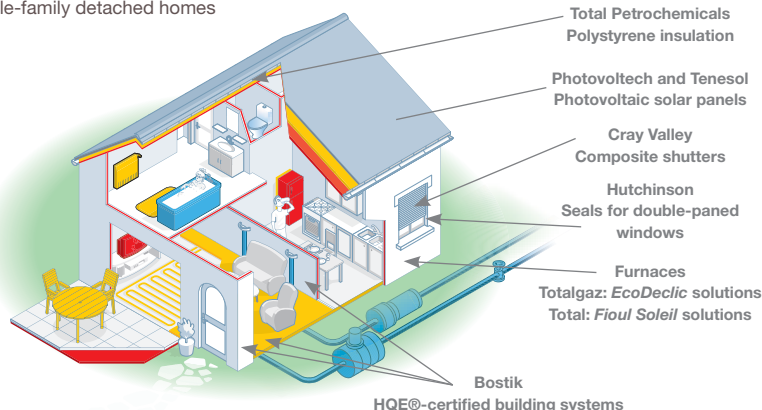
Listening, Assessment and Innovation, the Common Thread in a Wide Range of Solutions

In developed countries with cool or temperate climates, 80 to 90% of a housing unit's energy consumption over its life cycle occurs during the utilization phase, with more than two-thirds related to heating⁴. Consequently, that is where the greatest gains can be made, and Total integrates solutions for doing so into a line of products and services that we also began marketing to the office and retail sector in 2008.

Our premium home heating oils improve combustion in furnaces. In France, as part of the *EcoDeclic* solutions offered by Totalgaz and its heating oil subsidiaries, we base our advice to customers on a preliminary assessment and tell them about the subsidies available for installing dual-energy solutions (LPG-thermal solar or home heating oil-thermal solar) for hot water and heat.

Offering for buildings

Single-family detached homes



➔ **FEBRUARY 2008: Marketing of the TP Star concept,** a new generation of lubricants that simplifies the life of construction professionals by increasing their machinery's fuel efficiency and reducing its greenhouse gas emissions.

A versatile energy provider, we lead a network of qualified experts that relay our advice, describe simple ways to save energy and install, for example, the latest-generation temperature-regulating devices.

Totalgaz, the Energy Consultant of Professionals

Written especially for building managers, the *Eco Réflexes Pro* educational guide highlights six environmentally responsible behaviors all building users are encouraged to adopt.



Tarbicol Silentstik® Adhesive “Sticks” to France’s HQE® Criteria



Based on a process patented by Bostik, this flooring adhesive is easy to use, delivers superior acoustic performance that absorbs impacts and reduces resonance and ambient noises, and emits fewer VOCs. All three properties meet French high environmental quality (HQE®) construction specifications.

1. France's RT 2005 technical regulation for residential buildings, all uses, adjusted regionally. In the office and retail building sector, the BBC label is only awarded for performance that is 50% better than the level mandated by legislation and regulations.
2. Less than 15 kWh per square meter per year for heating, and less than 120 kWh per square meter per year in all. The term comes from the German Passivhaus concept.
3. A building that produces as much or more energy than it uses, through the use of photovoltaic solar panels, wind turbines, geothermal energy, biomass or other means.
4. Source: Enerdata 2004 and European Environment Agency 2005.

INDUSTRY

Providing Appropriate Solutions Through an Understanding of Each Industry

Our industrial customers also look to us to lighten both their energy bills and their environmental footprint.

In response, Total has for example developed asphalts that both enhance road safety and allow roads to be built using fewer materials and less energy. We offer users of heavy fuels products with additives to enhance efficiency and reduce particulate emissions, customized services including thermal audits through a dedicated team, optimized energy consumption at storage facilities, and stack gas treatment to remove nitrogen oxides (NOx).

Likewise, our subsidiary Tegaz partners with Bureau Veritas and Altran to offer its customers cutting-edge training and energy audits. The goal is to promote the rational use of natural gas, in terms of safety, consumption and return on investment. Originally created for large units consuming more than 3 GWh per year, some of these services have been available to small businesses and industry since 2008.

In another example, we now have a comprehensive line of biolubricants that meet the specific requirements

Biostyrelf, or Applying Eco-Design to Asphalt



Leading road builders and their customers are increasingly vocal about their desire for pre-mix asphalt that can be applied at lower temperatures to save energy and cut carbon emissions, as well as increased recycling, enhanced durability of materials and the use of renewable resources. Total's Asphalts business has translated their expectations into action priorities, using a strategic marketing consultation method developed in-house — 360-degree sustainable development consultation of stakeholders — and introduced in 2006. Made in Brunsbüttel, Germany, and tested since 2008 in Denmark, the Biostyrelf binder exemplifies this approach. Among other virtues, it includes plant-sourced components.

of sensitive environments such as mountains, forests, farming and fishing. After beginning the process in 2008 with our Chainbio chainsaw oil, in 2009 Total became the first oil company to be awarded the European Union eco-label for a comprehensive line of hydraulic fluids. Derived from renewable raw materials, these biodegradable products help to reduce carbon emissions.

INDUSTRY OFFERING

➔ Industrial Installations

Fioul Premier premium heating oil	Improved boiler performance
Biolubricants	Renewable components Biodegradable
GPNOx®	Reduced nitrogen oxide emissions in stack gas

➔ Materials

Plastics	Energy and materials savings for our plastics processor customers
Asphalt	Recycling of materials Inclusion of renewable components Durability and seal, for industrial applications Less energy required during application

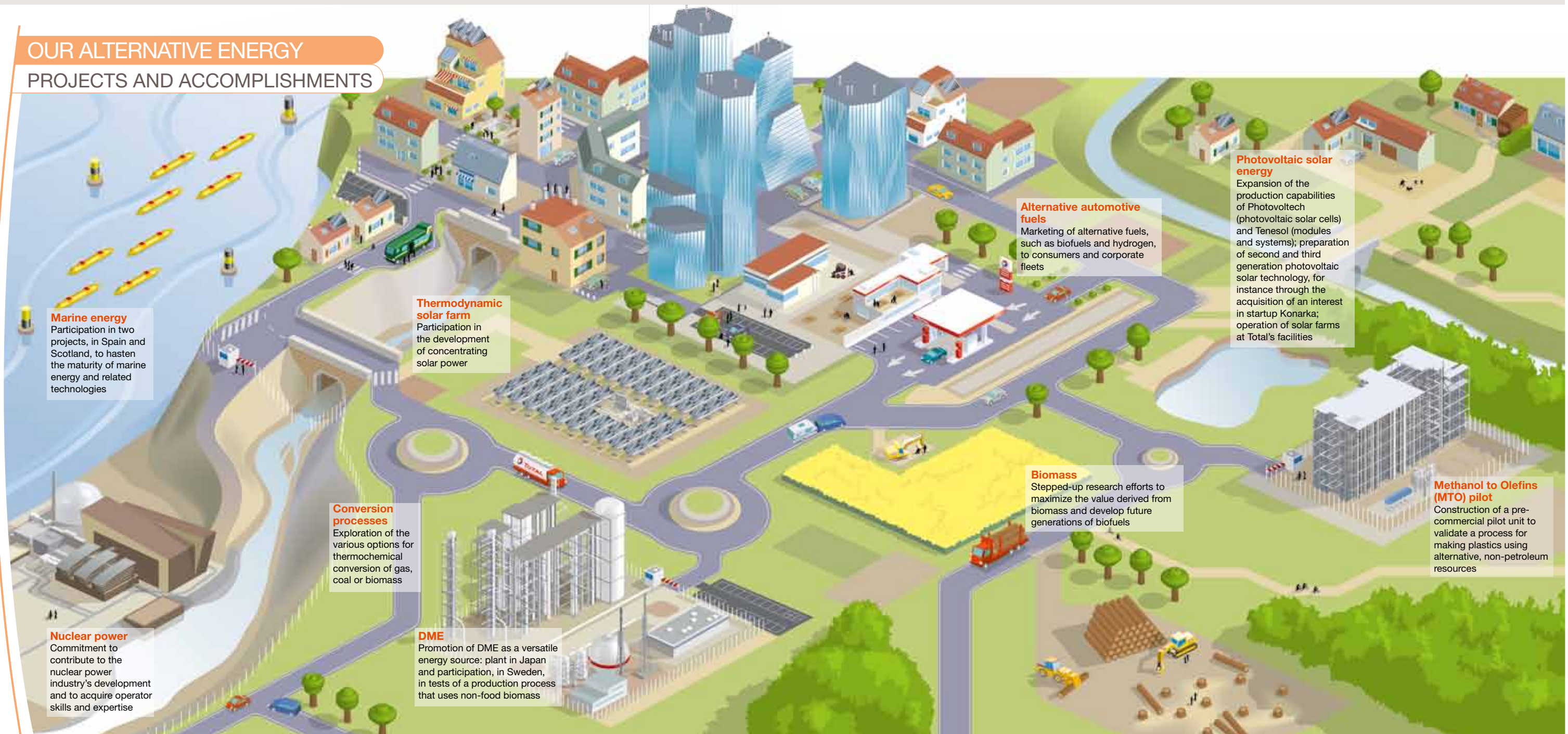
Moving Toward a More Innovative, Diversified, Sustainable Energy Supply

Developing certain kinds of energy to supplement oil and gas is already a priority at Total. Other alternative energies will be among our core businesses of the future. In addition to R&D, which is key to identifying the most sustainable options, securing the future of energy requires long-term capital expenditure. That is both our business and the meaning of our commitment in this field.

OUR OBJECTIVES

- Create an incubator for new energy solutions, nurture them to maturity and take part in their commercial production
- Be more active across the photovoltaic solar chain and ramp up our cell production capabilities to 260 MWp by 2012
- Invest around €80 million a year in development capital over the next five years to promote an array of clean technologies
- Strengthen and expand our partnerships with the research community in the field of new and alternative energies
- Leverage our existing skills and expertise and acquire new competencies so that we can assess and select the most relevant opportunities

OUR ALTERNATIVE ENERGY PROJECTS AND ACCOMPLISHMENTS



Preparing Our Future Activities



VÉRONIQUE HERVOUET

Investments Manager with the Development Capital team, Sustainable Development & Environment Department, Total



Our job is to spot startups that are developing innovative technologies and business models early on and support their growth, by acquiring interests in them alongside other professional financiers. In other words, to share risks and capabilities, in order to accelerate the development of companies offering groundbreaking solutions to the challenges of energy transition. These “eco-industries” span a wide array

of sectors, including alternative and renewable energies, more efficient use of natural resources and energy, managing greenhouse gases, and recovering and reusing waste. Investment capital, which encompasses venture capital, is a new business for Total. To start with, we acquired interests in two established funds — Demeter in Europe and Chrysalix in Canada. In late 2008, Chrysalix invested in Brammo, which makes electric motorcycles, and Demeter invested in Méthaneo, which specializes in biogas. At the same time, we’re looking into direct investment opportunities, notably through a partnership with a bank. The development capital business harnesses skills and networks across Total and in return provides insight on these new issues. It’s a fascinating job. It requires an open mind, disciplined thinking and selectiveness to identify, on the boundaries of our activities, the businesses that combine innovation with a strong potential for return on investment, in sectors that are in a state of ferment.

Clear Choices in Priority Sectors

Transitioning to a new energy model requires a massive, concerted effort to manage demand. In the medium term, it also depends on using a mix of all types of energy — fossil resources through technologies that emit less greenhouse gas, renewable energies such as solar, wind, biomass and marine energy, nuclear power and even the expanded use of hydrogen. A global energy producer and provider, Total is present or establishing a foothold in nearly all of these sectors. However, our priority as an investor is on four sectors of the future in which we can play a significant role and

where our range of capabilities can make a unique contribution to the community. Two of them — photovoltaic solar energy and nuclear power — have reached the commercial stage and are poised to grow sharply. The other two — second-generation biomass and new ways to convert coal — will catch up to the first pair soon, when the research in progress enables us to manage their environmental and community impacts throughout the product life cycle. This strategic orientation considers three sets of criteria: the fight against climate change, the inherent return on investment of the operations in question, and how closely they align with Total’s

existing skills and expertise in terms of processes, market knowledge and management of large-scale projects.

Our Springboards: Direct Investment, Development Capital, R&D and Partnerships

In all these fields, Total works within the same long-term horizon as for our oil and gas operations. Whether the goal is commissioning future nuclear reactors or wide-scale deployment of solar energy or second-generation biomass, we are looking at a timeline of ten to 20 years out. That is yet another reason to accelerate and broaden the field of investigation. In 2008, we created a development capital fund to support innovative startups working on the energies of the future. In addition, Gas & Power allocates around €30 million annually to R&D and continues to add staff.

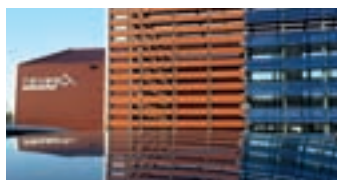
SOLAR ENERGY

Scaling Up Photovoltaic Solar Energy and Covering the Entire Chain

The value of solar energy is now well established. The solar radiation that reaches the Earth represents 10,000 as much energy as the planet’s current consumption.

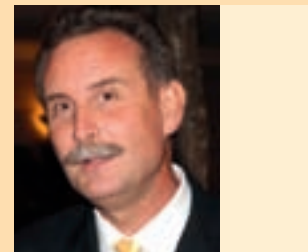
However, for Total and everyone else in the solar industry, the main short-term issue is performance. The goal is to boost the efficiency of photovoltaic solar cells and reduce the costs of the currently dominant silicon process, to achieve grid parity and make solar energy more competitive with other power sources. Photovoltech¹, a manufacturer of photovoltaic solar cells, is currently growing faster than the solar energy industry, and its production capacity will be increased to 260 MWp around 2012.

We are also working to optimize these first-generation cells, by using thinner silicon layers and by simplifying processes, and intend to position ourselves upstream, at the silicon



Insights Alain Liébard

President and Founder
of Fondation Énergies pour le Monde
[Energy for the World Foundation]



What are the main choke points when it comes to substituting new energies for oil and gas?

Most of the political decisions that could be made, have been. The technology of new energies is not a problem either: when we ask the right questions, we eventually find the right answers. So there are no longer any major technical obstacles to using renewable energies. Of course, research is more necessary than ever to further enhance their performance.

The real choke point today is organizing markets, which is very often done through land-use planning decisions made on a case-by-case basis. All economic, social and regional stakeholders must adapt to the specific demands and requirements of renewable energies, know about the measures taken to promote them, and learn how to use them. It is vital to bring everyone in the chain up to speed, so that, in the end, consumers can enjoy the best, most affordable service possible, for themselves and the community. In France, for instance, financial institutions should have all the Grenelle Forum environmental measures at their fingertips, so they can steer their clients toward the right choices. Consumers can't shoulder the entire burden or get things moving all by themselves. ■

An unabridged version of these remarks can be found at

www.total.com/csr



purification and wafer production stage. We are also planning to build a plant in the Carling region of France to manufacture wafers for the photovoltaic industry, in partnership with GDF SUEZ. Tenesol, a 50-50 Total-EDF joint venture specializing in modules and systems, expanded its plant near Toulouse, France, in 2008, and is boosting its sales and marketing network. By gaining a stronger foothold across the entire chain, we are positioning ourselves as full-fledged players in the sector's expansion.

At the same time, Total employees, together with world-renowned organizations², are keeping a very close eye on advances in thin films, the less silicon-intensive second-generation cells suitable for wider application. Still in the laboratory stage, the third generation, which encompasses hybrid cells, nano-enabled processes, microelectronics, quantum physics and organic molecules, is not just being closely monitored: we are forging promising alliances in the field right now.



▲ Based in Toulouse, France, Tenesol Technologies has had three production lines since 2008, for a capacity of 50 MWp per year.

FRANCE

Five Total Facilities Promote Photovoltaic Solar Energy

In 2008, our Science and Technology Center in Pau, the Lacq platform, the Provence refinery, the SARA refinery in Martinique, and the Cray Valley plant in Sorgues were selected to make good on one of the commitments we made in response to the Grenelle Environment Forum. They will be educating a broad swath of the public by presenting the various solutions installed on site. The demonstration projects include ground-level

photovoltaic arrays, shade screens, covered walkways, solar roofs. These projects, on which €15 million will be spent over a two-year period, will also showcase the know-how of Tenesol, which supplies systems designed to last at least 20 years. Total Énergie Solaire, a subsidiary purpose-created in 2008, manages these "solar farms," reselling their production to EDF, and is acquiring operator expertise transferable to other operations of the same type.



1. Total 47.8% - GDF SUEZ 47.8% (via Electrabel) - IMEC 4.4%.

2. Including the French Atomic Energy Commission (CEA), the French National Center for Scientific Research (CNRS), Interuniversity MicroElectronics Center (IMEC) in Belgium, and the French Institute for Scientific and Technical Information (INIST).



→ **SEPTEMBER 2008: Japan – Inauguration of the DME production plant in Niigata.**
The complex has a capacity of 80,000 to 100,000 metric tons a year and adds to the resources deployed by Total to promote DME and assess the potential market for it.

The Rebirth of Concentrated Solar Energy



The mushrooming of projects in southern Europe, North Africa, the Middle East and the United States highlights the renewed enthusiasm for concentrating thermodynamic solar collectors. Although they require direct, intense sunlight, concentration technologies are finding a number of applications in desert and mountain areas. Various designs are vying for prominence, in particular dish collectors, solar towers and cylindrical parabolic trough collectors. According to the International Energy Agency (IEA), installed capacity could reach 650 GW in 2050. Total helped renovate France's Pégase solar tower on the Thémis site, in conjunction with electric utility EDF and the French National Center for Scientific Research (CNRS), and is working on other similar projects. In a joint venture with Abengoa Solar, we have also submitted a bid to the Abu Dhabi government to build the Shams 1 concentrating solar power (CSP) plant, which will be equipped with parabolic troughs and have a net rating of around 110 MW.

BIOMASS

Moving Toward Truly Sustainable Use

Biomass, excluding biofuels, could supply more than 11% of the global demand for primary energy by 2030, according to Total's own estimates. Though in absolute terms biomass has substantial potential, attempts to develop it in a sustainable, acceptable way are bumping up against a number of obstacles. The emergence of first-generation biofuels highlighted the issues involved, which include the large land areas required, the risk that biofuels will compete with food and industrial applications (especially fibers), price

pressures, compliance with ethical practices, carbon performance requirements, and the need to improve competitiveness.

Total is a leading biofuel player in Europe, producing and blending 790,000 metric tons of ethyl tertiary butyl ether (ETBE) in gasoline at ten refineries in 2008 and 1,470 metric kilo tons of fatty acid methyl ester (FAME)¹ oil in diesel at 14 refineries and several depots, in line with applicable European Union regulations.

In addition, we are working to improve the overall energy performance of biomass-to-energy processes. Our projects involving partnerships with well-established biofuel firms, our joint analysis with the French National Research Agency (ANR)

R&D

Solving the Conversion Equation

On the input side are still plentiful natural gas, coal and biomass resources. On the output end are synthetic liquid hydrocarbons that outperform today's automotive fuels, as well as methanol, DME, basic molecules for chemicals, and even hydrogen or electricity. In between is a biochemical conversion stage for biomass only or a thermochemical conversion stage with a shared synthetic gas conversion stage ($\text{CO} + \text{H}_2$). The question Total's teams are trying to answer, drawing on skills and expertise very similar to those used in petrochemicals, refining and product marketing, is which processes will offer the best overall performance in the future. However, we do not believe it will be possible to utilize coal on a large scale until mature carbon capture and storage techniques are available.

DME, a Versatile Molecule

Biodegradable in the air, clean-burning and noncorrosive, dimethyl ether (DME) gas can be used as a clean automotive or other fuel and as a petrochemical feedstock. Total, the oil company most active in the field, leads the ISO committee responsible for drafting standards applicable to DME. In 2008, we also joined a European consortium that is testing bio-DME production from spent liquor, a pulp residue, in Sweden.

MTO, a Petroleum Substitute for Plastic Manufacturing

Through its methanol to olefins (MTO) project, Total Petrochemicals is investing €45 million in a world first: the development of a process that can replace petroleum-derived naphtha with other feedstock, including natural gas, coal and biomass. Up and running since 2008, the pilot unit installed at the Feluy complex in Belgium is preparing the transition to the commercial stage.



TO LEARN MORE

www.total.com/csr





➔ **JUNE 2008: Belgium – Europe's first superhighway hydrogen filling station** opens in Ruisbroek. This latest achievement of Total's partnership with BMW is a logical extension of the research and demonstration work devoted in the last few years to hydrogen fuel cells and their applications in transportation, heating, power and other sectors.



of resources and conversion technologies for some 20 processes, our stepped-up R&D and our pre-commercial pilots are not limited to automotive and other fuel markets. They draw on the cross-disciplinary capabilities of several Total businesses and on our Scientific Development Department's experts.



Establishing the Viability of the Most Relevant Options

In addition to esterification, hydrotreating vegetable oils and animal fats is a further step in making biodiesel that is as good as or better than conventional diesel. Based on recent test results, the process may be in use in several refineries by 2010. Total is also exploring biological methods, such as enzymatic reactions, fermentation and distillation, as well as thermochemical processes, including gasification followed by synthesis reaction. Biological processes are being considered for the production of ethanol using cellulosic resources. But a number of steps still have to be perfected, such as the conversion into ethanol of the pentose or hemicellulose contained in the plant material. Applicable to biomass and certain types of hydrocarbons, thermochemical processes open up a number of potential markets. We are managing or participating in a number of thermochemical R&D programs to identify the best techniques and bring them to the commercial stage.

1. Also known as vegetable oil methyl ester (VOME).

Futuro!, Or How to Optimize Bioethanol



hydrolysis of lignocellulosic biomass. The partners in the project, scheduled to run for eight years, have set five objectives: produce affordable second-

In September 2008, Total joined the Futuro! R&D project to develop and demonstrate a process to produce bioethanol via enzymatic

generation bioethanol using diversified feedstock; develop cellulose extraction technologies; select enzymes and yeasts and develop the hydrolysis and fermentation processes best suited to a variety of plant-based raw materials; obtain the best possible energy and greenhouse gas performance across the production chain; and incorporate sustainable development concerns across the process.

We will bring to the table our expertise in blending biocomponents in existing fuels.



NUCLEAR POWER

Time to Revive Nuclear Power and Leverage Competitive Potential

Spurred by the replacement of existing plants, technological advances and massive spending by a number of non-OECD countries, nuclear power generating capacity is expected to exceed 500 GW by 2030, according to the International Energy Agency (IEA) and other sources.

