



# Corporate Outlook

## Fuel for Thought

Is the Industry We Love to Hate—Big Oil—Doing Anything Right?

By Lori Tripoli



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The oil and gas industry is undoubtedly one that's easy to dislike. There's Chevron's legal mess in Ecuador concerning pollution of the Amazon that's been chronicled in everything from *60 Minutes* to *Vanity Fair*. There's lingering oil contamination in Prince William Sound from the Exxon Valdez. The remaining oil is almost as toxic as it was when the spill occurred in 1989—despite two decades of cleanup and monitoring, according to the Exxon Valdez Oil Spill Trustee Council, which was formed to oversee the restoration of the area. Just last month, the U.S. Environmental Protection Agency (EPA) announced it had ordered Texaco to assess soil and groundwater contamination at the Pacific Coast Pipeline Superfund Site, which formerly operated as a refinery, in Fillmore, CA. A Gallup poll of Americans' images of industry reported last summer that the oil and gas industry has the lowest approval rating, with only 21 percent of respondents having a positive impression. Even the banking business did better (with 28 percent).

Yet the vast majority of us rely on the industry's products even if the industry itself fares poorly in popularity polls. "We're more inclined to think that we don't like Big Oil, but we still like to drive cars, to travel, to be able to get fruit from different parts of the world," observes Carolyn Kissane, a clinical associate professor at the New York University Center for Global Affairs in New York City. "In order to make that happen, you need oil," she notes. Indeed, buying and using petroleum-based products and calling one's self sustainable are seemingly contradictory. And it's not as if a consumer—whether an individual or an institution—can go out and buy fair-trade petroleum or really go cold-turkey and abandon all petroleum-based products. Can Big Oil itself be relied upon to incorporate sustainability practices into its own core business?

Perhaps. "Overall, the oil industry is more green than people really give them credit for," observes Craig Moyer, chair of the land, environment, and energy division in the Los Angeles office of Manatt, Phelps & Phillips, a law firm. Admittedly, the industry's environmentally friendly efforts aren't necessarily undertaken for altruistic reasons. "Historically,

oil company refineries have been very efficient about recovering their product and recycling that product, for efficiency reasons," Moyer says. "If you go into air quality and toxics, their products are much cleaner than they were 10 or 15 years ago," he maintains. Has the industry cleaned up its products by choice or because it was compelled to? "The clear answer is they've done that because of government mandates," Moyer says. "Gasoline is a much cleaner product as a result of the 1990 Clean Air Act Amendments." The 1990 amendments prohibited leaded gasoline (with a 1995 deadline) and imposed emission standards for certain toxic pollutants.

The industry is also aware of its poor reputation with consumers and is trying to improve it with advertising campaigns like BP's "Beyond Petroleum" and Chevron's "The Power of Human Energy" initiatives, observes Kissane. Such efforts to rebrand the fossil fuel business by mentioning some of its more environmentally friendly aspects aren't necessarily generating the response that was intended. In 2008, Greenpeace UK bestowed its Emerald Paintbrush award for the worst greenwashing effort of the year on BP.

### Beyond Advertising

But is the oil business doing anything more substantive on sustainability than advertising? Absolutely, industry analysts say. For instance, Big Oil makes serious efforts to minimize the generation of waste. "The oil industry squeezes the squeal out of the pig," Moyer says. "They want to draw back every last drop of oil without creating a whole lot of waste"—since, after all, waste treatment requirements tend to be more onerous than those for useful products. Yet, as many institutions undertaking sustainability initiatives have learned, adopting more environmentally benign activities can result in economic savings as well.