There is no shortage of natural uranium reserves. Based on mining costs of less than \$130 per kilogram, reserves are currently estimated at 5.5 million metric tons, or 100 years of operation for a global installed base equivalent to the one in 2006. If spent fuel recycling were to become widespread, the same amount of power could be generated using around 20% less natural uranium. With the arrival of more efficient fourth-generation reactors, the same amount of resources could produce

50 to 100 times more energy.

In addition, the price of uranium accounts for only 5% of the cost of producing nuclear power.

Becoming an Operator That Counts in the Industry

Total aims to acquire nuclear skills and expertise, with the eventual goal of operating plants. To that end, we signed an initial partnership in 2008 with GDF SUEZ and Areva, to submit a proposal for reactors to the United Arab Emirates when the time comes, and are now interested in participating in the project to build the new Penly unit, France's second European Pressurized Reactor (EPR).

We have a number of assets we can leverage to become a major nuclear operator, such as a diversified pool of capabilities. We have also demonstrated, worldwide, our ability to manage complex, capital-intensive projects involving major political, environmental and community issues.

➔ **96,959** employees¹
at December 31, 2008

➔ **25,397** managers,
71,562 non-managers

➔ **68,510** men,
28,449 women

➔ **10,654**
hires² in 2008

Federating Our Teams and Harnessing Talent to Pursue Growth

Our main assets as an employer are the diversity of our people, a wide range of professional opportunities, fairness, and attractive working conditions and compensation. We continue to build on these strengths, because our employees' talents drive our competitiveness.

OUR OBJECTIVES

■ Promote diversity and fight discrimination

2010 objectives:

12% women senior executives

25% non-French senior executives

■ Develop employee skills through effective training

■ Broaden employee dialogue

■ Expand benefits and employee savings

■ Reward individual performance more consistently

KEY INDICATORS

■ **62%** non-French nationals
in the total workforce

■ **82%** non-French nationals
in permanent hires



■ **10%** women senior executives

■ **6.5** training days per employee
per year (average)³

■ **100,000** current and former
employee shareholders own
3.85% of Total



■ **86** companies representing **96.5%**
of the workforce in the Worldwide
Human Resources Survey scope have
introduced specific measures
to ensure that compensation exceeds
the legal minimum wage²

■ **77%** of employees
were covered by policies
guaranteeing death benefits
equal to at least two years'
gross salary²



■ **32.4%** women
in permanent hires²



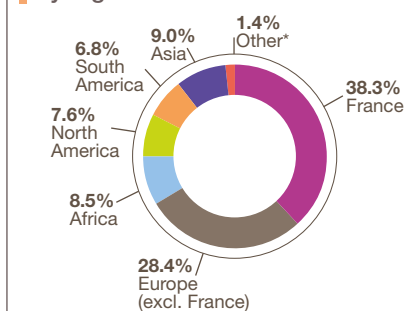
■ **73%** of employees who
responded to the Total
SURVEY⁴ feel a sense of
personal accomplishment
in their work



1. Consolidated scope; 112,741 in the managed scope.
2. Managed scope.
3. Source: Worldwide Human Resources Survey, an internal
survey of 92 companies representing 72% of Total's
consolidated workforce.
4. Internal employee satisfaction survey conducted in late
2007 of 51,000 employees.

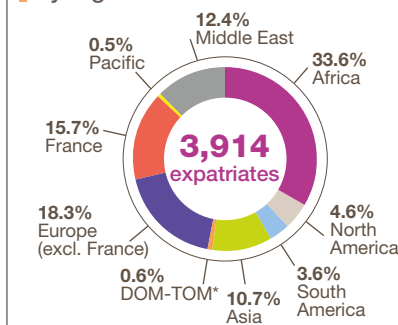
WORKFORCE

Breakdown
by region



* Middle East, French overseas departments and territories, Pacific. Source: Workforce Analysis.

Expatriate assignments
by region



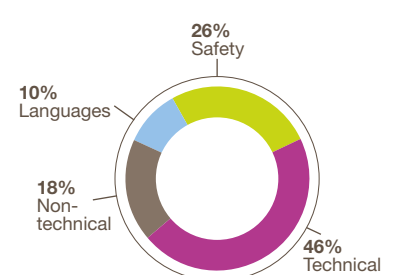
* French overseas departments and territories.

TRAINING

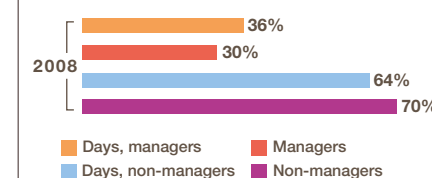
Average number of training days
per employee per year
(including on-the-job training since 2007)



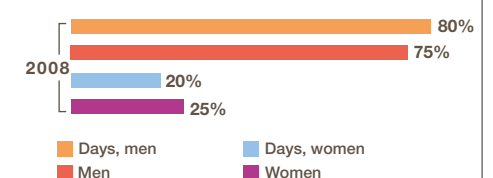
Training by type
(including on-the-job training)



Training days
by manager/non-manager



Training
by gender



Source: Worldwide Human Resources Survey.

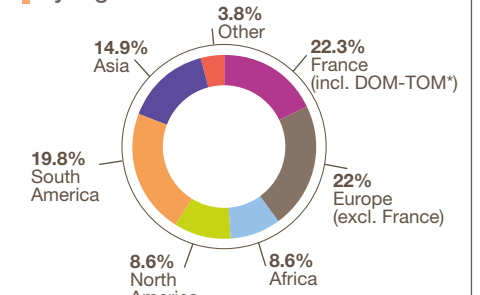
RECRUITMENT

Women and non-French nationals
in hires

WORLDWIDE PERMANENT MANAGER HIRES	2006	2007	2008
Women	25.6%	24.3%	27.8%
Non-French nationals	67.8%	72.6%	68.9%

Source: Workforce Analysis, managed scope.

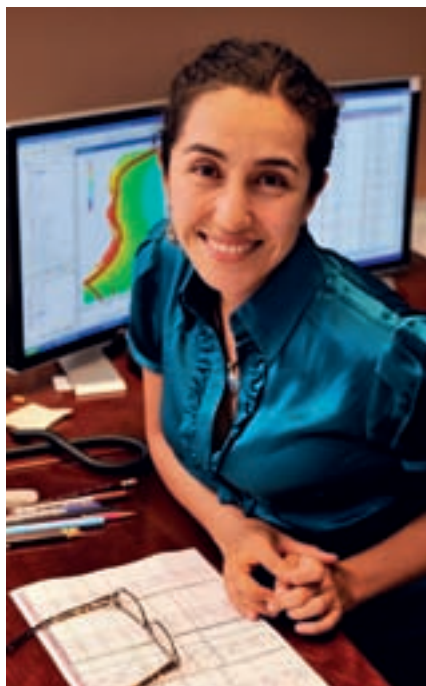
Permanent hires
by region



* French overseas departments and territories.
Source: Workforce Analysis, managed scope.



ATTRACTING, DEVELOPING AND RETAINING TALENT



Harnessing Employee Energies to Invent the Energies of the Future

At Total, looking beyond the immediate horizon and thinking in ten to 20-year increments is both a mindset and a requirement of our business. Naturally, we take the same approach to our core human resources policies, which are pivotal to our future success and ability to meet major challenges — such as managing increasingly complex projects, predicting the magnitude of future shakeups in the energy industry, expanding dialogue with all stakeholders and encouraging initiative without sacrificing cohesiveness, one of our strengths.

These challenges point up the scope of Total's requirements in terms of employee backgrounds and qualifications, especially in high-technology sectors. However, a few figures also underscore the wealth of opportunities we offer. Total operates in 130 host countries, offers jobs in 500 different professional disciplines,

and hires almost 10,000 people annually, 56% of them outside Europe, of all educational levels, from young people beginning their careers to seasoned professionals.

Optimizing Human Capital Development

Total's human resources community, a partner of our operational employees, juggles a number of projects simultaneously. It must prepare the next generation, attract talent from around the world while leveraging the experience of senior personnel, plan varied, rewarding careers, and offer attractive, fair compensation and working conditions. Projects under way include promoting mobility within the company, being open to new profiles and strengthening employee motivation by furthering their understanding of Total's strategy.

Although we aim to improve in all of the above areas, our human resources policies already in motion mean that turnover is fairly low — around 10% today — expressing better than words ever could our employees' attachment to Total.

Three-year turnover at Total
(%, excluding transfers outside the reporting scope)



A COMMUNITY STRENGTHENED BY DIVERSITY

Different Visions For More Appropriate Action In Every Area

Total has employees of more than 130 different nationalities. This diversity of cultures and thinking is one of our greatest assets. It both reflects and legitimizes our desire to act locally in all of our host countries.

(continued on page 54)

2,200

high potential employees of 80 nationalities
identified at end-2008

Recruitment Communication That Reflects Our Culture of Openness and Diversity



A number of companies are looking for future employees who are energetic, open-minded, adaptable team players available to work outside their home countries. We have highlighted these qualities in our new recruitment drive because they reflect a reality and ambition shared by all Total business units.

Planned by an international, cross-functional working group, the global campaign launched in 2008 was designed to allow our businesses and subsidiaries to tailor it to the local environment, in order to maximize its impact and visibility worldwide.

➔ **SEPTEMBER 2008: Nigeria** -Total E&P Nigeria hosts a conference on diversity in Abuja, Nigeria's capital, giving the Diversity Council, created in 2004, the opportunity to hold a meeting outside France for the first time.

Many Kinds of Diversity, Singular Careers

NEIL TARIQ
Business Manager,
Cray Valley
(Chemicals/Resins,
France)



2004 to present: Business Manager, Powders & Additives
1998: Product Manager, Additives & Polyamides
1993: European Distribution Manager for Cray Valley

“ A blend of nationalities and thinking is an asset for tackling today's challenges. ”

Being Welsh, I'm one of the few non-French business managers in the Resins Division's headquarters environment in Paris. This allows me to bring a certain Anglo-Saxon approach to work. A blend of different nationalities and thinking certainly brings a richer diversity to how we face the many challenges in our business and environment today.

My career with Cray Valley started in Wales 16 years ago, and has allowed me to move across a number of functions, from logistics to product management and into business development. I first

moved from the UK to Paris in 1998, and as a single person spent most of my time traveling around the world in my business development role. I went back to the UK in 2001 to assist in the integration of an acquisition. In 2004, I returned to Paris with a wife and two young children, in a new role as business manager for a worldwide specialty additive business and for a European business covering resins sold in the VOC and environmental powder coating market. Now, almost five years later, my family is very integrated into French life and our children enjoy the benefits of a bilingual education in the suburbs of Paris. Clearly, having a happy family in a foreign country allows me to concentrate more on my work!



NAZLEE RAJMOHAMED
Secretary General-
Financial Controller, R&M
(Refining & Marketing,
France)

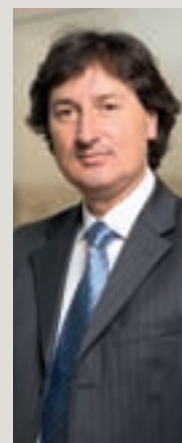
2008: Secretary General-Financial Controller, Total Refining & Marketing
2005: Executive Director, Finance and Development, Total Nigeria plc
2001: Internal Audit Manager, Total South Africa Ltd

My career path has certainly benefited from “good timing”, as a Black during the period of affirmative action employment in post-apartheid South Africa, and as a woman during the Group's initiative on promoting more women.

I believe that these initiatives have done a great deal to level past inequalities entrenched in social systems. There have been times when I have looked around the conference room or boardroom and have been either the only woman or the only foreigner. However, I have always felt

“ It has now become second nature for me to take time to understand someone whose views differ from mine. ”

welcomed as a fellow professional. I think this, more than anything else, demonstrates the openness of the Total culture to embracing diversity today. I have worked in South Africa, Nigeria and France. I believe that success in different environments requires flexibility, both in management style and in attitude. The learning process is continuous and covers such diverse topics as legislation, culture and environmental pressure. It has now become second nature for me to take time to understand someone whose views differ from mine. By taking the time to ask “why?” I always walk away with a deeper understanding, either of the issue or of how it may appear to others. I see these as positive qualities in both business and life.



FRANCISCO
JAVIER RIELO Y
AMEIJIDE
General Manager,
Total Austral
(Exploration
& Production,
Argentina)

2007: General Manager
2004: Business Development Director
2001: Strategy Manager
1998: Internal Audit Manager, Total Austral

“ Diversity is now an integral part of Total's culture and identity, though that didn't happen overnight. ”

I am the first Argentine to hold this position. Well, I was born in Spain, but I consider myself more of an Argentine, because I've been living here since I was a year old! Unlike most of my colleagues, I have never thought you needed to be French to get ahead at Total. Yet many people are persuaded that you do. When Total Austral was first created, the atmosphere was definitely quite French. In a way, the Argentines liked it, because they felt different. But at the same time, some people limited themselves unnecessarily. Today, diversity is becoming more and more a part of Total's culture and identity. It didn't happen overnight. Diversity now seems normal to us — not so much before. As far as I'm concerned, I've always believed that regardless of nationality, a company promotes the advancement of people who demonstrate their capabilities and show a desire to learn and progress. Total showed me that I wasn't wrong, not about that and not about identifying with the company.

Federating Our Teams, Harnessing Talent

OUR MAIN CHALLENGES

➔ **APRIL 2008: France** - Total and 30 other companies and associations sign a **parental rights agreement**, *Charte de la Parentalité*, sponsored by the government. It commits us to doing more to accommodate our employees' family responsibilities and to creating resources to help both mothers and fathers achieve a better work-life balance.

It also enables us to compare and contrast points of view and stay in step with the changes in a more globalized world.

Our diversity is the result of an unwavering commitment on our part, overseen by the Diversity Council, which ensures that we continue efforts to increase the percentage of women and non-French nationals in the workforce, including at the most senior management levels.

Strengthening Genuine Management of Equal Opportunity

At Total, promoting diversity also mean fighting all forms of discrimination, by being open to recruiting from different socioeconomic backgrounds, supporting equal opportunity, encouraging the promotion of more women managers, and hiring and retaining employees with disabilities. A proactive equal opportunity action plan has been introduced to mobilize recruiters and career managers, as well as managers of business units. It covers bias awareness, assessing selection criteria and auditing hiring processes, maternity leave wage offsets in Europe, and promoting diversity on committees responsible for employee careers.

Stepping Up Our Commitment to Employing the Disabled

Total has set a growth target of 7% a year from 2007 to 2009 for the employment of people with



▲ In partnership with IMS-Entreprendre pour la Cité, Total hosted the Employment and Diversity Forum in France in November 2008.

disabilities in our Upstream/Corporate operations. An agreement signed in 2007 with employee representatives calls for both permanent contract hires and fixed-term contract hires lasting more than six months, better identification and tracking of applications from individuals with recognized disabilities, priority to disabled employees for work-study opportunities, and the retention of employees who become disabled or work-disabled. Besides ensuring equal treatment, these commitments complement a more comprehensive approach to the specific needs of disabled employees, which can include workstation and schedule accommodations, transportation and housing assistance, and support in gaining recognition for their disabilities.

TO LEARN MORE

www.total.com/en/group



FRANCE

Tackling Discrimination Against Visible Minorities

To make sure that young people are not shut out of the job market because of their surname, nationality or ethnic origin, Total has teamed up on several initiatives. A partner of *IMS-Entreprendre pour la Cité's* Employment and Diversity Center and of *AFIJ*, an association to help young people find their first jobs, we also support *Nos Quartiers Ont des Talents* and *Proximité*, two organizations that help young graduates from low-income neighborhoods find employment. Total has signed France's Business Charter for Equal Opportunity in Education. We have joined other partnerships to promote the education of disadvantaged youth in middle and high schools and are participating in a pilot program initiated by *Institut d'Études Politiques de Paris* in the Seine-Saint-Denis department north of Paris to encourage employees to mentor high school students, teach classes and organize training for teachers. As part of the *Plan Espoir Banlieue* introduced by the French government in 2008, we hired 650 people from designated disadvantaged neighborhoods under permanent contracts, fixed-term contracts, internships and work-study programs, including 400 young people under 26.

GENDER DIVERSITY AND NON-FRENCH NATIONALS: CURRENT SITUATION AND 2010 TARGETS

	Women			Non-French nationals		
	Managers	High potentials	Senior executives	Managers	High potentials	Senior executives
2008 targets	20%	18%	10%	58%	40%	20%
Real 2008	21%	18%	10%	60%	39%	20%
2010 targets	25%	25%	12%	N/A	45%	25%

(Managed scope)



➔ **DECEMBER 2008: France** - The Peak Oil and the Future of Energy conference held by Université Total brought together 300 Total senior managers, representatives of major companies, researchers and experts to examine this key issue and the relationships between energy, growth and sustainable development.

TO LEARN MORE

www.universite.total.com



DEVELOPING SKILLS AND EXPANDING OPPORTUNITIES FOR ADVANCEMENT

A Training Policy for the Long Term

As the roughly €340 million we invest annually makes clear, Total sees training as one of the best ways to sharpen our competitive edge. We strive to tailor the training we offer to individual needs, from the time of hire throughout the employee's career, in order to maintain a high level of skills and employability and facilitate advancement and career changes, at Total or elsewhere.

Geographically, our training effort is more intensive in our fast-growing regions, with an annual average of more than 12 training days per employee in Africa, Asia and the Middle East.

Corporate Social Responsibility Awareness for Everyone

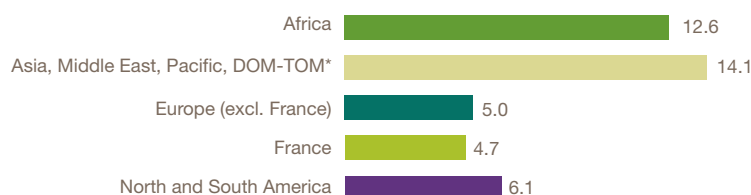
Each year, thousands of employees, especially managers and new hires, take part in various programs to further educate them about our ethical, environmental and industrial safety responsibilities. Université Total has steadily expanded the range of topics it covers since its creation.

99%

of Total companies have annual performance reviews (APR) in place

Average number of training days by region and employee

(including on-the-job training, figures at end-2008)



* French overseas departments and territories.

In 2008, the corporate university enrolled another 3,000-plus employees in its conferences, courses and seminars, which feature input from leading experts.

Pinpoint Career Management

Human Resources teams are working to make career management more transparent and appropriate for each employee, to enable them to optimize their career paths at Total. Since June 2008, for example, all employees in France have been able to consult job openings on the JOB Posting intranet. The site enables employees to apply on their own and at the same time helps career managers identify applicants they might otherwise not have known about. The JOB Posting

intranet should be accessible outside France in 2009.

To strengthen this shared resource base, a dedicated set of tools is deployed in all units. They include specific job descriptions and evaluations using the Hay method¹, resource planning for key positions, identification of high potentials, annual performance reviews (APR) for everyone, including an assessment of mobility opportunities, and a career interview every two to three years.

Nearly 24,000 hours of e-learning for employees in 2008

COMPENSATION AND EMPLOYEE BENEFITS: BALANCING FAIRNESS AND COMPETITIVENESS

Doing More to Reward All Aspects of Performance

Like the rest of our human resources policies, our approach to compensation aims both to keep us competitive, by paying median wages in a specific market, and to ensure fairness internally. With a continued focus on developing talent, our expanded goal now is to do more to reward personal performance, by awarding merit raises,

bonuses and other incentives. Although all Total companies share these basic principles, they are adapted to local factors, such as legislation, the economic environment and the job market. We are also committed to giving employees a financial stake in our performance. When company-wide financial performance targets are met, we grant performance shares to a large



1. 80% of manager and equivalent jobs at end-2008.

Federating Our Teams, Harnessing Talent

OUR MAIN CHALLENGES

➔ **77% of employees** have insurance coverage offering death benefits equal to at least two years' gross salary.

➔ **More than 100,000 current and former employees** hold 3.85% of our capital.

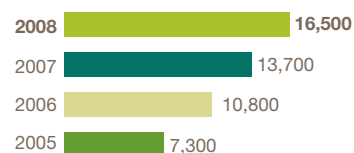
number of our employees, as allowed under French legislation since 2004. In 2008, 9,400 employees of all occupational categories received stock options and restricted shares. Here too, in order to ensure that the system is fair, first-time grantees account for about 45% of the beneficiaries. When combined with previous stock option plans, nearly 20,000 employees in over 120 countries have benefited.

Accelerating Expansion Outside France of Benefits and Employee Savings

We want to provide all our employees with equivalent benefits, taking into

account the local environment. In particular, we have developed incentives for employee savings, including providing matching contributions. We also regularly carry out employee-only share issues, most recently in March 2008. More than 32,000 people working in 555 companies in 106 countries purchased €216 million worth of shares. The process was opened up to ten new countries, including Saudi Arabia, Iran and even China, where it was the first employee-only share issue ever. Today, three-quarters of our employees worldwide have quality insurance coverage with death benefits.

Number of employees receiving performance shares and stock options (cumulative)



EXPANDING DIALOGUE AND ENRICHING EMPLOYEE RELATIONS

Continuing Deployment of Employee Representation Organizations Worldwide

Developing employee relations and the dialogue between management and employee representatives is a cornerstone of our human resources policies, as stated in our business principles (see pages 14 to 19). Because of our commitment to dialogue that takes into account the diversity of local environments, we create employee dialogue organizations in all non-OECD countries in which legislation allows. In 2008, 87% of the companies polled in the Worldwide Human Resources Survey¹ had employee representative organizations. The same survey counted 166 collective bargaining agreements between employees and management.

A Highly Structured Process in Europe

In Europe, where two-thirds of our workforce is located, negotiations between employees and management have produced a number of major agreements, such as the one reached in 2006 on equal opportunity and



the accord signed in 2007 on aid for small business startups, acquisitions and expansions. The European Works Council provides a forum for formal employee dialogue and encompasses all European Union countries in which Total operates, plus Norway. It has 45 permanent members, of which 26 represent our European subsidiaries and are members of the employee representation organizations of their countries of origin. A forum for information, consensus-building and co-development, the Council deals with all topics related to Total's strategy, competitive position, social, economic and financial situation, jobs, transfers of operations, and restructuring. Its role and resources were expanded in 2006 and it now has a committee dedicated to sustainable

REGULARLY GAUGING EMPLOYEE SATISFACTION

Every two years, we conduct a wide-ranging survey of our employees, the Total SURVEY, to better gauge their level of satisfaction and commitment. In 2007, more than 51,000 employees at 238 sites in 80 countries were surveyed, with a response rate of 61%. The next survey is scheduled for late 2009. It will provide invaluable feedback on the effectiveness of the action plans adopted in the interim.

development, corporate social and environmental responsibility, and safety issues.

Created under an agreement signed in 2004, the European Social Platform fosters employee dialogue, promotes jobs and skills planning, and reviews compliance with our business and ethics principles during restructuring. In 2006, it produced a European scorecard that covers ten countries and more than 50 subsidiaries and tracks initiatives in the area of employee relations.



When it comes to the environment and energy diversification, Total must constantly seek sustainable solutions.

RENÉ JACQUOT
Secretary of Total's European Works Council

The European Works Council takes an interest in sustainable development. Created in 2006, the Sustainable Development Committee holds an annual meeting convening 15 members to review Total's commitments, spending and strategy with respect to greenhouse gas reduction, energy efficiency, environmental risk management, and new energy products and services.

After analyzing the committee's report, the European Works Council recommends that Total act transparently and constantly seek sustainable solutions in everything it does. This is especially true in three areas. The first is renewable energy diversification and attempts to manage fossil fuel primary energy consumption. The second is second-generation biofuels, which are preferable to fuels that create food shortages, but are not entirely free of

negative social and environmental impacts, notably in terms of land prices, deforestation and freshwater use. And the third is Total's foray into nuclear power, especially its use as a primary energy in fossil resource extraction facilities, which must consider safety and security, nuclear waste treatment capabilities, and the environmental disamenities associated with nuclear power plants.

SPOTLIGHT

AN OBSERVATORY TO OPTIMIZE EMPLOYER-EMPLOYEE RELATIONS

What will employees' future expectations be in terms of a new work-life balance, equal opportunity, expatriation procedures and consequences, telecommuting, a networked company and practical support? How can we fully leverage employee data already collected and pick up on the subtle signs of real change? How do we prepare the introduction of new working arrangements? To answer these and other questions in more detail, Total's Corporate Human Resources Department created an Employee Observatory in September 2008. A think tank to brainstorm ideas and make real-world recommendations, this advance lookout is designed to help Total project into the future, by fully leveraging the synergies between our internal expertise and the sharpest outside opinions. It is also expected to do more to publicize our achievements and promising experiments.

SUPPORTING EMPLOYEES AFFECTED BY RESTRUCTURING

Minimizing the Impact of Industrial Redeployment on Employees

When we restructure or redeploy operations, we do everything we can to avoid layoffs, through internal transfers, outplacements or retirement. Each employee affected by restructuring is offered individual support, in the form of either early retirement or training opportunities and placement assistance to find a new job with Total or another company.

In line with this policy, management has made plans, announced in March 2009, for substantial capital investments to upgrade certain Refining and Petrochemicals facilities in France to adapt to changing demand².

Revitalization of Affected Regions: Carling in France

As part of the industrial restructuring begun in 2006 by Total Petrochemicals France, an agreement was signed in March 2007 with the government on economic revitalization, new business development and support for research organizations in the area around the

Carling facility in northeastern France. Total Développement Régional's initiatives had created 359 jobs as of December 31, 2008, exceeding the target originally announced. A total of €600,000 was allocated to the Lorraine Regional Council to attract foreign businesses to the area. The third phase of the action plan is being deployed now, with the first companies scheduled to move into Composite Park, an industrial park specializing in the production of composite materials for aerospace and automotive applications, in 2009. The park could ultimately generate 250 jobs. Total also announced plans in March 2009 to build a silicon wafer plant in partnership with GDF SUEZ that would employ 80 to 100 people in the Carling region. The initial capital expenditure of about €70 million would strengthen our positions in the fast-growing photovoltaic solar market.

1. Internal survey of 92 Total companies accounting for 72% of our consolidated workforce.

2. Employee representatives from the facilities concerned have to be consulted before the plans can be implemented.

Improving Safety and Protecting Personal Health

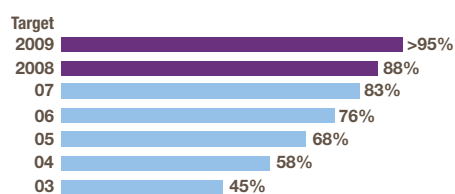
No accident — minor or severe — is acceptable. At Total, people and property safety is a constant priority for everyone who works for us, and continuous improvement is a core concern. Built on capital spending and on-the-job efforts to prevent injuries and maintain the continuity of our operations, our policies are rooted in instilling a shared safety culture.

KEY INDICATORS

Safety Management Systems (SMS)

Total is committed to reducing industrial risks to as low as reasonably practicable and integrating our urban sites more seamlessly into their surroundings. To strengthen safety at our facilities, we deploy safety management systems (SMS) that are assessed using protocols recognized by outside experts. At end-2008, 88% of sites presenting technological risks had such an SMS in place, and most of our businesses had already achieved the end-2009 target of at least 95%.

Percentage of SMS's audited in accordance with externally recognized protocols at sites presenting risks



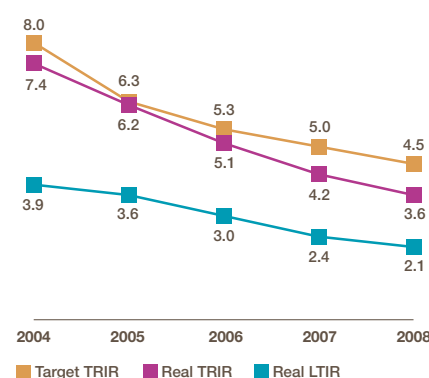
Improving Workplace Safety and Health

The steady improvement in workplace accident statistics reflects the efforts of Total and our contractors and encourages continued action.

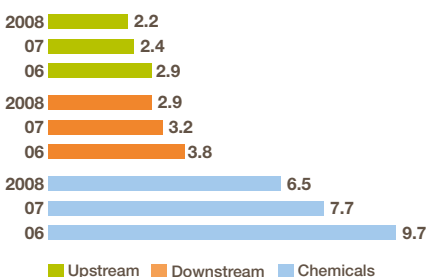
In 2008, the total recordable injury rate (TRIR) declined 14%, from 4.2 to 3.6 per million hours worked, surpassing the target of a 10% reduction. The lost time injury rate (LTIR) also improved sharply, falling 13% in 2008.

To cement these gains, action plans will continue to be deployed across all our units, to achieve the best possible performance in each of our businesses.

Injury rates (per million hours worked)

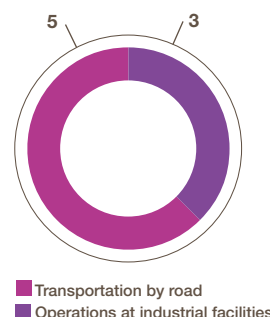


TRIR by business (per million hours worked)



Workplace fatalities by cause in 2008

Total and contractor employees



Although we are saddened to report that there were eight workplace fatalities in 2008, this nonetheless represented a sharp decline from the 15 fatalities in 2007. Road accidents are still the main cause of fatalities, and were implicated in Africa and Yemen. Motor vehicle accidents continue to be the focus of dedicated action plans to improve safety. Industrial accidents have declined slightly from previous years, but we cannot afford to relax our efforts.

OUR OBJECTIVES

- Manage technological risks by enhancing the safety of our facilities
- Continuously improve occupational safety
- Prevent health risks in the workplace and around industrial units
- Help to keep our employees in good health
- Manage the risks associated with our products
- Enhance transportation safety and promote road safety

Compliance with the Occupational Health and Hygiene Guidelines by business



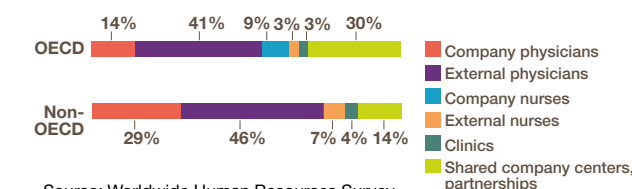
At end-2008, reporting indicated that 66% of Total's 375 major sites were compliant with the Occupational Health and Hygiene Guidelines, broken down as indicated above.

At end-2008, 66% of Total's major sites were compliant with the Occupational Health and Hygiene Guidelines



▲ Safety operator wearing protective equipment.

Health care resources



Source: Worldwide Human Resources Survey, sample of 92 companies accounting for 72% of the workforce.

Group companies may have a number of health care resources, broken down as indicated above, in subsidiaries that took part in the Worldwide Human Resources Survey (WHRS) in 2008.

Group companies involved in prevention programs (HIV/AIDS, smoking, hepatitis, meningitis, etc.)

REGION	2008
Africa	100%
North America	100%
South America	67%
Asia	100%
Europe	85%
Middle East	100%
Total	90%

Source: Worldwide Human Resources Survey, sample of 92 companies accounting for 72% of the workforce. Percentage of WHRS respondent companies engaged in a prevention program related to personal and community health issues.

Many units deploy prevention programs that address a variety of general health issues, such as stress, cardiovascular disease, obesity, epidemics, smoking and alcoholism. In Africa, prevention programs also cover pandemics such as HIV/AIDS and malaria, as well as vaccinations.

Days of absenteeism for medical reasons by region

REGION	2006	2007	2008
Europe	3.0%	3.0%	3.6%
Africa	1.3%	1.6%	1.4%
North America	1.2%	1.3%	1.8%
South America	0.8%	1.1%	1.4%
Asia	0.5%	0.9%	0.7%
Middle East	0.9%	1.6%	1.6%
Group average	2.4%	2.5%	2.8%

Source: Worldwide Human Resources Survey, sample of 92 companies accounting for 72% of the workforce.

This indicator covers absences due to illness, surgery and convalescence. Some of the regional differences can be attributed to differences in counting and regulations among the countries that took part in the survey.

➔ **FEBRUARY 23, 2009: France** - The AZF trial begins in Toulouse. After five years of investigations, the cause of the disaster has yet to be identified.

MANAGING TECHNOLOGICAL RISKS

Total operates a number of Seveso-classified or equivalent high-risk industrial sites worldwide, including oil and gas production platforms, refineries, oil depots and petrochemical plants. We are committed to reducing industrial risks to as low as reasonably practicable and integrating our urban sites more seamlessly into their surroundings. To strengthen safety at our facilities, we deploy safety management systems (SMS) that are audited in accordance with externally recognized protocols. At end-2008, a year earlier than scheduled, most of our businesses had already met the 2009 target of increasing to at least 95% the number of sites presenting technological risks that had a safety management system (SMS) audited in line with externally-recognized protocols.

Learning From Experience, the Cornerstone of Any Safety Policy

Our comprehensive feedback from incidents process is a key factor in driving continuous improvement in safety. It aims to identify the immediate and root causes of incidents, learn practical lessons from them, disseminate what we learn and make sure that every unit concerned benefits from our findings. This is especially important for technological risks, which can potentially have serious consequences.

One particular example of the process occurred after a pipe burst on the N'Kossa platform in the Republic of the Congo on May 10, 2007, causing a powerful explosion that killed two people. The lessons learned spurred Exploration & Production to introduce a system to monitor the integrity of this type of complex installation, which required improving our understanding about the way it deteriorates and ages.

Total's Sites Ready for the Consensus-Building Phase of Technological Risk Prevention Plans

In France, one of the main objectives of the Act of July 30, 2003 is to ensure that Technological Risk Prevention Plans (PPRT) are drafted for facilities subject to the European Union Seveso Directive. These plans meet the need for more effective regulation of future land use around industrial sites. At the same time and more importantly, they support changes to existing urban land use, to reduce the amount of damage a serious accident would cause. Total operates

63 Seveso-classified facilities in France. The PPRT process is now well under way. All of our sites subject to the regulation have finalized the technical information public authorities need to start officially defining zoning regulations and launch consensus-building with local elected officials and neighborhood associations. The discussions are taking place within Local Information and Dialogue Committees, known as CLICs, whose role is to examine the government's proposals concerning land use.

LESSONS LEARNED FROM THE DONGES INCIDENT IN FRANCE

Corrosion concealed underneath pipe insulation resulted in a 500-metric-ton bunker fuel leak on March 16, 2008, with around 180 metric tons reaching the Loire estuary. The next day, Total Refining & Marketing began operations to clean up the riverbank, rock fill, boats and beaches. Within three-and-a-half months, the work was completed and all areas concerned were reopened to the public. A compensation process was set up for fishermen, farmers and other professionals, as well as municipalities affected by the pollution. Almost all claims had been settled before summer 2008. Total Refining & Marketing was placed under judicial investigation, which is ongoing. Fourteen environmental impact assessments are being conducted by independent experts, using a methodology approved by the French government. At the same time, the Donges refinery has introduced a wide-scale program of reinforced inspection of its pipelines and strengthened monitoring of its facilities along the Loire River. Measures included installing thermal imaging cameras. Total Refining & Marketing has introduced a program to reassess environmental risks at all of its refineries.



▲ The N'Kossa platform in the Republic of the Congo.

→ Created in 1991, **THE EUROPEAN WORKS COUNCIL** is a forum for information and discussion for employee representatives that deals with our major strategic orientations and any organizational changes that affect more than one European country. Nineteen of its 45 members are from France and the other 26 from European subsidiaries.

IMPROVING OCCUPATIONAL SAFETY

Total works continuously to reduce the number and severity of accidents by making prevention an absolute priority. We enforce basic safety rules, such as the use of personal protective equipment, with the same rigor everywhere, educate our own and contractor employees about high-risk situations, and keep an eye out for the subtle early-warning signs of potential problems.

Lessons Learned from the Buncefield Incident in the UK

On December 11, 2005, several explosions followed by a major fire occurred at an oil depot operated by Hertfordshire Oil Storage Limited (HOSL), owned 60% by our subsidiary Total UK and 40% by another oil company. The depot is located in Buncefield, north of London. The accident resulted in minor injuries and serious property damage to the depot itself and nearby buildings and homes. HOSL's shareholders have ensured that their dispute concerning liability has not had any implications for the compensation process. In a High Court ruling on the civil proceedings on March 20, 2009, Total UK was found solely liable for the incident and ordered to pay the property damage bills of the claimants. Specific points of the decision are being appealed. Criminal proceedings began on December 1, 2008 against five companies, including Total UK. The final report of the major incident investigation board set up by the UK government was issued in late 2008. It confirmed the causes of the gasoline tank overflow in the depot that caused the explosion and fire and contained a number of safety recommendations drawn up in cooperation with the oil industry.

Managing and Recognizing the Safety Expertise of Maintenance Professions

Despite the existence of management systems, rules and regulations, and operating procedures, safety still depends first and foremost on people. Acting on this principle, the *Système de Certification Compétence et Conformité* (S3C) association was created in France at end-2008 to certify the skills of employees who plan, oversee and carry out operations entailing specific risks.



Although a number of longer-established occupations are now required by law to certify safety expertise, others, especially specialized industrial maintenance fields such as high-pressure water jetting, pumping and confined space work, currently have no comparable system for assessing knowledge and skills. Using as a model the *Stichting Industriële Reiniging* (SIR) system for industrial cleaning created in the Benelux countries, Total and *Fédération Nationale des Sociétés d'Assainissement* (FNSA) wanted to establish a certification system for maintenance occupations in France, for both service provider and user company employees. Convinced of the benefits of certification, the partners involved in the joint Contractor Safety Improvement Manual/French Union of Chemical Industries (MASE/UIC)



▲ High-pressure water jetting.

system have joined forces with S3C. Their involvement ensures the independence of the system. Our specialists are helping to draft technical guidelines and recommendations. High-pressure water jetting jobs will be the first to be certified under this system.

TO LEARN MORE

www.s3c-ami.org



Making Safety a Central Focus of Discussions with Employee Representatives

Safety, environmental and sustainable development issues are fully integrated into the dialogue between Total's management and employee representatives through the European Works Council.

In 2008, the members of the European Works Council's Safety Committee were invited to meet all stakeholders with an interest in the topic at two sites: an Exploration & Production platform in the North Sea and a French refinery. In addition, the annual seminar organized by Industrial Safety, Employee Relations and the European Works Council was dedicated in 2008 to fostering a safety culture. Its testimonials and presentations covering such topics as maintaining hazard vigilance and awareness, behavior-based safety, the safety culture initiatives being deployed, safe driving, substance use and abuse, and the World Day for Safety and Health at Work made participants even more eager to raise the bar. It was agreed to continue analyzing and discussing the responsibility and increased accountability of stakeholders and learning from incidents. In addition, the European Works Council discussed safety at its December plenary session, a valuable opportunity for employee representatives and senior management to examine issues.

STRENGTHENING TRANSPORTATION SAFETY

Transportation safety management remains a major strategic focus at Total, as shown by our initiatives in 2008, especially in the areas of driving, loading and offloading safety, and rail shipment of hazardous substances.



▲ Poster for a road safety campaign in Turkey.

Road Safety Education Worldwide for Children and Experienced Drivers

In Turkey, Total is working with the Ministry of National Education and Renault, the project's initiator, to teach primary school students the basic rules of road safety. Presentations at almost 1,500 schools in 18 cities have reached 190,000 children in five years.

The campaign will branch out into other regions of the country through 2012.

In Poland, our subsidiary Total Polska is a member of the local organization of the Global Road Safety Partnership (GRSP), with which we first partnered in 2005. The local GRSP manages an ambitious program that focuses on vehicle fleets, to improve safety culture and promote the adoption of best practices and international standards. Other initiatives have been launched concurrently with the Polish Red Cross and local associations to educate drivers about the hazards of drinking and driving.

In Zimbabwe, we created the Total Transport Academy in liaison with the Zimbabwe Traffic Safety Council.

This curriculum for professional drivers focuses on safety practices and offers regular refresher courses. A certificate recognized by the country's authorities is awarded on successful completion of the training.

In 2008, we ramped up the global road transportation risk management plan for cars and hazardous materials transportation throughout the Asia-Pacific region. Total employees and contractors were educated about the cardinal rules of Group Safety Guideline 3: Driving Safety and the road and rail

loading and offloading operations covered by Group Safety Guideline 14.

Formal Requirements for Rail Operators

Now that the European Union's rail freight market has been opened up to new, often private operators, Total felt it was essential to assess the ability of newcomers to comply with our requirements should they be asked to transport hazardous substances for us. With that in mind, in 2008 we prepared a guide and a questionnaire based on

SPOTLIGHT

ENHANCED PIPELINE SURVEILLANCE AND SAFETY

Our specialists have made a substantial contribution to the implementation of new pipeline safety regulations in France, helping to draft the cross-industry guidance approved by the government, *Performing Safety Studies and Pipeline Surveillance*. Under an agreement with the French Association of Mayors of Municipalities with Seveso-Classified Facilities, tangible communication and education initiatives developed with officials will be introduced concerning land use around our facilities.

Fighting Complacency About Loading and Offloading

Although repetitive, loading and offloading truck and rail cargo still entail risks. Published in 2008, Group Safety Guideline 14 was written to highlight the keys to doing the job safely.

Safe loading and offloading requires a risk assessment process that considers the operating conditions, specific technical requirements and the types of products involved, as well as accident analysis and feedback from incidents. Rolling stock, vehicles and drivers must be inspected and vetted. Unflagging vigilance is required with respect to preparations (overload checks, access to work areas), safety and emergency equipment and



related instructions. Workers must be trained to use such equipment and wear their own personal protective gear. Total also emphasizes work at height risks, supervision and warning controls, and the importance of drills, reliable reporting and regular audits.

➔ **OCTOBER 2008: Total marks European Road Safety Day.** A number of business units took advantage of the opportunity to strengthen road safety awareness through poster campaigns, DVD showings and other initiatives and to promote our partnerships with road safety association *La Prévention Routière* in France and the Global Road Safety Partnership (GRSP) worldwide. The GRSP was initiated by the World Bank to address road safety issues and finance related measures.

the Rail Safety and Quality Assessment System guidelines of the European Chemical Industry Council (CEFIC). The questionnaire covers 78 issues under five headings: management, health-safety-environment, security, procedures and equipment, and operations. Assessments may result in the deployment of an action plan to help rail operators raise their overall level of safety and service.

DEVELOPING A SAFETY CULTURE SHARED BY ALL

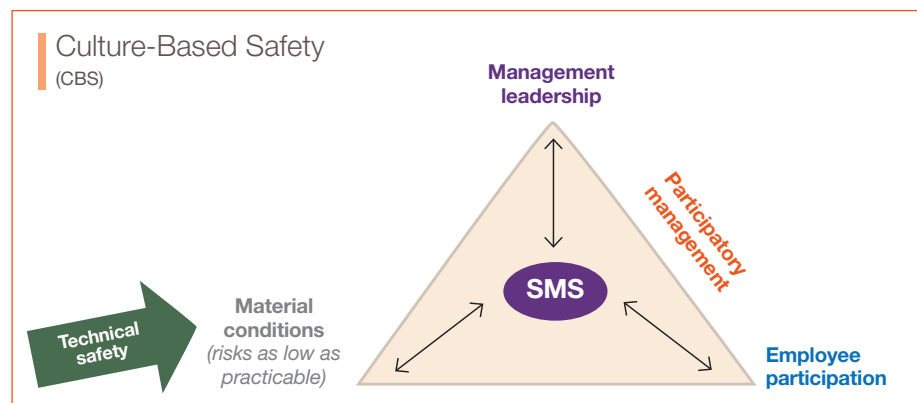
Culture-Based Safety, a Participatory Process Involving Everyone from the Top Down

Since 2005, Total has gradually organized a process for evaluating and strengthening safety culture. Known as Culture-Based Safety (CBS), it aims to

foster a more participatory management style, by stressing both management leadership and employee participation. This field-centric approach heightens the effectiveness of safety management systems (SMS), which are still the heart of the process, by facilitating their assimilation by everyone involved.

Gradual Rollout Based on the Specific Requirements of Professional Disciplines and Local Environments

After conducting pilot initiatives in 2006 and 2007 at ten Marketing France and Total Petrochemicals business units, we adjusted and optimized our approach, now used across Total in Exploration & Production, Refining & Marketing and Chemicals.



SPOTLIGHT

THE RIPPLE EFFECT OF THE WORLD DAY FOR SAFETY AND HEALTH AT WORK



On April 28, 2008, the World Day for Safety and Health at Work was marked across the company. Total E&P USA had its *HSE Moment*, Total Italia organized the *2008 Safety Challenge*, and several facilities staged safety non-compliance hunts. The event owes its success to the very active participation of subsidiaries, the host of initiatives planned for the occasion and the involvement of contractors, who were invited to share this special day and showcase their own safety knowledge and expertise.