Refineries nowadays are often home to cogeneration plants, which produce electricity by burning fuel such as natural gas. Steam generated in the process then might be used in manufacturing processes at the refineries. "Cogen is very common at most refineries



to improve efficiency, something that oil companies try for,” Moyer explains. With a cogen plant onsite, a company “does not have to rely on vagaries of the grid, and gains efficiencies associated with reusing heat,” he notes. ExxonMobil, for instance, has almost 100 such cogen plants at 30 sites around the globe. Earlier this year, a cogen plant in the company’s refinery in Antwerp, Belgium, became operational. “The Antwerp cogeneration process generates about 125 megawatts of electricity—enough to power the refinery, as well as the needs of most of ExxonMobil’s other Belgian manufacturing operations,” said Richard Henderson, the refinery’s technical manager, at the time the plant’s startup was announced.

Industry observers say that Big Oil’s efforts on the sustainability front go far beyond creating cogen facilities. “I am not aware of any company that doesn’t have some focus on sustainability issues, whether its focus is in the environmental area, the social area, on economic benefits, or any combination of the three,” says Walt Retzsch, a senior policy advisor at the American Petroleum Institute, a trade association in Washington, DC. “Most of the majors are going to be focusing on all of those in any area they operate,” Retzsch says. Major oil companies are also getting word out by posting their sustainability or corporate social responsibility reports on their websites. To that end, the American Petroleum Institute, in conjunction with the UK-based International Petroleum Industry Environmental Conservation Association, issued guidance for the oil and gas industry on voluntary sustainability reporting in 2005 and is currently updating it.

“We recognize our responsibility to help meet this growing energy demand while working to reduce the impact on the environment,” ExxonMobil Chairman and CEO Rex Tillerson explained in Exxon’s 2008 Corporate Citizenship Report. “To that end, we are taking action —improving our own energy efficiency, helping consumers improve theirs, and seeking new technologies that could be the game-changers that tomorrow’s vast global energy system will require,” he continued. Exxon’s goal is to improve energy efficiency in its refining and chemical operations by at least 10 percent between 2002 and 2012.

## It’s Still Fossil Fuel

While oil companies can certainly make substantial efforts to make their operations more environmentally friendly, the primary product they’re pushing is fundamentally not a sustainable one. Ultimately, “their business is the extraction of oil,” Kissane notes. “The big oil companies do what they do best, and that is produce oil.” While some companies might be addressing environmental and social issues to a greater or lesser degree, “that doesn’t change the fact that they’re still producing a polluting fossil fuel,” she says.

While major oil companies may not be spending as much as environmentalists would like them to on alternative sources of energy, they are making efforts, industry analysts say. The Hague, Netherlands-based Royal Dutch Shell “was a major player in the solar industry until they sold their solar division in 2006,” observes Roberta Gamble, industry manager for Frost & Sullivan’s Energy and Power Systems research practice based in Mountainview, CA. “Shell and (London-based) BP seem to be focusing more on biofuel, biodiesel, and ethanol, which makes sense, because if you think of these companies as fuel producers, it would be a lower cost market for them to get into because they have the logistics down, they have the transportation,” she says.

### Fast Facts about Oil



- What’s the difference among oil, petroleum, and gasoline? Crude oil, or petroleum, is extracted from the earth and then refined into products such as gasoline, jet fuel, diesel fuel, and heating oil.
- Worldwide, more than 85 million barrels of oil are consumed each day. There are 42 gallons in a barrel.
- Irving, TX-based ExxonMobil, with \$45 billion in profits, is the largest corporation in the United States, according to the 2009 Fortune 500 list. Conoco Phillips in Houston is No. 4, Marathon Oil in Houston is 23, Sunoco in Philadelphia is 41, Hess in New York is 55, El Dorado, AR’s, Murphy Oil is 92, and Occidental Petroleum in Los Angeles is 98.