Applied to safety, the four Total Attitude cornerstone behaviors of listening, mutual support, boldness and cross-functionality translated into presentations on four topics: vigilance, involvement, intervention and prevention.

Analysis and discussion of the need to wear personal protective equipment (PPE), safe driving, fire safety, cleanliness and organization, health and safety in offices, and first aid skills training helped to solidify the shared culture we are trying to build. Under the *Safety Together!* banner, a program created to reduce work accidents by changing the individual attitudes of employees and management, six videos were shown to highlight behavioral and organizational flaws with the potential for serious repercussions.

The event is now a permanent fixture on our calendar: the World Day for Safety and Health at Work was marked again on April 28, 2009.

PROTECTING HEALTH IN THE WORKPLACE

Social demand to reduce health risks continues to grow, both within civil society and at companies. Besides merely meeting their legal obligations, companies now incorporate their initiatives into a comprehensive process combining prevention and protection. To protect the health of our employees and of contractors involved in our operations, Total has for the last several years deployed occupational health and hygiene policies based on identifying and managing risks.

Measuring and Anticipating to Address the Right Needs

Stepped-up efforts to measure benzene and noise exposure, together with the rollout of Total's *Occupational Health and Hygiene Guidelines*, help us pinpoint related physical, chemical, biological and other hazards more accurately. By assessing risks based on the specific work situation, the guidelines help Total to prepare the most appropriate action plans. In 2008, 90 line managers, Health, Safety and Environment (HSE) managers, human resource managers and occupational physicians participated in the Occupational Health and Hygiene training program. The OHH training course meets growing demand for health protection and prevention-related initiatives.



*Musculoskeletal disorders
account for a significant
proportion of
occupational illnesses.*

Deployment of the *Occupational Health and Hygiene Guidelines* Hits Its Stride

At end-2008, 66% of our 375 major sites were compliant with the *Occupational Health and Hygiene Guidelines*, which were designed to align with the HSE management systems in place at Total.

→ Exploration & Production	67%
→ Gas & Power	75%
→ Chemicals	68%
→ Refining & Marketing	64%

Occupational Illnesses: Spotlight on Musculoskeletal Disorders

The global survey of occupational illnesses, which we conducted for the fifth time in 2008, helps pinpoint the causes of the illnesses Total employees are exposed to. It confirmed the growing incidence of musculoskeletal disorders, along with the main risks and illnesses identified, namely past asbestos exposure and hearing problems. Its findings are analyzed to continuously improve the prevention techniques and action plans addressing these problems.



Body Mechanics & Posture, an Ergonomic Pilot at Hutchinson

When trying to determine what can be done to more effectively prevent musculoskeletal disorders (MSD), observing how employees typically move at work, notably with the help of video footage, is a good starting point. Carried out at four "control" plants in 2008, the first step in the pilot conducted by Hutchinson's HSE teams in partnership with the French National Institute of Research and Safety (INRS) looked at ways to optimize workplace ergonomics. During a second step in December, an MSD team was created in each plant, with representatives from a variety of professions. They are tasked with performing a workstation-by-workstation assessment focusing on two specific angles, posture and repetitive motion.

The INRS, which specializes in the prevention of occupational accidents and illnesses, will recommend solutions for dealing with the two issues and take part in training teams through a program deployed at 15 sites in 2009.

Meaningful Initiatives to Evaluate and Combat Work Stress

The Medical Stress Observatory set up in 2008 by Total's corporate management and the Occupational Health Department, with the agreement of employee representatives, features a number of safeguards, such as voluntary participation, confidentiality, a scientifically vetted employee questionnaire, and registration with France's data protection authority, *Commission Nationale de l'Informatique et des Libertés* (CNIL).

The observatory's goal is to accurately measure the impact of our responses to common stress factors. Nurses invite interested employees to fill out a self-administered questionnaire during their regular checkup. The



▲ In most of our host countries, we provide medical assistance to employees and their families. Here, the Wouri base in Cameroon.



▲ Hearing test during a medical checkup.

occupational physician may comment on the results, which are protected by medical confidentiality and may prompt advice, support or a referral to other professionals.

All the statistical data gathered through the questionnaires are made anonymous and analyzed by an independent body, for the information of the Occupational Health Department, senior management and the Health, Safety & Working Conditions Committee, which will use it to implement the necessary measures. The stress observatory's scope is limited to corporate Upstream employees, including our subsidiary Total Exploration & Production France. The latter employs the services of a clinical psychologist at its headquarters in Pau, France, who has been working on the same topic of preventing job-related psychosocial risks since 2007. The Lacq Occupational Health Department in France also began offering a stress assessment questionnaire at employee checkups in 2008.

SPOTLIGHT

TOTAL'S REACH TEAMS STILL MOBILIZED AFTER PHASE 1

Effective June 1, 2007, the European Union regulation on the Registration, Evaluation and Authorization of Chemicals (REACH) made it mandatory to register and evaluate chemicals made in or imported into the European Union. The regulation aims to better protect human health and the environment against the potential risks associated with chemicals.

REACH requires chemical manufacturers and importers to submit highly detailed technical dossiers (registration phase) describing potential hazards and the steps taken to manage the risks involved in all identified uses. REACH provides for a phase-in pre-registration period during which manufacturers can declare their intention to register and prepare joint registration dossiers while continuing to fabricate their products.

The nature of our business makes us one of the European manufacturers most directly concerned by REACH. During the initial phase that ended on December 1, 2008, Refining & Marketing submitted 881 pre-registrations for 239 different substances and 45 corporate entities within its managed scope or active in petroleum product trading at the Group level. Meanwhile, our Chemicals business filed more than 4,000 pre-registrations for 50 corporate entities. The huge number is due to the fact that some specialty chemicals companies had to pre-register substances that they only use rather than make, to guard against a failure by the supplier, producer or importer to register them. The actual estimated number of different substances the Chemicals business has to register is 243. By early December 2008, the European Chemicals Agency (ECHA) had received 2.6 million pre-registrations — 20 times more than expected — from over 65,000 corporate entities for more than 100,000 substances. Registration properly speaking will now proceed through 2018, in accordance with a precise timetable based on tonnages. At the same time, the authorization process, which could see certain substances pulled off the market, has entered the active phase.

Managing and Reducing Our Environmental Impact

Our objectives and actions in the area of local and regional environmental impact¹ are underpinned by a commitment to continuing to strengthen our environmental management systems, managing environmental risks, lowering emissions, optimizing water use, remediating soil, reclaiming sites, and reducing and reusing waste.

OUR OBJECTIVES

Strengthen our environmental management system
Obtain ISO 14001 certification for all environmentally sensitive sites in 2009

Protect air quality
Reduce sulfur dioxide (SO₂) emissions from refineries by 20% between 2004 and 2010

Protect water quality
Keep E&P's hydrocarbon discharges below 30 ppm for each subsidiary

New objective: 10 parts per million in water discharged inshore/onshore areas by subsidiaries in 2010

OUR ACCOMPLISHMENTS

252 ISO 14001-certified sites

80% of environmentally sensitive sites certified at December 31, 2008

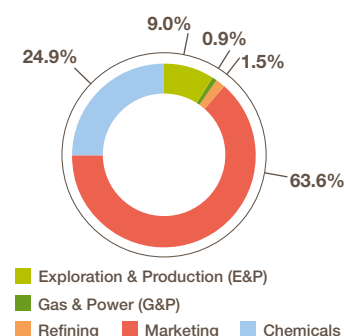
15% reduction in Refining's SO₂ emissions since 2004

Environmental performance reporting scope

910 operated industrial sites at end-2008

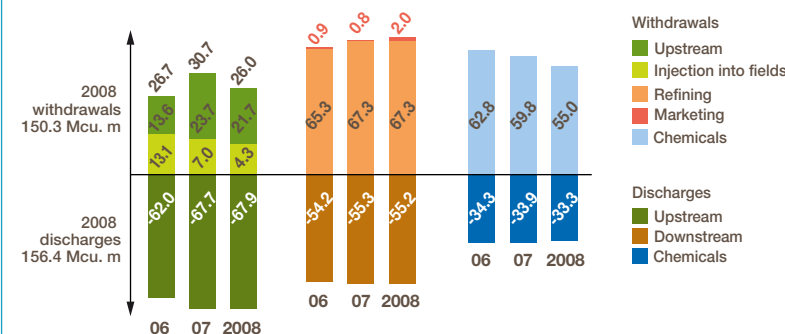
97% of operated sites responded to the environmental performance reporting questionnaire

Number of operated industrial sites worldwide by business



WATER WITHDRAWALS AND WASTEWATER DISCHARGES

Freshwater withdrawal and discharges, excluding cooling water (million cubic meters/year)

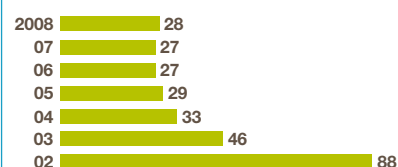


E&P freshwater withdrawals include water injected into fields (4.3 million cubic meters). Discharges include production water.

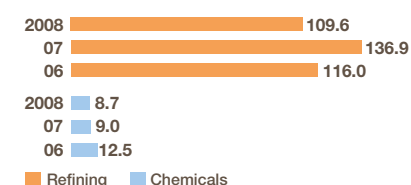
In 2008, the "freshwater withdrawals (excluding cooling water)" indicator was included in the indicators audited externally for the first time, as part of our commitment to continuous improvement of our impact.

Effluent hydrocarbon discharges
2008 total: 1,518 metric tons

Exploration & Production
(parts per million, or ppm)



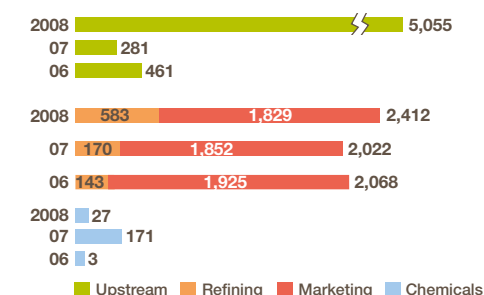
Refining and Chemicals
(metric tons/year)



The 20% improvement in Refining can be attributed to the resumption of normal water stripper operations at the Normandy refinery.

HYDROCARBON SPILLS TO THE ENVIRONMENT

Accidental oil spills in cubic meters (over 159 liters)
2008 total: 7,494 cubic meters



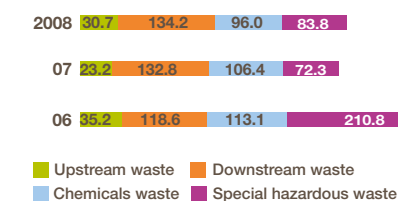
The sharp increase in the volume of spills to the environment reported by E&P in 2008 stemmed mainly from an incident at the loading buoy for an offshore platform in Angola (3,300 cubic meters) and several incidents involving pipelines in the Middle East (1,350 cubic meters), one due to sabotage. Thirty percent of the amounts spilled was recovered. In Refining, a major 500-metric-ton spill occurred at the Donges refinery during the loading of bunker fuel onto a tanker; nearly 90% was recovered.



HAZARDOUS WASTE TREATED OFFSITE

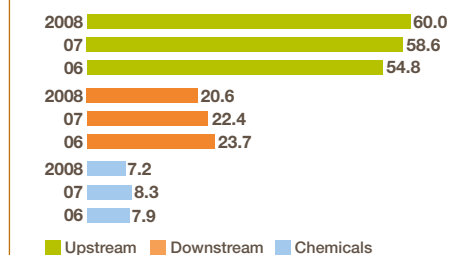
Hazardous waste treated offsite from routine operations and special waste from dismantling of units (metric tons/year)

2008 total: 344.7 metric tons

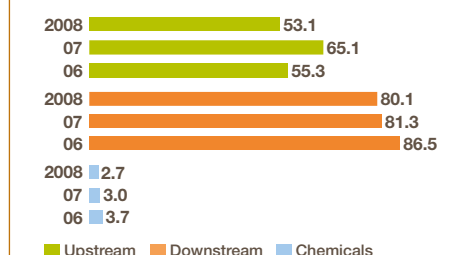


AIR EMISSIONS WITH LOCAL/REGIONAL IMPACT

NO_x emissions (metric tons/year)
2008 total: 87.8 metric tons

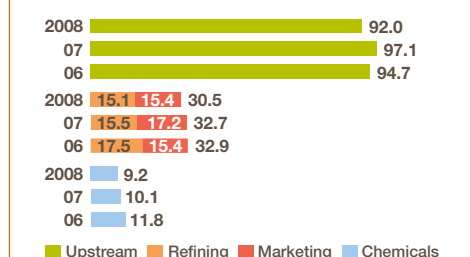


SO₂ emissions (metric tons/year)
2008 total: 135.9 metric tons



The strong 9% decline in 2008 was due in particular to an eight-month production shut-in in Libya and a decrease in Petrochemicals activities.

Non-methane VOC emissions (metric tons/year)
2008 total: 131.8 metric tons



The significant reduction in Marketing resulted in particular from improved use of vapor recovery units during loading.

¹ See pages 34 to 43 for details on greenhouse gas management at our own and customer facilities.

Managing and Reducing Our Environmental Impact

OUR MAIN CHALLENGES

➔ **FRANCE: Lussagnet** - Integration into its surroundings, use of solar energy, rainwater recovery, heat pumps and other features earned this facility France's **High Environmental Quality (HQE®)** label in recognition of its all-inclusive approach to limiting environmental impact, from construction through operations, while delivering superior health and hygiene performance, comfort and energy efficiency.



STRENGTHENING ENVIRONMENTAL MANAGEMENT TOOLS

Pursuing the ISO 14001 Certification Process

Bringing our environmental management system (EMS) in line with the international ISO 14001 standard is a pillar in our deployment of a comprehensive policy to achieve continuous improvement. This widely recognized set of guidelines and requirements gives diverse professional disciplines a common language and makes it easier to identify areas for improvement, such as dialogue with our external stakeholders, and thereby serves as a tool for motivating employees. We expect 2009 to be a watershed year for certification. Our goal is to obtain ISO 14001 certification for all of our environmentally sensitive sites¹. But we are not stopping there: more than 200 other sites not classified as environmentally sensitive have already been certified or are involved in a similar process.



▲ TIGF's new buildings in Lussagnet received the French HQE® label.

Committed to Transparency

In addition to the information we provide to social responsibility rating agencies, Total voluntarily submits certain key environmental reporting indicators for auditing by specialized outside firms (see page 90). Depending on the activity, the environmental performance data of sites is consolidated monthly or quarterly by each business and annually Group-wide. Serious incidents or accidents are investigated thoroughly, so that we can quickly share lessons learned from our experience.

life cycle, beginning with preliminary design. Major capital spending proposals undergo an even more detailed analysis, involving painstaking vetting using the multi-criteria checklist developed and implemented by Total's Risk Committee (see page 21).

We are making increasing use of our internal Environmental Risk Assessment method, which allows operational employees to construct priority air, water and soil pollution scenarios. The method is equally capable of assessing chronic and accidental pollution. Facility managers are responsible for adapting inspection and maintenance procedures to the local situation, as a preventive measure. In addition, accidental spill scenarios are supported by pollution control response plans.

All Site Managers Share Responsibility for the Environment



Understanding our impact, monitoring our performance using appropriate indicators, and taking steps to reduce our environmental

footprint are priorities for all of our sites, regardless of size. A practical guide to help them meet these responsibilities was distributed in 2008. Designed more specifically for managers of small units, this internal resource is meant to help them manage their environmental responsibilities even more effectively, in liaison with Health, Safety Environment (HSE) teams.

Identifying and Reducing Risks

More generally, assessments of the situation and of environmental impact are integrated in every stage of the project

R&D

ENLISTING TOP-TIER EXPERTISE

Total works with a number of partners specializing in the environment. To cite just a few French organizations and research topics, we work with:

- **Bureau de Recherches Géologiques et Minières (BRGM)**, France's leading public research institution for the earth sciences, on new soil remediation methods.
- **Institut National de l'Environnement Industriel et des Risques (INERIS)**, a public research and information agency in the field of industrial risks, on ways to fight air pollution.
- **Laboratoire de Physico et Toxico-Chimie des Systèmes Naturels (LPTC)** at Université de Bordeaux, on assays of contaminants in complex natural environments (living organisms) and the development of early warning indicators (biomarkers) to monitor the impact of toxic substances.
- **Institut National des Sciences Appliquées (INSA)** in Toulouse, an engineering school, on innovative water treatment processes.

We also participate in a number of projects funded by the French National Research Agency (ANR), under its *EcoTechnologies* program.

PROTECTING AIR QUALITY AND REDUCING EMISSIONS

Total continues to reduce gaseous emissions from our plants and production sites. Due to the nature of our operations and processes, we focus on sulfur dioxide (SO₂), nitrogen oxides (NO_x) and non-methane volatile organic compounds (NMVOC).

Spending by Refining to Reduce Sulfur Dioxide and Nitrogen Oxide Emissions

Sulfur occurs naturally in oil, in variable quantities. Spurred by ever-tighter regulations, especially in the European Union, recovering sulfur from refined products is a priority across the industry. Our Refining business is committed to a 20% reduction in its total sulfur dioxide emissions by 2010 from their 2004 level. By 2008, a 15% reduction had been achieved.

Several new projects came out of our capital expenditure program to meet that goal last year. Two high-pressure strippers (HPS) were installed at the Grandpuits and Normandy refineries in France. They will cut their annual sulfur dioxide emissions by 10 to 20%. Meanwhile, the Donges refinery has been successfully operating its Maxisulf unit, which adds another sour gas treatment stage, since end-2007. As a result of these investments, sulfur dioxide peaks, a major concern of refinery neighbors in France, dropped by 50% in 2008. In 2008, our French refineries also reduced the nitrogen oxide emissions of their boilers by around 25% compared with 2007. The Feyzin and Provence refineries are now equipped with selective non-catalytic reduction systems to recover nitrogen from flue gas through urea injection. Feyzin has also replaced the conventional burners in some of its units with low-nitrogen oxide burners. Similar projects are planned for 2009 and 2010.



▲ A mobile lab operated by the Environment and Air team at our CReS research center in Solaize, France.

A More Thorough Analysis of Non-Methane VOC Emissions

Several factors make the VOC issue a complex one. Volatile organic compounds are hydrocarbons that evaporate at ambient air temperature and normal atmospheric pressure. There are many potential sources. Emissions are often diffuse, and their harmfulness varies depending on the compound involved. VOCs pose three major types of risk: olfactory disamenities; local photochemical pollution in the case of VOCs that are ozone synthesis precursors; and, in the case of carcinogenic, mutagenic and reprotoxic (CMR) VOCs, health risks.

A number of countries have legislation mandating a reduction in total VOC emissions. We want to do more and are working to better characterize VOCs, to improve our understanding of their risks and more effectively protect neighboring communities and personnel at all our facilities, even where there are no local VOC regulations.

A Priority Across Our Businesses

In Feluy, Belgium, Total Petrochemicals employees recently installed a proven-effective differential pressure vapor processing system for VOC capture. Working with *Institut National de l'Environnement Industriel et des Risques*

(INERIS) experts, the Normandy and Grandpuits refineries conducted fugitive VOC detection surveys in 2008, using portable infrared cameras, a process that had been tested previously at other sites. VOC treatment is also a priority for our European network of fuel depots and service stations, which are gradually installing recovery equipment.

A JOINT TOTAL-QATAR PETROLEUM PROJECT TO MODEL OZONE FORMATION



Where does the ozone that affects the lower layers of the atmosphere come from and who or what is responsible for how much? These questions have long been of concern in Europe and are now becoming more pressing in Qatar, where large industrial projects are mushrooming. Teams from Total and the Qatari national oil company are co-developing an air quality model integrating all the data associated with the problem, including ozone precursor emissions and weather. The project will help to set acceptable VOC and NO_x limits for future ventures in order to reduce the local population's exposure to ozone.

1. Defined as sites that will account for 90% of our major environmental performance indicators.

Managing and Reducing Our Environmental Impact

OUR MAIN CHALLENGES

→ **€200 million** will be spent over ten years on the Water Program for Total's refineries. The plan aims to adapt and improve unit operation and maintenance, train teams and design treatment plants to get a jump start on the ecological and chemical status requirements that will be introduced by the EU Framework Water Directive in 2015.

PROTECTING WATER RESOURCES AND OPTIMIZING USE

Water is not a raw material for Total. It is closer to a utility, essential to a number of processes, or a co-product, notably for Exploration & Production, which extracts large amounts of water daily, especially from end-of-life fields (see page 28). However, the scarcity of freshwater — a vital resource — in many parts of the world accentuates the need to optimize water use in industrial processes everywhere, by improving processes, minimizing leaks, stepping up recycling and other means. Like discharge treatment and management, reducing water use, regardless of type or source, is a priority for all of our businesses.

Discharge Quality: Looking Ahead to 2015

The European Union's Framework Water Directive, published in 2000, reflects a global trend toward ever tougher regulation. The directive establishes new standards and modifies the earlier approach. It does not simply set maximum pollutant concentrations¹ for water discharges, but also creates an obligation of results concerning the chemical and ecological status of watercourses and receiving bodies of water, to be met by 2015.

Total's units in European Union countries are working to ensure widespread adoption of best practices and to upgrade installations. The Donges and Feyzin facilities have expanded their activated sludge secondary treatment capabilities. Feyzin is also upgrading the system used to recover oil from process water by building a dissolved-air flotation unit, among other improvements. In 2009, the Provence refinery will replace its trickling filter with much more efficient activated sludge treatment.

Pilot Rivers, a Unique Resource for Observing Aquatic Ecosystems

Physicochemical data are not always enough to understand the complex, changing reality of environmental impact on water. At Total's Mont-Lacq R&D center in France, 16 river channels were recreated and populated with organisms dropped into the same conditions they would find in their natural habitats. Unprecedented in terms of size and the experiments conducted there, this facility will use specific biomarkers to measure the real-world effects of an isolated chemical or a mixture of industrial effluents, thereby improving risk assessment.

Preventing and Fighting Marine and Freshwater Spills



Prepared Employees and Upgraded Internal and External Resources

- An in-house expert team that coordinates our spill response.
- Emergency response procedures that can be activated 24/7 at the corporate level, covered by the emergency spill response plan.
- Response resources organized as part of pollution control plans specific to each site.
- Regularly scheduled equipment deployment and crisis management drills.
- The Fast Oil Spill Team (FOST) based in Rognac, France, which manages an inventory of equipment and supplies, trains responders from subsidiaries and responds to spills.
- To respond rapidly anywhere in the world, assistance agreements with the international Oil Spill Response Ltd pollution control equipment cooperative, the Clean Caribbean & Americas (CCA) cooperative, and CEDRE, a French organization that conducts research on accidental water pollution, pollution prevention and spill monitoring.
- Scientific partnerships (studies and research programs) and international alliances (strengthened cooperation between the industry and governments).

SPOTLIGHT

LESS WATER MEANS LESS POLLUTION AT THE CAR WASH



Washing cars without proper care, either at home or in poorly managed car washes, impacts the environment through pollutant discharges and excessive water use. Total's Marketing Europe network, which has a professional interest in car washing at service stations, took aim at the problem in 2007, determined to change behaviors and optimize its own facilities.

The first step is to attract loyal customers by offering them an affordable alternative to washing their cars by hand on the street or at home. To avoid discharging wastewater directly into the public sewage system, all stations with car washes are equipped with separators. In 2009, Total will issue a call for tenders to the main suppliers in Europe, with fully biodegradable products as our top criterion.

The second step is to expand water recycling. At end-2008, 40% of car washes at Total service stations included recycling systems. As a result, rollover washes use only 25 to 30 liters of water, instead of the 200 liters required by hand washing. Our teams are now shooting for 3 liters using steam wash systems and even waterless car washes utilizing processes currently being tested in France and Africa.



1. Compliance with standards covering more than a hundred micropollutants and reducing or eliminating scores of hazardous substances.

➔ **JUNE TO AUGUST 2008: France** - Service station managers in our French network were provided with waste management kits comprising a CD-ROM, an information guide on legislation, safety, sorting and storage, and a practical quick-reference card to help them optimize the treatment of some 12,500 metric tons of waste each year.

RECLAIMING SITES AND REMEDIATING SOIL

A Structured Risk Management Process

Accidental and diffuse pollution caused by past or current industrial operations can have both health and environmental impacts and interfere with the land's subsequent use for other purposes. It also creates image problems and liability issues that the company has to consider.

In a move to strengthen the resources in place for several years — experience sharing and site reclamation and soil remediation project coordination through a steering committee and a technical committee of internal specialists and outside soil remediation experts — Total introduced an extensive set of guidelines and sophisticated tools in 2008 to manage contaminated sites and soil and to prevent, manage and reduce risks.

Spelled out in a set of six guides distributed to all internal stakeholders, our approach emphasizes both preventing pollution itself, right from the installation's design stage, and preventing pollution's consequences, by setting priorities for action and ranking risks.

For actual cases of pollution, the guidance specifies the emergency or monitoring measures to take and the prerequisites for permanently reclaiming the site, in liaison with stakeholders.

CLEAN: The Culmination of Four Years of Work in Refining

With the completion of work to dismantle decommissioned atmospheric distillation and vacuum distillation units at the Feyzin refinery and Unit 1 at the Normandy refinery, both in France, and the Lindsey Oil Refinery's former water treatment system in the United Kingdom,

the CLEAN project is a step closer to completing its task — decreasing the risks associated with facilities no longer in service.

Creating Reliable Waste Treatment Options in More Countries

With operations in many non-OECD countries, Total wants to help introduce organized waste management processes where they are lacking. For instance, we have deployed a two-part pilot project in Gabon in partnership with waste treatment specialist Séché Environnement. The project focuses on waste reduction at source and oily waste recycling and recovery, as well as collecting hazardous waste that cannot be treated locally and exporting it to accredited centers in Europe. This comprehensive approach aims to ensure waste traceability, expand collection by pooling existing local resources, promote reliable, long-term channels and ensure their acceptability.

Contaminated Sites and Soil: Six Guides and a Shared Methodology

The guides tap a huge pool of feedback from experience we have acquired worldwide to describe a shared process encompassing prevention, FEED and remediation project management, technical resources and tools, market operators and risk management. They combine our internal knowledge and skills and the expertise of several partners, including *Bureau de Recherches Géologiques et Minières (BRGM)*, France's leading public research institution for the earth sciences.



Innovation to Help Us Leave Nothing Behind

FRANCIS ROMMELAERE

Executive Director of RETIA, the Total subsidiary responsible for reclaiming brownfield Chemicals facilities



When we close one of our facilities for good, we have to make sure the site can safely be used again for any purpose. We embrace this good corporate citizen role and want to avoid leaving future generations with any significant trace of our past operations. Reclamation and remediation are equal parts technology, project management, legal issues, politics and communication. Communication is essential to win acceptance of a project from all stakeholders. We explain what we are doing and why to our neighbors, especially since our work can take five to ten years to complete. People have to know about the end project, which after all benefits the community. As the subsidiary of a large company, we may have more demands placed on us than other operators — people ask us to go the extra mile, to test this or that process. We accept our role as an innovator because we consider progress vital, both for business reasons and in order to meet sustainable development requirements.

Preserving Biodiversity

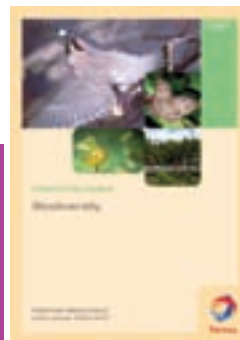
Whether tackling climate change or conserving species and protecting biodiversity, a coordinated effort is required. We do our part, notably by improving our management of biodiversity issues, which are now a more integral part of our strategy and operations, from project design through facility dismantling.

OUR OBJECTIVES

- ▶ Minimize ecosystem impact throughout the lifetime of our facilities, so that sites are as close to their original condition as possible when we leave
- ▶ Integrate biodiversity preservation in our environmental management system
- ▶ Pay special attention to regions that are especially rich or vulnerable in terms of biodiversity, which can lead us to make case-by-case decisions on whether to work in certain areas
- ▶ Contribute to scientific advances and the dissemination of knowledge about species and biodiversity issues
- ▶ Coordinate our biodiversity initiatives with our community relations processes, to help local communities preserve the richness of their natural environment

OUR ACCOMPLISHMENTS

- ▶ Practical biodiversity guidelines for operational employees.



- ▶ 6 pilots to implement a wider-ranging policy: Yemen LNG; Prémont (a reclaimed brownfield Chemicals site), the Feyzin and Flandres refineries and TIGF in France; and the Sogara refinery in Gabon.



- ▶ **€3.45 million** spent on the environment by the Total Foundation, which provides funding and skills to scientific programs on marine and coastal biodiversity conducted by its institutional partners. The corporate foundation supports projects implemented by specialized partners to restore damaged ecosystems, rebuild communities and preserve threatened species, paying particular attention to initiatives focusing on marine areas.

- ▶ In the Mahakam Delta in Indonesia, a program to rehabilitate the Anggana mangrove forest.

4 objectives:

- ▶ Replant the mangrove forest.
- ▶ Re-establish land ownership rules.
- ▶ Introduce environmentally friendly aquaculture.
- ▶ Identify alternative sources of income.



→ **The Total Foundation has supported 170 PROJECTS in more than 40 countries in the last 17 years.** The revamped corporate foundation has retained marine and coastal ecosystem preservation as one of its action priorities, while expanding its focus to encompass culture, heritage and community outreach in the areas of health and education.

TO LEARN MORE

<http://foundation.total.com>



Insights Carl Gustaf Lundin

Marine biologist and head of the Global Marine Program of the International Union for Conservation of Nature (IUCN)



What can we expect from the creation of an international group of biodiversity experts modeled after the Intergovernmental Panel on Climate Change (IPCC)?

The initiative¹ will focus attention on biodiversity and make the issues more visible to decision and policy-makers. There is also a real biodiversity crisis.

You advocate an economic valuation of ecosystems. Is that so you can come up with figures the way the Stern Review on the Economics of Climate Change did?

The goal is to help governments and businesses to better understand what we are saying and to give a clearer picture of a complex reality that should not be reduced to dry statistics. Biodiversity loss affects agriculture, of course, but also a number of other sectors.

An intergovernmental panel approach can shape action priorities, provide a foundation for possible compensation for and by countries or industries, based on a determination of responsibilities, and make it easier to draft joint regulations.

What role should businesses, especially extractive companies, play in protecting biodiversity?

Their main responsibility is to change their practices. We can help them find win-win solutions, although they may sometimes be more expensive. Big companies are better equipped to get to grips with biodiversity issues. But although we're winning small battles, we may lose the war. We have reached a point of no return in some cases; for instance, it's too late to stop the spread of invasive species in Europe. On the other hand, there is still more we can do to protect tropical coral reefs, for example. As with climate change, if we stand by and do nothing, we risk serious consequences. ■

Preserving Species and Ecosystems: A Global Challenge, A Priority for Total

Our employees, especially in the Upstream, encounter a wide variety of natural environments, including temperate regions, wetlands, lagoons and coastal sites, mangrove forests, deserts, tundra and taiga, boreal and tropical forests, coral reefs, the Arctic and ocean deeps. All are vulnerable ecosystems and each requires a dedicated approach.

We also operate facilities in the heart of crowded industrial areas. We need to devote the same attention to protecting the often-underappreciated biodiversity that exists within or on the periphery of these areas.

Our environmental footprint takes different forms. Besides land use and emissions, human activity near our sites increases, which may further disrupt fragile balances. It is our responsibility to manage and minimize these risks, both at our long-established business units and in new locations, especially as we develop non-conventional resources.

Solidifying Advances

Biodiversity is not a new concern for Total, which created the Corporate Foundation for Biodiversity and the Sea in 1992.

In addition to supporting initiatives to preserve or restore ecosystems and species, the Foundation has helped broaden knowledge in these areas, with the support of a network of specialized NGOs, institutions and scientists. In line with the main international conventions, including the UN Convention on Biological Diversity adopted at the Rio Summit in 1992, we work with the United Nations Environment Program (UNEP), the International Union for Conservation of Nature (IUCN) and the International

Petroleum Industry Environmental Conservation Association (IPIECA) on topics directly related to oil and gas in order to move our practices forward. For several years now, we have been adapting our internal guidelines, requirements and procedures and systematically conducting baseline surveys and impact assessments for all projects prior to their launch. For the last four years, we have been working toward genuine, organized biodiversity management, considered to be an integral part of our overall strategy.

Three Steps in a More Proactive Process

Learn, protect and do more. Described in the *Practical Biodiversity Guide* distributed in 2007, our process begins with a detailed survey of the site, ecosystems and local issues. Protection involves action plans defined very early on in the process and the payment of appropriate compensation for proven damages. It also entails the documented monitoring, on a case-by-case basis, of the effectiveness of measures taken, such as creating wildlife corridors, reducing our physical footprint, limiting disamenities of all kinds, and preventing the introduction of invasive species. Total is emphasizing a number of measures for doing more to protect biodiversity, including improving the reliability of tracking indicators, updating geographic information systems (GIS) that show how close our facilities are to the protected areas defined by IUCN, the United Nations or UNESCO, and continuing our scientific partnerships and research. We are especially interested in sharing more of the data collected at our sites and inviting all interested stakeholders to analyze and act on them with us.

1. A United Nations Environment Program (UNEP) meeting held in Malaysia in November 2008 approved in principle the creation of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), an intergovernmental panel of biodiversity knowledge holders.

One Refinery, Two Falcons and Three Chicks



The only peregrine falcon pair known to make their home in the Rhone region of France chose the Feyzin refinery as the place to build their nest, high atop a flare stack, and raise their young.

In another, equally welcome surprise, *Ligue de Protection des Oiseaux*, a bird protection association, voluntarily contacted the refinery, whose teams were more than happy to open the plant's doors for a joint study of the conditions necessary to preserve this unusual habitat. Members of a now-protected species that was endangered in the 1970s, the pair and its three chicks are being closely monitored, in particular by experts from the *Centre Ornithologique Rhône-Alpes*.

Biodiversity Observatories, an Experimental New Concept

Biodiversity observatories have three objectives: to regularly monitor environmental and biodiversity health at identified sites; to check data consistency and approve data with the help of a panel of experts; and to report to all stakeholders about environment changes. What makes this Total-promoted concept so original is that it gathers at one table representatives of governments, local communities, NGOs, scientists specializing in biodiversity and internal operational employees. We are proposing bringing these stakeholders, not always in the habit of talking to one another, into permanent, transparent oversight committees based on mutual trust. Biodiversity observatories are meant to do more than serve as a forum for dialogue. They are designed to be springboards for action. Possible initiatives include conducting R&D projects, carrying out local biodiversity censuses, mapping ecological hotspots, and selecting appropriate bio-indicators. Another potential project is restoring ecosystems, especially in areas used for waste storage in

the past, in line with accepted practices at the time, which we would like to bring back to their optimal natural condition. We are examining the possibility of replicating this approach at a large number of sites, based on the experience of facilities like the Feyzin and Flandres refineries, TIGF and the Prémont site in France, Yemen LNG and the Sogara refinery in Gabon, all of which are already moving along this path.



▲ Ile d'Yeu nature reserve in France.

SPOTLIGHT

BIODIVERSITY PRESERVATION AT THE FEYZIN REFINERY



Initiatives Conducted in Cooperation with Local Stakeholders

Located in the heart of one of France's most densely populated industrial and urban complexes, bordered by the Rhone canal and a heavily traveled highway, the Feyzin refinery is also framed by two "green lungs," Ile de la Chèvre and the Feyzin military fort at the entrance to the Plateau des Grandes Terres.

Here, respect for biodiversity is shaped by factors specific to the region, including the refinery, economic activities, the habitat, and recreational and outdoor pursuits. Hence the importance of striving to live together in harmony, working with as many local stakeholders as possible, including associations, management collectives, the municipality and academics, and with the support of a specialized research department.

An association to protect and restore the Rhone River, *Syndicat Mixte du Rhône, des Îles et des Îlons* (SMIRIL), is very active in preserving local biodiversity. The association's willingness to work for the first time with an industrial operator — Total — is a striking feature of a project introduced by Feyzin employees in 2008. The two-phase pilot undertaking will consist of a census of species in and around the refinery and creating an active observatory responsible for medium and long-term biodiversity preservation. Its studies may produce local management plans and help pinpoint the key indicators for species conservation and protection. Total can then use those indicators for other R&D programs. The project also builds on already exemplary collaboration between the refinery and the city of Feyzin, as evidenced in 2007 by their contribution to a local Agenda 21 sustainable development action plan, and by the Neighbors' Conference, a consensus-building organization involving the refinery, neighbors and elected officials, which celebrated its first anniversary in November 2008.



8

➔ **DECEMBER 2008:** The Flandres refinery and *Conservatoire des Sites Naturels du Nord et du Pas-de-Calais*, an organization that protects the natural environment in northern France, **team up** to enhance the 45-hectare site where the Mardyck wind farm was built. Implemented in liaison with two local associations¹, the management plan and scientific monitoring of the site leverage a baseline survey and include a two-year census of all the species living there.

SPOTLIGHT

YEMEN

Close Monitoring of Coral Communities and Successful Transplantation

In 1997 and 2005, Creoccean, a French consultancy specialized in coastal and marine environmental matters, was commissioned to carry out baseline surveys prior to the launch of the Yemen LNG project. They identified roughly 79 species of coral, some believed to be 400 years old.

In response, Yemen LNG redesigned part of the site and shoreline work in the port of Balhaf on the Gulf of Aden in southern Yemen to reduce the impact of construction on ocean currents and coral and fish communities.

The shore retaining wall was redesigned to avoid marine impacts, a piled bridge solution was adopted to ensure continuous water circulation, and silt curtains were installed to protect the coral colonies from sediment from the construction work. Cooling water is discharged farther out into the open sea to prevent the increase in water temperature from affecting the coral.

In addition, 1,500 threatened coral colonies were moved 600 to 800 meters, to a location where conditions are similar to their original habitat. It was the biggest transplantation operation ever undertaken, involving corals that weighed as much as four metric tons each. Creoccean's scientists have been observing the condition of the coral colonies since then.

The transplantation operation has been even more successful than they had hoped, with a survival rate to date of 90%.



They will continue their monitoring for the duration of site operations. Yemen LNG has also set up a partnership with the International Union for Conservation of Nature (IUCN) to implement an observatory of marine biodiversity. Moreover, Yemen LNG is working with the local environmental protection authority to assist in its introduction of a comprehensive coastal zone management plan. Fishermen are also being taught more efficient, more sustainable methods, to preserve fishing stocks. Total has a 39.62% interest in Yemen LNG. The project will come on stream in 2009 and includes a 320-kilometer gas pipeline from Marib to Balhaf, a dual-train gas liquefaction plant, a tank farm, a materials offloading facility, and a loading jetty for LNG carriers.

Nature Reclaims Its Own at the Former Prémont Chemical Site in France

▼ Before



▲ After

Though not yet confirmed, the findings of initial studies carried out by an independent consultant provide an encouraging answer to the question of whether wildlife and plants can recolonize the site of a factory that produced sodium chlorate for over a century. After the installations were dismantled in the 1990s and the soil remediated, the land was completely reclaimed by bringing in earth from the nearby Fréjus tunnel construction project. It was then reseeded with native vegetation. Assessment is ongoing at both the three-hectare site and the 16 hectares immediately nearby, using an area with identical characteristics as a baseline for comparison.

1. Groupe Ornithologique et Naturaliste du Nord-Pas-de-Calais (GON), a wildlife protection association, and Assemblée pour la Défense de l'Environnement du Littoral Flandre-Artois (ADELFA), a coastal protection association.

An Ongoing Contribution to the Development of Our Host Countries

Acting as a responsible industrial operator and meeting the expectations of our host countries and stakeholders also means doing our part to develop human capital, in all its aspects. Guided by the expertise of specialized partners, we do this by actively supporting the creation of sustainable jobs and businesses, as well as health, education, and water and energy access programs, keeping in mind that our initiatives and approaches can always be improved. Our broader goal is to strengthen individual and community local capabilities, wherever we can.

OUR OBJECTIVES

- ▶ Make our community development processes more professional
- ▶ Expand the local content of our projects and activities, to develop the skills and expertise of host countries and strengthen their industrial base
- ▶ Support the communities near our facilities and, with our partners, invest in education, training and lasting improvements in living conditions
- ▶ Help our host communities drive their own development
- ▶ Promote the growth and creation of businesses in our regional employment areas; increase the number of small businesses we support in some 20 countries to more than 4,500 by end-2010

OUR ACCOMPLISHMENTS

▶ Publication of the *Local Content Guide* and *Economic and Social Development Project Guide*, prepared in cooperation with *Institut de Recherches et d'Applications des Méthodes de Développement* (IRAM), a French NGO specialized in rural development

▶ **€14.8 billion** in income and production taxes paid in 2008 in non-OECD countries¹

▶ More than **11,000** students supported by Total in 2008 in around 20 countries

▶ **€17 million** invested in support initiatives by the Total Foundation and the Corporate Philanthropy Department



▶ **€151 million** of community spending on **2,619** initiatives, in particular in the areas of education, training and health

▶ **87.5%** of community spending directed at non-OECD countries

▶ **3,200** small businesses supported in the last 25-plus years, resulting in the creation of 50,000 jobs





➔ **Angola** – Commissioned to **build and assemble FPSO components**, the subsea production system and flowlines, approximately ten Angolan businesses are using the Total E&P Angola-operated offshore Pazflor project as a springboard to consolidate their expertise and create permanent jobs.

➔ **NON-OECD COUNTRIES** – Workforce
21,789 employees
3,761 new hires of 60 different nationalities

DEVELOPING THE ECONOMIC BASE AND COMPETENCIES OF HOST COUNTRIES

More Effective Coordination to Increase the Local Content of Our Industrial Projects

Through a combination of partnering with local contractors to develop major industrial projects, hiring and training local technicians and managers, and energizing the small business and contractor network, Total continually strives to strengthen the positive impact of our presence in host countries. This local content policy, long deployed in Angola for example, meets a core expectation of many producing countries. While tailored to local needs and conditions, it complies at all times with Total's safety, quality and cost control requirements.

In 2008, our commitment to local content was taken to the next level when Exploration & Production created a dedicated Local Content Coordination unit. Its purpose is to leverage accumulated experience in this area to professionalize the process and coordinate even more efficiently

the contributions of the many people involved, such as headquarters and subsidiary managers, project leaders, engineers, legal experts, procurement officers, human resources and sustainable development teams, and small business support specialists.

Integrating the Process into Our Business Strategy

To align our efforts and maximize benefits, our local content policies are broadly scoped. The focus of long-term planning at the business level, they are taken into account from the conceptual engineering and FEED stages, guide our selection of local goods and service providers, and are monitored through reporting and operational tracking indicators on a project-by-project basis.

In this way, we are gradually helping a steadily growing number of local contractors meet current international oil industry standards and gain access to potential new markets.

NIGERIA

Strengthening Local Engineering Capabilities



A program supported by Total E&P Nigeria (TEPNG) matched Nigerian businesses with international engineering firms, speeding the transfer of technology. This led to the creation of mixed ownership companies incorporated under Nigerian law, with which TEPNG signed five framework agreements in November 2008. These accords set a timetable for replacing expatriates with Nigerian nationals, among other provisions.

The arrangement levels the playing field for contractors and will help TEPNG manage the resulting calls for tenders locally, meeting the requirements of Nigerian Content Short-Term Directive No. 1². As a result, the front-end engineering and design (FEED) for the Egina offshore project will be performed entirely in Nigeria. By 2010, 70% of all capital expenditure associated with project development will have to be made in country.

INDONESIA

Wider Use of Local Entrepreneurs



A lack of information about call for tender procedures, terms and conditions and unfamiliarity with HSE issues can make it difficult for more locals and small contractors in the Mahakam Delta to work for Total or the broader oil and gas industry. In response, Total E&P Indonésie held several training seminars on

regulations, management, quality criteria and other topics in 2007 and 2008 to strengthen ties with nearby communities. In 2008 as a whole, 60 people received training and Total E&P Indonésie awarded 32 construction and equipment supply contracts to local businesses.

Pooling Local Content Expertise



Developing Local Content is an internal guide in French that distills our know-how and describes the best practices we would like to see widely adopted. Distributed in 2008



to the operational employees concerned, it is designed to help them assess related issues and embrace a tried and tested method.

1. Current tax liability (corporate income tax, taxes paid to Middle East oil-producing countries for the portion which Total held historically as concessions, and production taxes), excluding deferred taxes, as booked.

2. Nigerian Content Short Term Directive No. 1 stipulates that all front-end engineering and design (FEED) and detailed engineering and design (DEED) must be domiciled in the country.