Sources: U.S. Environmental Protection Agency, American Petroleum Institute, *Fortune*



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San Ramon, CA-based Chevron is seeking to produce biofuels from renewable forest sources and from agricultural, nonfood, sources, according to its 2008 Corporate Responsibility Report. "Responding to climate change is a long-term process. Seven years ago, we implemented our comprehensive 'Action Plan on Climate Change,' which focuses on reducing emissions, improving efficiency, investing in research, pursuing business opportunities, and promoting flexible and economically sound policies that protect the environment. As part of the action plan, we set annual greenhouse gas emissions goals. I am pleased to report we have met those goals every year since 2004," said Dave O'Reilly, chairman of the board and CEO of Chevron, earlier this year. "I'm also pleased that we're ranked No. 1 among U.S.-based oil and gas companies, and No. 2 worldwide, in the 2008 Carbon Disclosure Leadership Index. Compiled by the Carbon Disclosure Project, the index highlights companies taking 'best in class' actions to measure and report carbon emissions. It is the third time in four years that we have been included." Last year, Chevron completed a LEED (Leadership in Energy and Environmental Design) gold-certified building in Covington, LA.

### Possible Partnerships

The oil industry is also partnering with customers and other organizations on sustainability initiatives. Indeed, 400-plus partnerships between the industry and environmental, educational, and community groups are identified on the American Petroleum Institute's website at [www.api.org/ehs/partnerships/](http://www.api.org/ehs/partnerships/). Big Oil is working directly with large customers to reduce their energy needs. "The most interesting thing that Chevron has is a business that does energy efficiency consulting and installation," says Amy Myers Jaffe, a fellow in energy studies at the James A. Baker III Institute for Public Policy and associate director of the Rice University Energy Program in Houston. "If you are a big user of energy, they will come up with an energy efficiency solution for you," she explains. Chevron's energy efficiency consultation and installation division, even before the stimulus package (which promotes renewable energy initiatives), was one of the most profitable within Chevron in terms of net profit, Myers Jaffe says.

Hess Energy Marketing, a division of Hess Corp., is also helping major consumers become more energy efficient. In 2008, Hess launched a demand response program for customers on the East Coast in which it pays customers to commit to reduce their electricity consumption whenever local grids are under peak demand. "Think of a hot August day when, in New York City, there is only  $x$  amount of generation, everyone is turning on the air conditioning and the lights, and cooking dinner. Power can spike, and the power grid may not have enough power to meet that

need," says John Deese, manager of new product development at Hess Energy Marketing in Woodbridge, NJ. In anticipation of those events, Hess enters into agreements with certain large customers to reduce electricity consumption during such a power spike. Hess engineers identify a number of steps for a customer to curtail energy, and the customer agrees to reduce its consumption by a certain number of kilowatts. Customers might set the thermostat a little higher so the air conditioning won't run as much. If they have a big water fountain out front, they might turn it off for two hours, or use onsite generators for a while to stop pulling power from the local grid. Hess gives participants in the demand response program at least two-hours' notice and often more, Deese explains.

As part of the program, Hess installs meters that report actual consumption in real time to an online energy management platform called Hess PowerPort. That enables customers to track their own energy usage very accurately so they can monitor usage and, perhaps, decide to reduce their own consumption during daytime hours when peak prices are in effect, or on weekends when buildings are in more limited use. Hess also pays customers to participate in the demand response program.

Feedback from participants has been positive, Deese reports. "We like it," says Marc Valera, associate vice president for facilities management at Fordham, which has campuses in Manhattan, the Bronx, and Westchester County in New York. "We're always

#### How Do Renewable Energy Certificates Work?

- When a renewable energy facility operates, it creates electricity that is delivered into a vast network of transmission wires, often referred to as "the grid." The grid is segmented into regional power networks called pools.
- To help facilitate the sale of renewable electricity nationally, a system was established that separates renewable electricity generation into two parts: the electricity or electrical energy produced by a renewable generator and the renewable "attributes" of that generation. (These attributes include the tons of greenhouse gas that were avoided by generating electricity from renewable resources instead of conventional fuels, such as coal, nuclear, oil, or gas.)
- These renewable attributes are sold separately as renewable energy certificates (RECs). One REC is issued for each megawatt-hour (MWh) unit of renewable electricity produced.
- Purchasers of RECs are buying the renewable attributes of those specific units of renewable energy, which helps offset conventional electricity generation in the region where the renewable generator is located.