An Ongoing Contribution to Local Development

OUR MAIN CHALLENGES

- ➔ **APRIL 2008: Indonesia** – Our **community development initiatives** in the Asia-Pacific region are presented at a seminar in Jakarta.
- ➔ **DECEMBER 2008:** The first introductory and advanced **community development** courses are held. Both will be adapted for use by interested subsidiaries.

BASING ECONOMIC AND SOCIAL DEVELOPMENT ON NEEDS IDENTIFIED LOCALLY

Acting Locally in Host Countries Takes Careful Planning

Listening and dialogue are more than just ways to foster good relationships between our facilities and neighboring communities. We work closely with authorities, communities and all stakeholders to pinpoint their expectations and decide, in consultation with them, what the priorities are for integrating our operations into the country and nurturing local development.

The now widely used Stakeholder Relationship Management+ (SRM+) resource helps local managers prepare their responses, create action plans and facilitate assessment of the effectiveness of their integration,

community information, education, training, health and micro-finance programs.

SRM+ Grassroots, a supplemental resource created in 2007 for new operations, has been tested in a project in Kazakhstan and will be used soon for several projects in Canada.

88

At end-2008, 88 sites had deployed SRM+. By end-2009, 90% of our major facilities will have mapped their stakeholders using SRM+.

Community Development: Specific Skills and a Recognized Profession

Creating and maintaining the ties between companies and host communities are critical to the acceptability of our operations. This requires different types of expertise, from baseline studies for new projects through contractor supervision and even resolving disputes.

Our Exploration & Production business, for example, is collecting experiences from a variety of sources, including major operated projects, World Bank principles and initiatives conducted by subsidiaries, for a *Manual of Community Development Know-How*.

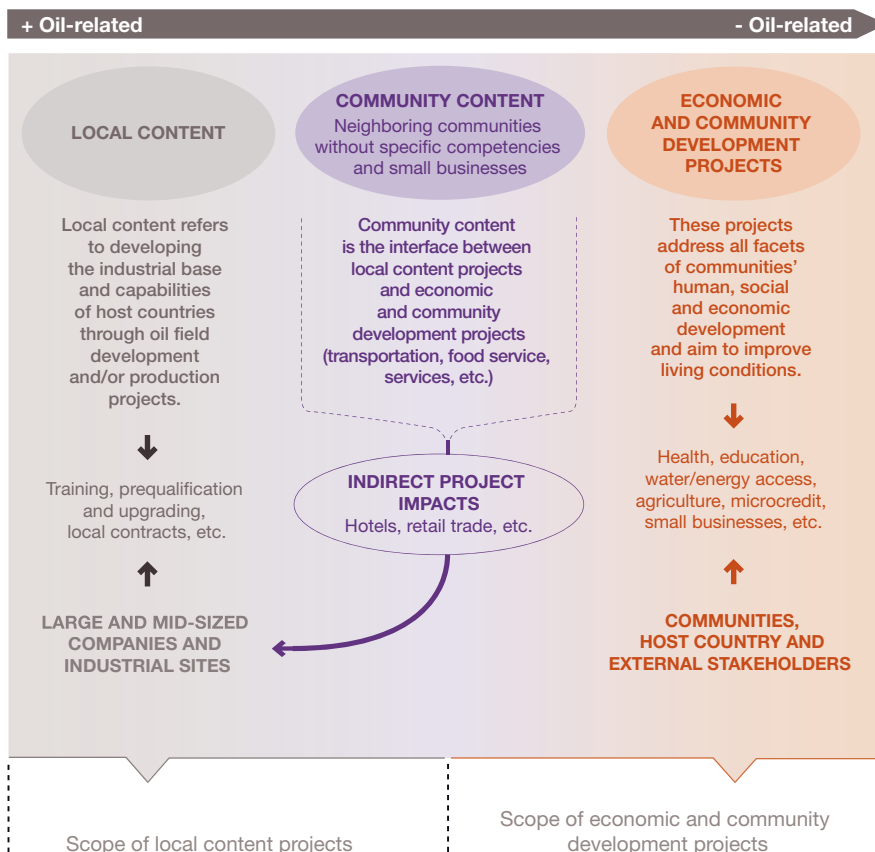
Exploration & Production continues to recruit specialists and, after identifying all employees working in this area, has prepared a preliminary matrix of the key skills required. E&P's career management process now clearly and specifically identifies the position of "community development specialist" in Health, Safety and Environmental guidelines. This will enable such professionals to benefit from specific training and career paths.

Fostering Lasting Initiatives and Passing the Torch

To catalyze energies, Total taps the expertise of a network of partners — specialized organizations and consultants, international or local NGOs — during planning and execution of the projects we support or initiate. Their outsider's eye and knowledge of community development issues help us to more effectively check the negative impacts of our operations and enhance our contribution to community development.

In 2008, Total commissioned researchers from France's ESSEC business school and the Paris 1 and Versailles universities to conduct two field surveys

A Holistic Approach to Spurring Host Country Development



TO LEARN MORE

www.total.com/csr





◀ August 8, 2008: Nigeria - Administrative control of the Eastern Obolo Community Development Foundation, fully funded by Total E&P Nigeria, was handed over to the People's General Assembly. It was previously facilitated by Pro-Natura International, the NGO that created and developed it.

in the Eastern Obolo and Ogba/Egbema/ Ndoni (ONELGA) local government areas¹ in Nigeria. Initial results found disparities in living standards and in the ability of communities to manage their own development. The surveys in particular revealed strong community expectations about higher living standards and the quality of relationships with oil companies, a finding confirmed by the participatory process deployed in Eastern Obolo. The combined quantitative and qualitative surveys are continuing in 2009. Improvements are only lasting if local stakeholders are properly prepared to eventually take over the administration of each project without outside support. Though support remains vital, Total teams encourage stakeholders to participate in decision-making from the preliminary assessment stage forward, in order foster local empowerment and eventual independence.

Getting Communities More Involved in Their Own Development in Nigeria

New Vision is the name Total E&P Nigeria (TEPNG) has chosen to signal a new approach to working with host communities.

The impetus for the change was the disappointing finding that the money and efforts expended were not netting the expected results, either for the communities or the company. One of the reasons for the mutual dissatisfaction was insufficient community input in most of the projects initiated and executed by TEPNG, resulting in a gap between what they are offered and what they actually need and want.

Launched in 2007, *New Vision* focuses on building the human and social capacities of host communities to manage their developmental agenda, with the company partnering as a facilitator. The program benefits from

the contractual engagement of the United Nations Institute for Training and Research (UNITAR) and NGO Pro-Natura International.

The main achievements so far include renewed partnership agreements with stakeholder communities, a paradigm shift in skills training to specialized oil and gas-related skills, the creation of expanded compliance monitoring and evaluation committees in each community, and the decision to empower communities to select local contractors to execute development projects.

Every aspect of collaboration with communities is based on clear, financially transparent contracts, and budgets are set jointly.

In addition to providing more information on its activities, TEPNG is working to enhance the employability of host community engineering graduates through a remedial program to upgrade their skills at the Total-sponsored Institute of Petroleum Studies, the product of a partnership between the *Institut Français du Pétrole* (IFP) and the University of Port Harcourt.

From Community Input to Action Plan: a Joint Initiative in Normandy, France

Two linchpins of the Le Havre industrial zone, the Normandy refinery and Total Petrochemicals' Gonfreville plant, wanted to work together to improve public understanding of their operations and better integrate them into their environment. Using the SRM+ method, in July 2008 the two plants presented the results of the consultation to representatives of around 60 stakeholders surveyed by an independent outside firm. It is the first time Total has ever attempted such a large-scale summary and interpretation. Besides solidifying trust, the exercise has fostered a positive perception of the company's safety practices, dialogue and contribution to the local economy. However, expectations remain high when it comes to providing information about incidents, health and reducing local pollution and disamenities. The action plan that came out of the survey will be implemented over a two-year period. It has already produced a very responsive information protocol between the two plants in Le Havre and local communities and environmental associations.

INDONESIA

Communities Gain Access to Piped Water and Achieve Greater Self-Sufficiency



Less than 30% of Indonesia's rural population has access to piped water. That compares unfavorably with 65% of the residents of the Mahakam Delta, where most of Total E&P Indonésie's operations are located. The programs launched by the subsidiary since 2000 are one of the reasons for the difference. The

initiatives owe their success to the participative approach adopted. After needs had been assessed and the necessary training provided, village committees were set up to manage and maintain the facilities. Householders pay a monthly fee, ensuring the sustainability of the project.

1. Total has onshore operations in the ONELGA area; no oil companies are present in Eastern Obolo.

MYANMAR

Promoting the Creation of Agricultural Cooperatives



Isolation and problems obtaining fertilizer had hindered the ability of farmers in the Kanbauk region to boost their rice, rubber and coconut crop yields. In 2007, with the support of Total E&P Myanmar's agriculturalists, they created the first Village Agriculture Input Store (VAIS), a local storehouse for inputs managed cooperatively for an annual membership fee of one dollar. Already in the black and therefore self-supporting, the VAIS has distributed more than 15 metric tons of fertilizer to its 221 members. Now that this experiment combining technical and management aspects is up and running successfully, a second VAIS is scheduled to open in 2009, serving three other villages.

Local Development: A Practical Guide to Launching, Managing and Evaluating Projects

Prepared in cooperation with *Institut de Recherches et d'Applications des Méthodes de Développement* (IRAM – Institute for the Research & Application of Development Methods), a French NGO specialized in international cooperation, this internal manual is used by the employees who implement local



development strategies in the field. It provides perspective on the issues, outlines Total's role in development processes and identifies potential partners.

creates a virtuous circle. It frees up time formerly devoted to collecting firewood, for example. It facilitates access to water and reduces the mortality linked to the use of hazardous or dirty energy sources, especially for cooking. It also helps create local income-generating activities and acts as a check on rural exodus.

Solutions Tailored to the Local Situation

As an energy producer, Total has a responsibility to help eradicate these inequalities, especially in communities close to our operations. Our various energy-access initiatives since the decade began all address the same imperative: offering affordable, reliable energy services and improving living conditions.

Besides creating new markets in some cases, our projects focus on an array of solutions, including stand-alone photovoltaic systems, solar pumping, solar cookers, liquefied petroleum gas (LPG), diesel micro grids or cottage industry hubs, and support for the creation of rural electricity enterprises.

EXPANDING ACCESS TO ENERGY

Energy, A Decisive Factor for Development

According to the World Energy Council, roughly 1.6 billion human beings, mainly living in rural or isolated areas of developing countries, lack access to electricity or any modern form of energy. An essential prerequisite for development, the availability of a safe, reliable, affordable energy supply



▲ Marketed by Totalgaz Southern Africa, the SHESHA bottle provides low-income households with access to LPG.

Of Bees, Honey and Men



The idea behind the three-year project launched by Yemen LNG in 2008 was to create an additional income stream for Yemeni villagers — most of whom live on less than a dollar a day — by helping them produce premium honey. With French experts as facilitators, the initiative will create 11 beekeeping schools, train nearly 400 local beekeepers in more modern, sustainable techniques, supply the equipment they need to start their businesses, and plant more than 30,000 jujube trees (known locally as Elb trees). Phase 2 will involve setting up a small factory to manufacture movable-frame hives.

Yemen LNG had earlier compensated beekeepers near the gas pipeline from the Marib region to the port in Balhaf whose honey production had decreased due to the steady stream of truck traffic, which created dust that settled on the flowers.



MALI

Testing Jatropha as a Biofuel



Teriya Bugu is a combined experimental farm, equitable tourism center and laboratory for renewable energy use. It provides a living for more than 5,000 people in Mali. Total is partnering with associations and experts¹ at the site to assess the potential of jatropha, an inedible,

hardy succulent, as a biofuel. The seeds produce an oil that can be substituted for the diesel fuel currently used to run generators. The project is expected to demonstrate the viability of a stand-alone rural electrification model based on a shortened system.

Solar Power Serving Rural Communities

Total is directly or indirectly involved in a number of decentralized rural electrification projects, based mainly on solar energy.

In Cuba, Refining & Marketing's Latin America and Caribbean Department is overseeing a program in the Viñales Valley. In this locale classified as a world heritage center by UNESCO, nearly a hundred homes now have electricity, more than half of them thanks to solar panels supplied by Ecosol Solar, a local company.

In Morocco, the solar panels installed by Temasol, a wholly-owned subsidiary of Tenesol — a 50-50 Total-EDF joint venture — now supply nearly 25,500 households.

In South Africa, rural energy services company (RESCO) KwaZulu Energy Services (KES) — owned 35% by Total — aims to provide some 26,000 households in Eastern Cape province with photovoltaic solar power

and LPG, building on a similar initiative that has already benefited around 8,000 households in KwaZulu-Natal. In 2008, an evaluation of RESCOs conducted by our partner EDF in cooperation with the French Environment and Energy Management Agency (ADEME) confirmed the technical and organizational benchmark set by these companies in the area of decentralized rural electrification. Recognized pioneers in this field, RESCOs have brought credibility to national rural electrification programs, enabling funds to be obtained from international lenders. These programs' contributions to alleviating poverty were highlighted by the evaluation and include improved health and education, increased safety due to public lighting and, more simply, a feeling shared by users of being citizens like any others. The evaluation also identifies tangible avenues for continuing to improve the model, which is still experimental.

TO LEARN MORE

www.total.com/csr



LPG Promotion in Bangladesh Focuses on Safety, Combats Deforestation and Creates Businesses



Between 2005 and 2008, Totalgaz's local teams and their partners organized over 150 meetings in community centers and

taught more than 15,000 women how to cook safely with LPG. At the same time, the subsidiary and its distributors jointly offered people without jobs a chance to work as mobile LPG retail dealers, using their rickshaws to deliver to customers. Soaring local gas prices stifled the initiative's expansion, but the goal is to have at least 11 mobile retail dealers in 2009, plus 1,000 new customers. A microcredit program introduced in 2007 has financed the startup of six neighborhood retail kiosks, mainly tea stalls, that use LPG, instead of charcoal as before. Their operators can become owners after one year. All three complementary initiatives have been recognized by Innovation Development Awards (IDeA) from Refining & Marketing.



1. Association des Amis du Père Bernard Verspieren; Association d'Entraide et de Développement Rural; the French Agricultural Research Center for International Development (CIRAD); Enerbio; and Suez Energie Assistance.

➔ **JULY 2008: Yemen** – *Total Développement Régional* led a delegation to Yemen and performed an initial assessment of what it would take to promote the development of local small businesses, thereby diversifying the economy of a country that earns most of its revenue from oil and gas.

**PROMOTING
ENTREPRENEURSHIP
AMONG WOMEN**



Created in February 2008, *Fédération Pionnières* is a network of business incubators in France, Morocco and Serbia that coach and support aspiring women entrepreneurs with plans for startups that will offer innovative services and create jobs. Under an agreement signed in early 2009, Total will nurture their projects to success and help the association expand its geographic scope.

4,500

2010 objective: Increase to 4,500 from 3,200 the number of small businesses supported by Total in 20 countries

SUPPORTING THE CREATION AND GROWTH OF SMALL BUSINESSES

Nurturing the Economic Base

All over the world, Total strives to build long-term operations, make them more acceptable and nurture an “ecosystem” of contractors, small businesses and microbusinesses that directly or indirectly benefit from our activities.

Coordinated by *Total Développement Régional* (TDR), the support we provide in our host regions to start up, acquire or expand businesses supplements our local content and community initiatives (see page 73). It fulfills the same corporate responsibility with respect to our socioeconomic environment. Financial assistance, skill sharing,

technology and management expertise, and knowledge of international markets and growth drivers have proved their value in France for decades. The process is currently being deployed more widely in Europe and in non-OECD countries, such as the Republic of the Congo, Angola and Syria.

We generally view our commitment to promoting entrepreneurship as a long-term one, especially in non-OECD regions, where projects take five to ten years to get off the ground.

In every case, listening, mutual respect and recognition of common interests are the cornerstones of our



▲ Basket-weaving class for a women's association, part of Yemen LNG's community development program.

Encouraging Startups by Young Entrepreneurs in France



The Total Foundation is donating €150,000 to NGO *Association pour le Droit à l'Activité Économique* (ADIE) to support the *CréaJeunes* initiative. Deployed in six population centers — Greater Paris, Marseille, Bordeaux, Toulouse, Lille-Roubaix-Tourcoing and Lyon — the program aims to help young people aged 18 to 30 from disadvantaged neighborhoods create

1,000 businesses by end-2009.

Support includes coaching and job training.

By offering loans to people shut out of the banking system, ADIE, a microcredit pioneer in France, has helped create 51,000 microbusinesses and 62,000 jobs over the last 20 years.



Insights

Luc Rigouzzo

CEO of Proparco, an Agence Française de Développement (AFD) company²

partnerships with the businesses we support. The primary purpose is to create or maintain jobs in a variety of sectors.

Encouraging European Small Businesses to Innovate and Diversify into New Markets

In 2007, Total's senior executives and three European trade union federations¹ signed a Europe-wide framework agreement that includes a 36-month trial implementation period in four regional employment areas. It describes the financial, technology and export support that we can provide for startups and small business expansion projects, including companies created via intrapreneurship, near our main European facilities.

Under a business agreement signed in early 2008, Total Petrochemicals' Feluy site in Belgium is participating in the trial. In December, a delegation traveled to Qatar to put representatives of small businesses from the French-speaking region of Belgium in touch with sold-to parties in the emirate, where Total is a partner in a number of projects, including a polyethylene plant and an ethane cracker that will be commissioned in 2009. The event gave Belgian entrepreneurs a chance to present their products and know-how to local manufacturers, with a view to developing business relations at all levels and encouraging the transfer of skills between large manufacturers and these small businesses.

There are plans to replicate the basic program in 2009, since several other sites have expressed a desire to take part, notably in the United Kingdom, the Netherlands and Spain.



Why is helping small businesses a strategic driver to stimulate the economies of developing countries?

Small and microbusinesses account for at least three-quarters of jobs in developing countries. They create ten times as many jobs as the public sector. Moreover, they are often, in many countries, vitally important suppliers of basic services to the poorest communities. There has been a lot of emphasis lately on microfinance, but we often forget the role of small businesses in serving the poor. Private initiatives account for one-third of primary schools and half of all health care services delivered in sub-Saharan Africa. Finally, the gradual adoption of international standards by the most dynamic small businesses ensures environmentally and socially acceptable industrialization in developing countries. In that sense, major international companies such as Total have a decisive role to play in supporting better governance by their main contractors.

What do you need to do to ensure that the projects you support will be effective?

We take a highly practical approach. It consists of getting independent, outside opinions and using professional tools to analyze and monitor the social, economic and environmental aspects of each project, while at the same time

having the common sense and humility needed to adjust to widely disparate realities.

Two points need to be mentioned despite their very obviousness. The first is that profits and development benefits are not mutually exclusive. The projects with the strongest measurable impacts are often the ones that make the most money. A project is only sustainable if it makes profits that can be used to finance its growth. Anything less and you are talking about a publicity gimmick, not development. The second point is that "the road to hell is paved with good intentions." Even if you think you're doing the right thing, you should never keep local partners out of the decision-making process. The more ambitious the project, the more it will need organized local partners. Listening to communities and local stakeholders is a key determinant of success.

The project to support the development of Total's small business partners in Nigeria, expected to be up and running in 2009, applies these principles. Each stakeholder brings its expertise and value added: Proparco, its ability to take long-term risks in the region; Nigeria's Zenith Bank, its familiarity with the local small business community; and Total, its ability to offer small businesses market outlets and help companies embrace and apply international standards and professionalize their employees. ■

1. European Mine Chemical and Energy Workers' Federation (EMCEF), European Federation of Managers in the Chemical and Allied Industries (FECCIA), European Federation of Executives in the Sectors of Energy & Research (FECER).

2. 66.8%-owned by the French Development Agency (AFD), Proparco is the agency's private sector financing arm. www.afd.fr



SPOTLIGHT



ANGOLA: STRENGTHENING SECONDARY EDUCATION

Four High Schools Dedicated to Excellence



In February 2009, four new high schools opened their doors in Bengo, Cuanza Norte, Malanje and Cunene provinces, under an agreement

signed in May 2008 by Total and the Angolan Ministry of Education. They are offering grade 10 equivalent classes in their first academic year, and will add grade 11 in 2010 and grade 12 in 2011. The country's public authorities selected where to locate the schools and approved the education plan, which focuses on excellence in teaching. The enriched curriculum includes more classroom hours devoted to the sciences and teaching in English, French and Portuguese. *Mission Laïque Française*, a secular association, is managing the schools, entrusted for the time being to French expatriates overseen by a senior staffer. Total is financing the construction and maintenance of the schools, as well as *Mission Laïque Française*'s operating costs. This initiative, which is unlike any other in the country, solidifies our closer cooperation with Angola in the realm of education, which goes well beyond the specific training required to develop the oil and gas industry. Each year, Total finances nearly 200 higher education grants and scholarships for Angolan students and literacy programs for 4,500 people.

A STAUNCH COMMITMENT TO YOUTH EDUCATION AND TRAINING

Preparing the Future and Developing Talent

Investing in education and training is more than ever an essential component of our community development policy. Depending on the aspirations of national governments and host communities, this can take a variety of forms. Our goal is to promote access to knowledge, a basic precondition of human development, assist countries that express a desire to optimize their education systems, and enable young people from all backgrounds to develop their talents at Total or other global companies. Our policy obviously considers Total's recruitment needs, specifically our goal of hiring and promoting more non-French nationals and giving precedence to local human resources. But it also goes much farther than that. For the future, we are especially interested in providing more support for short, post-secondary technical courses, which often lead to real job opportunities, especially with our local partners and contractors.

Facilitating Access to the Most Demanding Sectors

Locally, a large number of Upstream, Downstream and Chemicals subsidiaries are involved in programs focusing on primary, secondary or higher education. The grants and scholarships they award enable hundreds of students each year to continue their studies at home or abroad, mainly at European or North American schools and universities, in a wide range of specialties including oil and gas-related disciplines, law, economics and political science. Total awards other scholarships through a dedicated international program. In 2008, around 100 young people from 20 countries had the opportunity to complete their education in France. Based on needs identified in the field, a petroleum upstream engineering course for national oil company employees was added in 2008 to the range of options

already offered, which include master's degrees in engineering and MBAs from schools such as *Institut d'Études Politiques de Paris* and *École Nationale d'Administration* (ENA). Designed by IFP Training and supported by Total, the new program leads to a diploma granted by the IFP School after 18 weeks of coursework and a four-month internship with Total or in the home country. The first graduating class consisted of Iraqi, Libyan and Yemeni students. Enrollment in upcoming classes will be open to other nationalities.



11,000

Total supported more than 11,000 students in around 20 countries in 2008, of which 930 in Nigeria, 850 in Indonesia, 600 in Venezuela, 200 in Angola and 100 recipients of international scholarships managed by corporate headquarters.

Two Top-Tier Schools Expand Outside France with Total

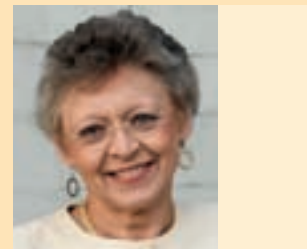
In October 2008, Total signed a partnership agreement with the IFP School to introduce oil and gas training modules for students at the Bandung Institute of Technology (ITB) in Indonesia. The agreement should eventually lead to a dual ITB/IFP School diploma. We are also working with the IFP School and France's HEC business school to help them open satellites in Qatar.

➔ **SEPTEMBER 2008:** The **corporate foundation** expands its mandate to encompass environmental, cultural and community support projects. With **an annual budget of €10 million**, the Total Foundation is one of the largest corporate foundations in France.



Insights Françoise Barré-Sinoussi

Virology Researcher, Director of Institut Pasteur's Regulation of Retroviral Infections Unit in Paris and co-winner of the 2008 Nobel Prize in Physiology or Medicine



What is the distinguishing feature of the partnership between *Institut Pasteur* and Total?

Besides supporting research, we team up with our respective local partners on public health projects in countries with scarce resources. Focused on a specific pathology and/or population category, our initiatives can later be replicated elsewhere and/or extended to other diseases. The local *Institut Pasteur* provides its expertise and Total works alongside communities. Together, we're learning to more accurately identify the factors that lead to success in prevention and health care access.

What else is valuable in your partnership with Total?

It allows us to intervene in countries where the availability of health care professionals and infrastructure are often weak links. It is not *Institut Pasteur's* job to invest financially in those areas. So we complement each other beautifully, with Total providing funding.

What is the best way for companies to get involved in the fight against malaria or HIV/AIDS?

The multinationals operating in Africa have long had to deal with the impact of these pandemics on their employees. They have gradually learned to share their best practices with one another and with stakeholders from the scientific community, government and non-profits. There is no single model or easy recipe. But we're starting to see real co-investment initiatives in the field, thanks notably to the work of the Global Fund to Fight AIDS, Tuberculosis and Malaria. ■

HELPING TO IMPROVE HEALTH CARE SYSTEMS

Demanding Effectiveness

Total operates in a number of the world's regions where health care systems lack organization, skills and resources. That is why we are taking part in initiatives to improve the health of employees and their families and are extending our programs to local communities, especially in the areas of HIV/AIDS, tuberculosis and malaria.

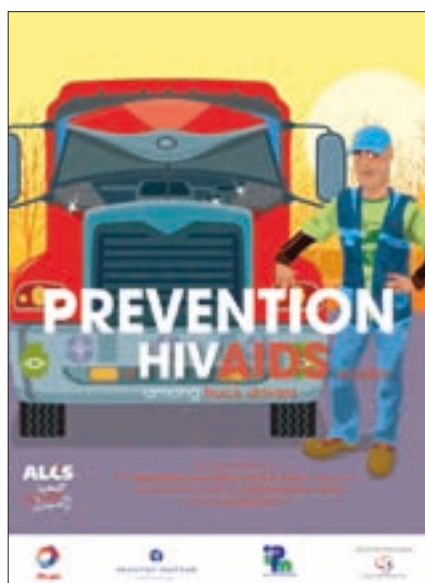
In the field, most of our subsidiaries are involved in health-related prevention, information and education campaigns. Always carried out with the approval of the country's authorities, our initiatives focus on the most vulnerable, exposed populations. They rely on the assistance of various institutions and the expertise of local and international NGOs.

Sharing and Disseminating High-Level Expertise with *Institut Pasteur*

Since 2005, Total and *Institut Pasteur's* international network have steadily stepped up their joint efforts to spur research, train more health care professionals in non-OECD countries and develop local capabilities for fighting sexually transmitted infections (STIs) and other diseases. Below are a few examples of projects launched or expanded in 2008.

- In Madagascar, children under five accounted for more than half of all cases of illnesses causing diarrhea reported in 2004. At the end of a research phase to develop a test for fast identification of the type of virus or bacteria implicated, Total and the local *Institut Pasteur* will set up a pediatric unit and a bacteriology laboratory in the Moramanga region to improve the children's care, train local personnel to identify illnesses and teach mothers appropriate hygiene.

- In Morocco, 7,000 long-distance truckers were educated about HIV/AIDS, along with sex industry workers with whom they might have contact. The campaign included HIV/AIDS screening, STI counseling and the distribution of condoms and informational material. Conducted by *Association Marocaine de Lutte contre le Sida* (ALCS – Moroccan AIDS Service Organization) in partnership with Total and *Institut Pasteur* in Morocco and Paris, the campaign is supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria. A number of studies have shown a high prevalence of the epidemic along major road routes in Africa and Asia.



- In Cameroon, an agreement signed in November is expected to kick off a program to support HIV-positive babies and their families. Its goals are to deliver appropriate treatment, provide accommodation in hospitals for their parents, and prepare the children for a normal life in the future.

TO LEARN MORE

<http://foundation.total.com>



An Ongoing Contribution to Local Development

OUR MAIN CHALLENGES



- In China, preventing and treating hepatitis B and C, two diseases that are very widespread yet often a taboo subject, is a priority. Total has partnered with the China Foundation for Hepatitis Prevention and Control and also with *Institut Pasteur* in Shanghai and the Chinese Academy of Sciences to focus on prevention programs, research and training for medical personnel.

TO LEARN MORE

www.total.com/csr



NIGERIA

Total Service Stations Join the Fight Against HIV/AIDS



Following a test run in Lagos in 2007, Phase 2 of the project was conducted in 2008 in four other major cities, using the same approach and with the same success. In each population center, Total service station customers could obtain health information and be tested for HIV/AIDS.

The campaign had two priorities: expanding awareness of the risks and combating the still widespread

stigmatization of people living with HIV/AIDS.

Phase 3 began in December in Calabar, in the Niger Delta, where the focus was on low-income populations who could not afford screening or locate a testing center on their own.

More than 17,000 people in all were tested confidentially in 2008 through these campaigns, which will be extended to the country's rural areas in 2009.

SPOTLIGHT

EMERGENCY RELIEF, LONG-TERM SUPPORT

After Cyclone Nargis in Myanmar

Cyclone Nargis killed more than 100,000 people and left more than a million others homeless on May 3, 2008. Total's local teams helped out directly when they could deliver value added in terms of access and indirectly through relief organizations, to which they provided logistics support in the form of fuel oil, helicopter surveys and transportation from Thailand. Several thousand locals received emergency aid. In the Ama region, Total E&P Myanmar also funded efforts to help more than 200 fisher and farmer households get back to work and financed food aid supplied to over 1,200 families for several months. The subsidiary also worked to restore access to water and helped to rebuild a high school, primary schools, orphanages and a large number of dwellings.



After the Earthquake in China

The May 12, 2008 earthquake killed nearly 70,000 people in Sichuan province. With the Red Cross, Total and our roughly 4,000 local employees donated money to the relief efforts. Of the 90 physicians and nurses from the emergency services in Beijing who helped in the relief efforts, around 20 had taken part in the emergency medicine training program that Total has supported since 2004. They were each given new emergency bags provided by Total. In addition, Total China employees provided more than 3,000 winter coats to students and teachers at a school in Mianyang, which was particularly hard hit by the earthquake.

After the Floods in Yemen

On October 23 and 24, 2008, catastrophic floods killed and injured hundreds of people and destroyed vital agricultural resources. The Hadramawt region, where Total has operations, was especially hard hit, with a death toll of more than 80. Total E&P Yemen and Yemen LNG immediately set up crisis units to assist villagers and restore basic infrastructure. Yemen LNG loaned its helicopter to the government and United Nations and World Bank teams. We are continuing our work in 2009, providing aid for rebuilding and for getting the agricultural sector back on its feet, in conjunction with NGOs with a well-established local presence.



Appendixes
2008
PERFORMANCE
INDICATORS



REPORTING SCOPE AND METHOD

Environmental, Safety and Social Indicators

PROTOCOLS AND REFERENCE DOCUMENTS

Total's reporting procedures consist of:

- For environmental indicators and greenhouse gases, two corporate reporting guidelines, as well as instructions specific to the businesses.
- For industrial safety indicators, the *Corporate Guidelines on Event and Statistics Reporting*.
- For social indicators, a practical handbook entitled *Corporate Social Reporting Protocol and Method*.

These guides are available to all subsidiaries.

Abridged versions can be downloaded from the *Environment and Society* section of the Total Web site. The complete versions can be consulted at corporate headquarters, in the departments concerned.

SCOPE

In 2008, **environmental reporting** covered all Total-operated sites at December 31, 2008:

- Upstream: All Exploration & Production and Gas & Power sites.
- Downstream: All refineries, all Marketing (France, Europe, Africa/Middle East, Asia-Pacific) and all Specialties (lubricants, specialty fluids, other specialty fuels, LPG, bitumen and asphalt, jet fuel) sites.
- Chemicals: All Petrochemicals, Fertilizers, Hutchinson, Cray Valley, Bostik and Atotech sites.

The 2008 reporting questionnaire was completed by 882 production sites, or 97% of the total, including all Exploration & Production, Gas & Power, Petrochemicals and Fertilizers production facilities. The statistics published in this report cover greenhouse gases, chronic and accidental emissions and discharges to the air and

water, the amount of water withdrawn from and discharged into the natural environment, waste and certain data related to energy and site management systems.

The ISO 14001 certification target given in this report covers environmentally sensitive sites that account for a significant share of emissions in each business.

Safety reporting covers all Total employees, as well as employees of contractors with a specific volume of work who work at Group-operated sites or under contract to Total. Each site submits its reporting to the relevant business unit. The data are then consolidated at the business level and, every month, at the corporate level. In 2008, the Group safety reporting scope covered 446,613,000 hours worked, equivalent to around 263,000 people.

Social reporting is based on two resources — the Global Workforce Analysis and the Worldwide Human Resources Survey (WHRS).

The **Global Workforce Analysis** is conducted twice a year, on June 30 and December 31, in all fully consolidated companies owned 50% or more and included in the *Registration Document*. The survey covers worldwide workforces, hiring under permanent and fixed-term contracts, nationality, and employee hires and departures, to produce a breakdown of the workforce by gender, category (managers and non-managers), age and nationality.

The **Worldwide Human Resources Survey** (WHRS) is an annual survey that comprises 86 indicators in addition to those used in the Global Workforce Analysis. The indicators are selected in cooperation with the businesses and cover major components of our human resources policy, such as mobility, career

management, training, employee dialogue, *Code of Conduct* application, health, compensation, retirement and insurance. The survey covers a representative sample of 92 consolidated companies with 69,741 employees.

The statistics in this report are taken from the most recent survey, conducted in December 2008 and January 2009. A total of 92 companies accounting for 72% of the consolidated workforce and operating in 39 countries responded. Both surveys are conducted using the Enablon application, introduced at end-2003, and undergo similar internal control and validation processes.

Consolidation Method

Environmental, industrial safety and social data are fully consolidated in these scopes.

Changes in Scope

Changes in scope are taken into account on the date they take effect. However, because environmental parameters are expressed in absolute values, all historical parameters are restated as of the year an asset is acquired or divested. Where relevant, the data for prior years are recalculated in line with the new scope of consolidation for the current year to facilitate like-for-like comparisons.

PRINCIPLES

Indicator Selection and Relevance

The data published in this report are intended to inform stakeholders about Total's corporate social responsibility performance for the year in question. The indicators consist of performance indicators tracked by Corporate Affairs and the principal indicators in the International Petroleum Industry

Environmental Conservation Association's (IPIECA) *Oil and Gas Industry Guidance on Voluntary Sustainability Reporting*.

The indicators have been selected to track:

- Total's commitments and policies (SMS, EMS, environmental audits, etc.).
- Performance relative to Total's main challenges and impact.
- The effects of Total's social policies.
- Legislative and regulatory obligations, such as those stipulated in France's New Business Regulations (NRE) Act.

Terminology Used in Social Reporting

Management staff refers to any employee whose job level is the equivalent of 300 or more Hay points.

Managed scope: All subsidiaries in which one or more Group companies own a stake of 50% or more, or 509 companies and 112,741 employees.

Consolidated scope: All subsidiaries fully consolidated as in the *Registration Document*, or 334 companies and 96,959 employees.

Methods

The methods may be adjusted to reflect the diversity of Total's activities, recent

consolidation of subsidiaries, lack of standardized international regulations or definitions, practical procedures for collecting data or changes in methods.

Continuous Improvement of Definitions

As part of a continuous improvement process, certain methodological adjustments have been made in relation to the previous year (HR indicators, freshwater withdrawals, waste classification).

Consolidation and Internal Controls

Environmental data are consolidated and checked by each business and the Sustainable Development & Environment Department, based on data collected from business units. Data pertaining to certain specific indicators are calculated or estimated directly by the business. Industrial safety data are reported monthly and consolidated and checked by each business unit and business. This process is regularly audited internally. Social data are consolidated and checked by business and activity validators and the corporate Human Resources Department. Automated consistency checks are also performed by the reporting application.

External Opinion

For the fourth year in a row, Total elected to have its main environmental and social performance indicators audited. These indicators are identified by the symbol ⓘ in the summary table of performance indicators published in the 2008 *Environment and Society Report*. External audits are performed at the Group and business level, as well as at a sample of business units in and outside France, selected each year in line with their relative contribution to the Group totals, previous years' results and a risk analysis. The auditors' independence is defined by French legislation and France's *Rules of Professional Conduct for Statutory Auditors*.

Aggregate percentage of units covered by external audits of environmental and social indicators

Percentage of units covered	ENVIRONMENTAL INDICATORS					SOCIAL INDICATORS		
	Greenhouse gas emissions	NO _x emissions	SO ₂ emissions	Total hazardous waste treated offsite	Freshwater withdrawals (excl. cooling water)	Workforce	Number of training days	Number of sick days
2005	26%	25%	23%	36%	—	14%	18%	16%
2006	24%	25%	27%	14%	—	14%	20%	18%
2007	21%	20%	31%	9%	—	18%	25%	24%
2008	37%	24%	26%	21%	29%	10%	26%	13%
Aggregate, 2005-2008	90%	89%	96%	69%	29%	41%	65%	53%

ASSURANCE REPORT

on Certain Environmental and Social Performance Indicators

Total - Year ended December 31, 2008

At Total's request, we have carried out an assurance engagement in order to provide a moderate level of assurance on certain environmental and social performance data selected by Total ("the data") for 2008, which are identified in this report by the symbol ⓘ. The data were prepared in accordance with:

- The Corporate Directive for Group Environmental Performance Reporting and the Corporate Directive for Greenhouse Gas Emissions Reporting
- The procedures used to conduct the Worldwide Human Resources Survey and the twice-yearly Global Workforce Analysis.

Hereinafter the "Reference Procedures."

Two Corporate departments were responsible for preparing the performance data and establishing the respective Reference Procedures: the Sustainable Development and Environment Department for environmental performance and the Corporate Human Resources Department for social performance. The Reference Procedures can be consulted at Total's headquarters and are described in part on pages 88 and 89. Our responsibility is to carry out a limited assurance engagement in order to provide our conclusions on these data. We conducted our assurance engagement in compliance with the professional standards applicable in France and the ISAE 3000 (International Standard on Assurance Engagements, published in December 2003). We comply with the independence requirements set out by French legislation and regulations and the Professional Code of Ethics. Our conclusions concern the relevant data only and not the complete *Environment and Society Report*.

NATURE AND SCOPE OF THE ENGAGEMENT

We planned and performed the assurance engagement described below to provide a moderate level of assurance that the selected data are free of material misstatement. A higher level of assurance would have required a more extensive review.

- We reviewed the Reference Procedures with regard to their relevance, reliability, understandability and completeness.
- We interviewed the persons in charge of environmental and social reporting in the Holding Company and in the Exploration & Production, Gas & Power, Refining & Marketing, and Chemicals businesses to verify compliance with the Reference Procedures. We performed an analytical review and verified, on a test basis, the calculations and data consolidation at the business and corporate levels.
- As part of our review, we selected a sample of 13 sites and subsidiaries² for the environmental indicators and 12 sites and subsidiaries³ for the social data, in line with their activity, their contribution to the consolidated data for the Group, their location and the findings of our previous reviews. For these sites and subsidiaries, we verified understanding and application of the Reference Procedures and, on a test basis, verified the calculations and reconciled data with the supporting documentation.
- Our review covered 21% to 37% of the consolidated environmental data for Total and 10% of the consolidated workforce for social data.

COMMENTS ON THE REFERENCE PROCEDURES

We draw the following matters on the reporting process to your attention:

- Total's Reference Procedures appropriately describe the reporting scope, indicators, phases and schedule, as well as the roles and responsibilities of the participants. They are updated annually and distributed in English and French to the various participants.

Environmental Reporting

- Each business line and/or sector of Total organizes the reporting process at its level within the framework of the Corporate Reference Procedures.
- This year, the Exploration & Production business line has clarified the references for some of the factors employed in calculation formulas.
- The definition of the indicator "Total quantity of freshwater withdrawals excluding once-through cooling water" is based solely on a salinity threshold, which does not reflect the diversity of potential uses.
- In one Exploration & Production subsidiary, the available measurement equipment introduces a high degree of uncertainty concerning the reported data. Actions are planned to upgrade the equipment.
- Improvement is required in the Refining business line to more clearly differentiate between hazardous waste produced in current operations and exceptional hazardous waste.

In the Marketing business, more reliable procedures are required for taking into account hazardous waste temporarily stored onsite.

- The Refining business line needs to extend its reporting tool to all environmental reporting indicators.
- The Gas & Power business line needs to measure fugitive methane emissions more frequently to make the reported data more reliable.

Social Reporting

- Total's social reporting is based on a reporting application deployed in all units in the relevant scope.

This application has made social data collection more reliable, in particular by automating checks and during consolidation.

- The definition of the indicator "Days of absenteeism for medical reasons" needs to clarify the types of absences considered and the methods used to count them.
- There were material errors concerning the indicator "Number of training days" at two Exploration & Production subsidiaries due to the calculation method used and a lack of understanding of the relevant definitions.

OUR CONCLUSIONS

During our engagement, we found that on two of the sites audited, the indicator "Total quantity of freshwater withdrawals excluding once-through cooling water," which was reviewed for the first time this year, relied on measuring equipment and methods showing that the level of uncertainty needs to be reduced. On the basis of our review and subject to this reservation, nothing has come to our attention that causes us to believe that the reviewed indicators have not, in all material respects, been prepared in accordance with the Reference Procedures.

Paris-La Défense — April 2, 2009

Statutory Auditors

Ernst & Young Audit

Gabriel Galet
Philippe Diu
Partners

Eric Duvaud

Partner
*Manager of the Environment
& Sustainable Development
Department*

KPMG Audit *A department of KPMG S.A.*

René Amirkhanian
Jay Nirsimloo
Partners

Philippe Arnaud

Partner
*Manager of the Environment
& Sustainable Development
Department*

1. Environmental indicators: greenhouse gases (CO₂, N₂O, CH₄, HFC, PFC, SF₆), SO₂, NO_x, hazardous waste treated offsite, total quantity of freshwater withdrawals excluding once through cooling water. Social indicators: headcount (by age, by manager / non manager, by gender), worldwide changes (arrivals and departures), French and foreign managers, number of training days, legal guaranteed minimum wage, medical monitoring of employees, days of absenteeism for medical reasons, employees representation organization, career management (for manager and non manager).

2. Exploration & Production: TEP France, TEP Angola and TEP Yemen subsidiaries; Gas & Power: Dorstfontein Mine in South Africa; Refining: Port Arthur Refinery in the United States, the Feyzin and Normandy refineries in France and Refineria di Roma in Italy; Marketing Africa-Middle East: the Menemen lubricant blending plant in Turkey; Marketing Europe: the Feluy depot in Belgium; Chemicals: the Total Petrochemicals sites in Gonfreville, France, and Feluy, Belgium, and Bostik S.A.: Ribécourt site in France.

3. Holding company: Total S.A. (Holding company, Gas & Power and Trading); Exploration & Production: TEP France, TEP Angola and TEP Yemen; Gas & Power: Total Coal South Africa; Refining: Port Arthur Refinery in the United States; Marketing Africa-Middle East: Total Oil Türkiye; Marketing Europe: Total Belgium; Chemicals: Total Petrochemicals France, Total Petrochemicals Feluy S.A. and TP Research Feluy in Belgium, and Bostik S.A. in France.

Appendixes

2008 PERFORMANCE INDICATORS

Economic

	Unit	2006	2007	2008
Sales	€M	153,802	158,752	179,976
Adjusted operating income from business segments ¹	€M	25,166	23,956	28,114
Adjusted net operating income from business segments ¹	€M	12,377	12,231	13,961
Adjusted net income (Group share) ¹	€M	12,585	12,203	13,920
Adjusted fully-diluted earnings per share ^{1, 2}	€	5.44	5.37	6.20
Dividend per share ³	€	1.87	2.07	2.28
Net debt-to-equity (at December 31)	%	34%	27%	23%
Return on Average Capital Employed (ROACE) ⁴	%	26%	24%	26%
Return on equity	%	33%	31%	32%
Cash flow from operating activities	€M	16,061	17,686	18,669
Capital expenditure	€M	11,852	11,722	13,640
Divestitures at selling price	€M	2,278	1,556	2,585

1. Net income using replacement cost, excluding special items and Total's share of amortization of intangibles related to the Sanofi-Aventis merger.

2. Based on the average weighted diluted shares outstanding during the year.

3. Subject to approval at the Annual Shareholders' Meeting on May 15, 2009.

4. Calculated based on adjusted net operating income and average capital employed, using replacement cost.

Environment

	Unit	2006	2007	2008
Operated sites	number	793	804	910
Sites that responded to the environmental reporting questionnaire	%	—	96%	97%
ISO 14001-certified sites	number	221	235	252
of which: Exploration & Production	number	24	31	35
Gas & Power	number	4	6	6
Downstream	number	87	92	98
Chemicals	number	106	106	113
ISO 14001-certified environmentally sensitive sites	%	74%	76%	80%
Six greenhouse gases ⓘ	MTCDE/year	56.6	59.8	57.9
of which: Exploration & Production	MTCDE/year	24.5	27.2	26.5
Gas & Power	MTCDE/year	0.2	0.2	0.3
Downstream	MTCDE/year	23.3	23.9	23.7
Chemicals	MTCDE/year	8.5	8.5	7.5
Primary energy consumption	MGJ/year	626	634	628
Flaring and venting	ktoe/year	6,047	6,627	6,046

ⓘ Externally audited indicators.