Source: Green-e Dictionary, [www.green-e.org](http://www.green-e.org)



looking for things that are both good for the environment and also allow us to improve our revenue stream," he explains. Money generated from Fordham's participation in the demand response program is then used to fund sustainable projects on campus. Valera reports that the school has received payments in the low six figures.

Even as customers agree to reduce power consumption at certain times, their operations are not significantly affected by the energy reduction. "What a university has to do from their facilities group is go in and figure out where can I shed load but still operate the campus and the classrooms to provide the cooling and the lighting and the other types of energy that's needed," says Brian Alexander, director of energy management and utilities at Catholic University in Washington, DC. Catholic University is also participating in Hess's demand response program. "The first year we did it, we only did a megawatt because we wanted to see what we could do and how we could shed that without affecting the operation," Alexander says. "After doing it for a year, we've now increased our contract to 2 megawatts, roughly a \$100,000 payment, and we signed up for about four years to do that. We have a game plan." Given the economic environment and budgets that have been trimmed by about five percent, "when I told people that over a four year period, a company was going to give us \$400,000, I was the most popular man on campus," Alexander recalls.

Accomplishing that energy reduction takes a good bit of planning. "We have 57 buildings on about 240 acres here in DC," Alexander says. On any given day, classes, soccer camps, or baseball workshops might be conducted. The Medieval & Byzantine Studies Department with 1,000-year-old texts that must be protected may not want to jeopardize functionality of its building. "But that's where facilities can get creative," Alexander says. Emergency generators might be used, classes could be rescheduled, certain buildings might be shut down at times, and, of course, people could just turn the lights off when they're not using them.

Catholic University has been recognized by the EPA as a green power champion. Thirty percent of Catholic's electrical purchases come from renewable energy certificates purchased from Hess. "We would much prefer to create solar or wind turbines on campus," Alexander admits. "But the fact is I can't build a wind turbine that's 100 feet high in the District of Columbia. So the next best alternative is to buy renewable energy certificates. We're still using

the brown power, but someplace else, it's a little bit cleaner," he observes. The university is also working on a solar project. EPA's Green Power Partnership is a voluntary program that encourages the purchase of green power by organizations such as companies and colleges and universities. More information about the program is available at <http://www.epa.gov/grnpower/index.htm>.

Hess also offers a product called C-Neutral for institutional, commercial, and industrial customers who buy natural gas, electricity, and fuel oil through the company. "We use engineers to calculate the carbon emissions associated with each of those commodities. We secure the appropriate amount of offsets, bundle them together, and in essence sell our customer carbon neutral fuel," Deese explains. As Alexander mentions, Hess also offers renewable energy certificates representing 1,000 kilowatt hours of renewable energy being generated. A lot of those customers participating in the demand response program then reinvest the money they earn through the program in initiatives like C-Neutral and renewable energy certificates. Cutting back via the demand response program can provide a significant financial boost to big customers. "In 2008, we generated \$50,000 on average for our demand response customers," Deese reports.

## What's Next?

Ultimately, it seems, the oil business will have to focus on different energy products as oil supplies run out. "The whole fundamental nature of the business is changing. Simply focusing on how much oil you can produce in reservoirs around the world is no longer going to provide you with a meaningful business," says energy consultant Paul O'Rourke, managing director of the energy and environment sector at LECG LLC in Cambridge, MA. "It would be hard to find somebody in a major company today who would disagree with the statement that we are past peak oil."

Nonconventional sources of energy is where the majors have to go next, O'Rourke continues. Right now, he says, the attitude of major oil companies ranges from those who are paying lip service to sustainability and alternative sources of fuel, but there are some who are embracing reality and making significant investments in renewable energy sources. "Eventually they'll all come along, but it's not going to be something that happens overnight," O'Rourke says.



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