Environment (continued)

	Unit	2006	2007	2008
SO ₂ emissions ⓘ	metric ktons/year	145.5	149.5	135.9
of which: Upstream	metric ktons/year	55.3	65.1	53.1
Downstream	metric ktons/year	86.5	81.3	80.1
Chemicals	metric ktons/year	3.7	3.0	2.7
NO _x emissions in metric tons of NO ₂ equivalent ⓘ	metric ktons/year	86.3	89.2	87.8
of which: Upstream	metric ktons/year	54.8	58.6	60.0
Downstream	metric ktons/year	23.7	22.4	20.6
Chemicals	metric ktons/year	7.9	8.3	7.2
Non-methane VOC emissions	metric ktons/year	139.3	139.8	131.8
of which: Upstream	metric ktons/year	94.7	97.1	92.0
Refining	metric ktons/year	17.5	15.5	15.1
Marketing	metric ktons/year	15.4	17.2	15.4
Chemicals	metric ktons/year	11.8	10.1	9.2
Freshwater withdrawals (excluding once-through cooling water) ⓘ	Mcu. m/year	155.7	158.7	150.3
Discharges (excluding cooling water)	Mcu. m/year	150.5	156.9	156.4
Hydrocarbon discharges in effluent	metric tons/year	1,460	1,534	1,518
of which: Downstream and Chemicals	metric tons/year	128.5	145.9	118.3
Exploration & Production	metric tons/year	1,331	1,388	1,400
	ppm	27	27	28
Suspended solids discharges	metric tons/year	1,375	1,194	1,185
Chemical oxygen demand (COD)	metric tons/year	6,115	6,319	5,786
Hazardous waste production (treated offsite) ⓘ	metric ktons/year	477.7	334.7	344.7
of which: Hazardous waste from routine operations	metric ktons/year	266.9	262.4	260.9
of which: Upstream	metric ktons/year	35.2	23.2	30.7
Downstream	metric ktons/year	118.6	132.8	134.2
Chemicals	metric ktons/year	113.1	106.4	96.0
of which: Special waste	metric ktons/year	210.8	72.3	83.8
Oil spills	number	708	766	464
	cubic meters	2,532.9	2,474.2	7,494.1
of which: Upstream	cubic meters	461.3	281.3	5,054.6
Refining	cubic meters	143.5	170.0	583.5
Marketing	cubic meters	1,924.8	1,852.2	1,829.3
Chemicals	cubic meters	3.2	170.6	26.8
Other spills	number	N/A	N/A	52
	cubic meters	N/A	N/A	80.5

ⓘ Externally audited indicators.

Appendixes

2008 PERFORMANCE INDICATORS

Safety

	Unit	2006	2007	2008
Lost time injury rate per million hours worked (Total + contractor employees) - LTIR	number	3.0	2.4	2.1
of which: Exploration & Production	number	1.0	0.8	0.6
Gas & Power	number	4.2	1.8	2.1
Refining & Marketing	number	3.8	2.6	2.5
Chemicals	number	6.0	4.2	3.6
Total recordable injury rate per million hours worked (Total + contractor employees) - TRIR	number	5.1	4.2	3.6
of which: Exploration & Production	number	2.8	2.4	2.2
Gas & Power	number	4.9	2.7	2.1
Refining & Marketing	number	3.9	3.2	2.9
Chemicals	number	9.7	7.7	6.5
Fatalities	number	18	15	8
Fatalities per million hours worked (Total + contractor employees)	number	0.04	0.034	0.018

Social

	Unit	2006 ¹	2007	2008
Workforce by region ⓘ	number	95,070	96,442	96,959
of which: France	number	37,831	37,296	37,101
Europe excluding France	number	26,532	27,374	27,495
Africa	number	8,125	8,022	8,237
North America	number	8,015	7,905	7,379
South America	number	5,735	6,330	6,574
Asia	number	7,655	8,311	8,733
Other ²	number	1,177	1,204	1,440
Workforce by manager/non-manager ⓘ	number	95,070	96,442	96,959
Managers	number	23,576	24,742	25,397
of which: Senior executives	number	N/A	N/A	N/A
Non-managers	number	71,494	71,700	71,562
Workforce by age bracket ⓘ	%			
Under 25	%	7	7	7
25-29	%	12	12	13
30-34	%	15	15	15
35-39	%	15	15	14
40-44	%	13	14	14
45-49	%	14	13	13
50-54	%	13	13	13

1. 2006 data at constant scope (excluding Arkema).

2. Other: Middle East, French overseas departments and territories, Pacific.

ⓘ Externally audited indicators.

Social (continued)

	Unit	2006 ¹	2007	2008
55-59	%	9	9	9
60-64	%	2	2	2
65 and over	%	0	0	0
Workforce by business ⓘ	number			
Upstream	number	14,862	15,182	16,005
Downstream	number	34,467	34,185	34,040
Chemicals	number	44,504	45,797	45,545
Holding Company	number	1,237	1,278	1,369
Permanent hires by region ⓘ	%			
France	%	22	17	18
Europe excluding France	%	22	24	22
Africa	%	7	10	9
North America	%	14	12	10
South America	%	16	21	22
Asia	%	17	14	15
Other ²	%	2	2	4
Permanent hires by age bracket	%			
Under 25	%	24	24	24
25-29	%	29	29	29
30-34	%	19	19	18
35-39	%	12	11	12
40-44	%	7	8	8
45-49	%	5	5	5
50-54	%	3	3	3
55-59	%	1	1	1
60 and over	%	0	0	0
Percentage women in workforce ⓘ	%			
Percentage women in total workforce	%	29	29	29
Percentage women managers	%	20	21	22
Percentage women senior executives	%	N/A	N/A	N/A
Percentage women in permanent hires	%	30	31	31
Percentage women in permanent manager hires	%	27	25	29
Percentage women in workforce by age bracket ⓘ	%			
Under 25	%	36	35	34
25-34	%	32	32	33
35-44	%	29	29	29
45-54	%	26	27	27
55 and over	%	23	24	24

1. 2006 data at constant scope (excluding Arkema).

2. Other: Middle East, French overseas departments and territories, Pacific.

ⓘ Externally audited indicators.

Appendixes

2008 PERFORMANCE INDICATORS

Social (continued)

	Unit	2006 ¹	2007	2008
Percentage non-French nationals in workforce	%			
Percentage total workforce	%	61	62	62
Percentage managers ⓘ	%	56	57	58
Percentage non-French nationals in hires				
Percentage permanent hires	%	79	83	82
Percentage permanent contract manager hires	%	66	72	69
Nationalities represented at Total	number	134	133	133
Average number of training days per employee per year	number	4.6	6.3	6.5
Holding Company	number	2.8	2.9	2.7
Upstream	number	8.5	11.6	12.9
Downstream	number	3.9	5.9	5.8
Chemicals	number	3.3	4.2	4.0
Average number of training days per employee by region	number			
Africa	number	8.9	13.0	12.6
Asia, Middle East, Pacific, DOM-TOM ²	number	7.1	10.8	14.1
Europe excluding France	number	3.6	5.0	5.0
France	number	3.6	4.7	4.7
North and South America	number	5.4	6.5	6.1
Training days by manager/non-manager and gender	%			
Managers	%	37	37	36
Non-managers	%	63	63	64
Men	%	77	78	80
Women	%	23	22	20
Days of absenteeism for medical reasons by region	%			
France	%	3.0	3.0	3.1
Europe excluding France	%	2.9	3.0	4.2
Asia	%	0.5	0.9	0.7
Middle East	%	0.9	1.6	1.6
Africa	%	1.3	1.6	1.4
South America	%	0.8	1.1	1.4
North America	%	1.2	1.3	1.8
Weighted average	%	2.4	2.5	2.8
Group companies providing regular medical checkups to employees ⓘ	%	98	98	98
Percentage employees who can opt to work part time	%	85	83	82
Employees with death benefits > 200% of gross salary	%	72	74	77
Companies with employee representation ⓘ	%	88	86	87
Employees covered by a collective bargaining agreement	%	74	75	74

1. 2006 data at constant scope (excluding Arkema).

2. French overseas departments and territories.

ⓘ Externally audited indicators.

Social (continued)

	Unit	2006 ¹	2007	2008
Collective bargaining agreements by region	number	151	164	166
of which: Europe	number	119	131	133
Africa	number	22	23	22
North America	number	2	1	2
South America	number	1	1	3
Asia	number	7	8	6
Group companies with an annual performance review system ^❶	%	97.0	99.0	98.4
For managers	%	97.8	98.9	98.9
For non-managers	%	94.0	97.8	97.8
Average length of time in a position	%	4 years	4 years	5 years
Less than 3 years	%	40	41	43
3-5 years	%	23	21	19
6-8 years	%	11	15	14
More than 8 years	%	26	23	24

1. 2006 data at constant scope (excluding Arkema).

^❶ Externally audited indicators.

Community

	Unit	2006	2007	2008
Community development spending, excluding corporate philanthropy and Total Foundation	€M	118.0	124.5	151.0
Community development spending in non-OECD countries	%	79.0	79.5	87.5
Number of initiatives	number	2,983	2,759	2,619
Total Foundation + Corporate philanthropy spending	€M	N/A	N/A	17



Economic

			Comments and page references
Governments	ECO-1	Tax Expenses	pp. 23, 76
	ECO-A1	Transparency of Payments	pp. 15, 24
Shareholders	ECO-2	Dividends Paid Plus Share Repurchases	pp. 23, 92
Employees	ECO-A2	Payroll and Benefits	pp. 23, 50, 56, 96
Suppliers & Contractors	ECO-3	Capital Expenditures	p. 23
Lenders & Holders of Debt Securities	ECO-A3	Interest Paid	Section 9

Environmental

Spills and Discharges	ENV-1	Hydrocarbon Spills to the Environment	pp. 67, 93
	ENV-2	Controlled Discharges to Water	pp. 66, 93
	ENV-A1	Other Spills and Accidental Releases	p. 93
	ENV-A2	Other Effluent Discharges	p. 93
Waste and Residual Materials	ENV-A3	Hazardous Waste	pp. 67, 93
	ENV-A4	Non-Hazardous Waste	<i>Indicator not reported</i>
	ENV-A5	Recycled, Reused or Reclaimed Materials	<i>Indicator not reported</i>
Emissions	ENV-3	Greenhouse Gas Emissions	pp. 34, 92
	ENV-4	Flared and Vented Gas	pp. 34, 92
	ENV-A6	Other Operational Air Emissions	pp. 67, 93
Resource Use	ENV-5	Energy Use	pp. 34, 92
	ENV-A7	Freshwater Use	pp. 66, 93
	ENV-A8	New and Renewable Energy Sources	<i>Indicator not reported</i>
Other Environmental Indicators	ENV-6	Environmental Management Systems	pp. 66, 92
	ENV-A9	Biodiversity	p. 72

Health and Safety

	H&S-1	Health and Safety Management Systems	p. 58
	H&S-2	Employee Participation	pp. 61, 62, 63
	H&S-3	Workforce Health	pp. 59, 64, 65
	H&S-4	Occupational Injury and Illness Rates	pp. 58, 61, 64
	H&S-5	Product-Related Health Risks	p. 65

Social

Human Rights	SOC-1	Human Rights	pp. 16, 17
Business Ethics	SOC-2	Bribery and Corruption	p. 14
	SOC-3	Political Contributions	
	SOC-A1	Political Lobbying and Advocacy	pp. 24, 25
Employment Practices	SOC-4	Non-Discrimination and Equal Opportunity	p. 54
	SOC-A2	Employee Satisfaction	pp. 50, 56
	SOC-5	Training and Development	pp. 51, 55
	SOC-6	Non-Retaliation and Grievance System	p. 14
	SOC-A3	Local Employment Opportunities	p. 77
	SOC-7	Labor Practices	p. 56
	SOC-8	Community Relationships	pp. 76 to 86
Community & Society	SOC-A4	Social Investments	pp. 76, 97
	SOC-A5	External Capacity Building	pp. 77, 78, 79, 80, 81, 84, 85
	SOC-A6	Indigenous Communities	
	SOC-A7	Resettlement and Land Rights	
	SOC-9	Security	p. 16

A-C

Agenda 21: Adopted by more than 178 governments at the United Nations Conference on Environment and Development in Rio de Janeiro (the Rio Summit) in 1992, the Agenda 21 sustainable development program aims to alleviate poverty and social exclusion, promote the production of sustainable goods and services, and protect the environment. Agenda 21 actions will be taken globally, locally and nationally.

API degrees: Scale established by the American Petroleum Institute (API) to measure oil density. A higher API-degree indicates lighter oil from which a higher yield of gasoline can be refined.

Barrel (b): Unit of measurement of volume of crude oil equal to 42 U.S. gallons or 158.9 liters at 60°F or 15.6°C.

Barrel of oil equivalent (boe): Conventional unit used to measure the approximate energy released by a quantity of fuel by relating it to the energy released by burning one barrel of crude oil.

Biofuels: Alternative fuels derived from renewable organic matter. Other terms are increasingly being used, such as agrofuel, green fuel or vegetable fuel.

Brent: Marker crude oil (38° API) produced in the North Sea from the Brent and neighboring fields.

Condensate: Natural gas condensate is a low-density mixture of hydrocarbon liquids that are present at initial reservoir pressure and temperature conditions as gaseous components in raw natural gas or dissolved in saturated natural gas, and which are recovered in a liquid state in separators, on-site facilities or gas treatment units.

F-H

Flaring: Burning unmarketable or unusable natural gas on the field.

FPSO (floating production, storage and offloading): Floating integrated offshore unit comprising the equipment used to produce, process and store hydrocarbons and offload them directly to an oil tanker offshore.

Global Compact: The Global Compact asks companies to “embrace, support and enact, within their sphere of influence, a set of core values in the area of human rights, labor standards, the environment and anti-corruption.”

- Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights.
- Principle 2: Businesses should make sure that they are not complicit in human rights abuses.
- Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.
- Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labor.
- Principle 5: Businesses should uphold the effective abolition of child labor.
- Principle 6: Businesses should uphold the elimination of discrimination in respect of employment and occupation.
- Principle 7: Businesses should support a precautionary approach to environmental challenges.
- Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.
- Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies.
- Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.

Hydrocarbons: Molecules composed principally of carbon and hydrogen atoms. They can be solid, such as bitumen; liquid, such as crude oil; or gaseous, such as natural gas. They may also include sulfur, nitrogen, metal and other compounds.

L-N

Liquefied Natural Gas (LNG): Natural gas, principally methane and ethane, that has been liquefied by cooling to -258°F (-162°C) at normal pressure in order to transport it.

Liquefied Petroleum Gas (LPG): Light hydrocarbons (comprised principally of butane and propane) that are gaseous under normal temperature and pressure conditions and that are kept in liquid state by increasing the pressure or reducing the temperature.

Megawatt-peak (MWp): 1 million peak watts. A peak watt, the unit used to rate the performance of photovoltaic panels, will deliver one watt under peak solar irradiation.

Natural gas: Mixture of gaseous hydrocarbons, composed mainly of methane.

P-R

Photovoltaics: A field of technology related to the direct conversion of sunlight or solar radiation into energy.

Proved (1P) reserves: Those quantities of oil and gas which, by analysis of geoscience and engineering data, can be estimated with reasonable certainty (90%) to be economically producible from known reservoirs under existing contract, economic and operating conditions:

- Proved developed reserves are reserves that can be expected to be recovered through existing wells with existing equipment and operating methods, without a major expenditure.
- Proved undeveloped reserves are reserves that are expected to be recovered from new wells on undrilled acreage, or from existing wells where a relatively major expenditure is required for recompletion (surface facilities, wells, etc.). Proved reserves do not include additional oil and gas that could be recovered after the contract expires.

Proved and probable (2P) reserves: Proved and probable reserves are the quantities of oil and gas expected to be recoverable from an average accumulation, under E&P contracts covering drilled acreage for which technical studies have demonstrated economically viable development with Brent at \$60/b. They also include projects to be developed by mining. They do not include reserves after the license expires.

Refining: A set of processes, such as distillation, reforming, desulfurization and cracking, used to manufacture various petroleum products.

Reserve life: Ratio of proved reserves at the end of the year to the production sold during the past year.

Reserves: Oil and gas that can be expected to be recovered from known reservoirs on drilled acreage with existing technology under specific economic conditions. In exploration and production, reserves are expressed in barrels (b) for liquid hydrocarbons, cubic feet (CF) for natural gas, and barrels of oil equivalent (boe) for both.

Abbreviations

\$: U.S. dollar

€: euro

/b: per barrel

/d: per day

A-B

ADEME: French Environment and Energy Management Agency

ANR: *Agence Nationale de la Recherche* (French National Research Agency)

API: American Petroleum Institute

B: billion

BBC: *Bâtiment Basse Consommation* (a French label for low energy consumption buildings)

BLS: U.S. Bureau of Labor Statistics

Bboe: billion barrels of oil equivalent

boe: barrel of oil equivalent

C-D

CAP: Community Advisory Panel

CCS: carbon capture and storage

CDE: carbon dioxide equivalent

CH₄: methane

CLIC: *Comité Local d'Information et de Concertation* (name given to French organizations similar to Community Advisory Panels in the United States)

CLIS: *Comité Local d'Information et de Suivi* (name given to French organizations similar to Community Advisory Panels in the United States)

CNRS: *Centre National de la Recherche Scientifique* (French National Center for Scientific Research)

CO: carbon monoxide

CO₂: carbon dioxide

COD: chemical oxygen demand

CONRAD: Canadian Oil Sands Network for Research and Development

cu. m: cubic meter

DME: dimethyl ether

DOM-TOM: French overseas departments and territories

Downstream: Refining & Marketing and Trading & Shipping businesses

E-G

E&P: Exploration & Production

EDF: French electric utility *Électricité de France*

EITI: Extractive Industries Transparency Initiative

FPSO: Floating Production Storage and Offloading [vessel]

G&P: Gas & Power

GDP: Gross Domestic Product

GHG: Greenhouse gas

GJ: gigajoule

GRI: Global Reporting Initiative

GW: gigawatt

H-J

H₂: hydrogen

ha: hectare

HFC: hydrofluorocarbon

HIV/AIDS: Human Immunodeficiency Virus/ Autoimmune Immunodeficiency Syndrome

HQE®: *Haute Qualité Environnementale* (France's "high environmental quality" label for buildings)

HR: Human Resources

HSE: Health Safety Environment

IEA: International Energy Agency

IFP: French Petroleum Institute

ILO: International Labour Organization

IMF: International Monetary Fund

IPCC: Intergovernmental Panel on Climate Change

IPE: International Petroleum Exchange

IEPICA: International Petroleum Industry Environmental Conservation Association

ISO: International Organization for Standardization

ISRS: International Safety Rating System

IUCN: International Union for Conservation of Nature

K-M

kb/d: thousand barrels per day

kboe/d: thousand barrels of oil equivalent per day

ktoe: thousand tons of oil equivalent (metric)

ktons (or kt): thousand tons (metric)

kWh: kilowatt-hour

kWp: kilowatt-peak

LNG: Liquefied Natural Gas

LPG: Liquefied Petroleum Gas

LTIR: Lost Time Injury Rate

M: million

Mb/d: million barrels per day

Mboe/d: million barrels of oil equivalent per day

MGJ: million gigajoules

MIT: Massachusetts Institute of Technology

MSD: musculoskeletal disorder

MTCDE: million tons of carbon dioxide equivalent (metric)

MTO: Methanol to Olefins

MW: megawatt

MWp: megawatt-peak

N-P

N₂O: nitrous oxide

N/A: Not Available

NGO: Non-governmental organization

No.: number

NO_x: nitrogen oxide

OECD: Organization for Economic Cooperation and Development

OHH: Occupational Health and Hygiene

PFC: perfluorocarbon

ppm: parts per million

PPRT: *Plan de Prévention des Risques Technologiques* (France's technological risk prevention plans)

R-W

R&D: Research & Development

R&M: Refining & Marketing

RESCO: Rural Energy Services Company

SAGD: Steam Assisted Gravity Drainage

SF₆: sulfur hexafluoride

SMS: Safety Management System

SO₂: sulfur dioxide

SRM+: Stakeholder Relationship Management+

T&S: Trading & Shipping

t: ton (metric)

TRIR: Total Recordable Injury Rate

UN: United Nations

UNEP: United Nations Environment Program

UNESCO: United Nations Educational, Scientific and Cultural Organization

Upstream: Exploration & Production and Gas & Power businesses

VOC: volatile organic compounds

VPSHR: *Voluntary Principles on Security and Human Rights*

vs.: versus

WHRS: Worldwide Human Resources Survey

CONTACTS

To let us know what you think of the report and the issues covered in it, go to Contact at:



Editorial Team

Editorial consultant: le bureau des mots

The report was prepared in cooperation with the Sustainable Development & Environment, Industrial Safety, Human Resources and Corporate Communications Departments.

We would also like to thank everyone at Total who contributed to the report.

Photo Credits: Atochem, B. Blaise, courtesy of CNRS, Collège de France, Créocéan, M. Didier, M. Dufour, L. Eiliv, courtesy of Statoil, E. Follet, T. Gonzalez, P. Henry, Hutchinson, G. Kinder, M. Labelle, G. Leimdorfer, D. Maillac, MIT, Opéra National de Paris, ORC, M. Pallardy, Paris Pionnières, G. Perrin, C. Pirotte, V. Rachelboom, courtesy of Renault, S. Rivoallon, M. Roussel, P. Schaff, J. Schulzki, Total Foundation, L. Urman, courtesy of Volvo, D. William, L. Zylberman. All rights reserved.

Graphics: M. Berget / BRIEF / J.-P. Donnot / IDE / 3Cube / Verbe / All rights reserved.

Total S.A. – May 2009 – All rights reserved.

Design and production: BRIEF

Printed on Tempo paper manufactured in an ISO 14001 and ISO 9001-certified plant from pulp from sustainably managed forests.



PEFC No. 10-31-1222



The following documents can be downloaded from our Web site:





Corporate Communications

TOTAL S.A.

Headquarters: 2 place Jean Millier

La Défense 6, 92400 Courbevoie, France

Tel.: +33 (0)1 47 44 45 46

Share Capital: €5,929,520,185

Registered in Nanterre: RCS 542 051 180

www.total.com