

References:

1. http://www.shell.com/home/Framework?siteId=envandsoc-en&FC2=/envandsoc-en/html/iwgen/performance_data/environmental/zzz_lhn.html&FC3=/envandsoc-en/html/iwgen/performance_data/environmental/acid_gasses_and_vocs_01052006.html
http://www.shell.com/home/Framework?siteId=envandsoc-en&FC2=/envandsoc-en/html/iwgen/performance_data/environmental/zzz_lhn.html&FC3=/envandsoc-en/html/iwgen/performance_data/environmental/acid_gasses_and_vocs_01052006.html
2. Niger Delta Natural Resource Damage Assessment and Restoration Project
3. Use Your Profit to Clean Up Your Mess – Report on how Shell should fund local solutions for environmental and social destruction caused by its projects, Shell Accountability Coalition, 1st February 2007
4. Robbins et al, The Settlers Primary School Health Study, Draft Final Report, University Faculty of Medicine, Durban Institute of Technology's Department of Environmental Health, University of Michigan (USA), 2002
5. *ibid*
6. Pembina Institute from Canada, Oil Sands Fever, p. 46
7. The Shell Sustainability Report 2006
8. The Shell Sustainability Report 2005



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SHELL ENERGY SCENARIOS TO 2050

by

Friends of the Earth Europe

Shell continues to be involved in a large number of environmentally and socially harmful activities

1. Continue gas flaring

Gas being flared as a by-product of oil exploration, is a useful fuel in its own right. Yet in many places Shell throws this gas away by flaring (i.e. burning) it. Shell constantly flares gas in Nigeria. In 2005, the Federal High Court of Nigeria found gas flaring to be a “gross violation of the constitutionally guaranteed right to life and dignity, which includes the right to a clean, poison-free, pollution-free and healthy environment.” Shell was ordered to stop gas flaring, yet the company appealed the court decision and continues to flare gas in its installations. In the same year, Shell flared nearly 600 million cubic feet of gas in the country daily. In 2001, the amount flared in Nigeria by all oil companies equalled 40% of gas consumption on the entire continent of Africa.

Gas flaring is a major source of Shell’s sulphur emissions. Sulphur, emitted as sulphur dioxide, combines with atmospheric moisture to form sulphuric acid - one of the primary causes of acid rain. Acid rain has caused devastation in the Niger Delta, acidifying lakes and streams, damaging and killing vegetation and crops and corroding building roofs. Gas flaring is a major source of greenhouse gases which cause climate change.

In 2004, the World Bank estimated that flaring represents an annual economic loss to Nigeria of about US \$2.5 billion. While most of Nigeria’s oil is exported, the majority of its people live in poverty.

Flaring of associated gas has been reduced to a minimum in Europe, but in Nigeria, despite the fact that the procedure has been illegal since 1984, Shell continue to flare gas, waste the associated energy it contains, and poison the environment. This flaring is a massive waste of energy resources in a country with severe energy shortages.

2. Maintain the level and size of oil spills

Oil and fuel spills occur often at Shell refineries, pipelines and oil depots, wasting the fuel and leaving long term pollution. Shell's track record regarding oil and fuel spills is poor. For example, it has been estimated that in Nigeria 9-13 million barrels of oil have been spilt over 50 years, representing about 50 times the estimated volume spilled in the Exxon Valdez oil spill in Alaska in 1989⁽²⁾. Shell, being the biggest oil company in Nigeria, is responsible for a substantial part of this.

Clean up is often non-existent or superficial. Shell also admits that most of its facilities were constructed between the 1960s and early 1980s to the prevailing standards at the time.

One of the largest spills occurred in 1978 at Shell's Forcados Terminal tank, leading to a spill estimated at 580,000 barrels.

In Curacao, Shell operated a refinery for 70 years, closing it in 1982. Shell refuses to clean up its legacy of waste which contaminates the reef and the toxic lakes, that are filled with chemical waste, including "Asphalt lake", filled with 800,000 cubic metres of asphalt and tar⁽³⁾. Shell sold the refinery for only one dollar to the government. As part of the sale, Shell secured terms that would absolve it from any responsibility for the extensive environmental and health damage created by its refinery operations.

3. Prolong releasing emissions

From their refinery in Durban, Shell emitted 7,300 tonnes of sulphur dioxide a year. It could recover and reuse much of this - a similar refinery using more up to date technology in Denmark emits six times less. Shell's emission of sulphur is causing health problems for its neighbours.

Sulphur dioxide is a severe respiratory irritant which can trigger asthma attacks. There is significant incidence of chronic asthma amongst Durban residents, especially children⁽⁴⁾.

In the vicinity of the Shell's Durban refinery the leukaemia rates are reportedly 24 times higher than the national average. Local residents have their daily lives disrupted and are forced to move away due to emissions (sulphur dioxide, hydrogen fluoride, benzene), the spread of poisonous chemicals such as tetra ethyl, oil spills and leaks from pipelines.

In 2001, an underground pipeline from the refinery leaked over 1.3 million litres of petrol under the homes of local people. During another accident, the refinery's storage terminal spilled 25 tonnes of tetra-ethyl lead - a harmful neurotoxin into the environment.

4. Invest in high CO2 and energy intensive oil sands

Shell invests in the Athabasca Oil Sands Project in Canada⁽⁵⁾. In his February 2007 Strategy Update, Shell's CEO Van der Veer spoke of long-term projects such the Canadian oil sands as being "the foundations for Shell in the first half of the 21st century". At the same time, less than 1% of Shell's investments are in renewable energy.

About two thousand kilograms of oil sands must be dug up, moved and processed to produce 158.9 litres of oil (one barrel). Producing a barrel of oil from the oil sands releases **up to five times more** greenhouse gas emissions than a barrel of conventional oil⁽⁶⁾. One cubic metre of oil mined from the oil sands requires between 2 and 4.5 cubic metres of water to produce.

5. Run misleading PR campaigns

Shell placed "*Don't throw anything away, there is no away*" advert in various newspapers and magazines, including the European Voice, the NRC (Dutch newspaper) and the Sunday Times Magazine (UK). The advert showed a classic refinery outline but with flowers rather than smoke flowing from the chimneys, giving the impression that Shell's refineries are clean and suggesting that Shell's products and services do

not have an impact on the environment. In the advert Shell claimed that: "*we use our waste CO2 to grow flowers*".

Shell's data shows that in 2006 it produced almost 100 million tons of GHG⁽⁷⁾, while only at one refinery (Pernis in the Netherlands) does Shell recycle CO2 for growing plants. According to Shell, this saves 350,000 tonnes of CO2 each year⁽⁸⁾ - about 0.35% of Shell's total direct emissions.

The UK and Dutch Advertising Standard Authorities found that this Shell advert was misleading the public on Shell's environmental performance and asked Shell to remove it.

6. Lobby against the greenhouse gas (GHG) emission reduction targets of the new Fuel Quality Directive

The new Fuel Quality Directive proposed by the European Commission introduces a 10% GHG emissions reduction target for all transport fuels to be achieved by 2020 compared with 2010 levels. The Directive aims at reducing emissions released during the exploration and production part of the fuel's life-cycle: the "well-to-tank" phase. This places the responsibility for emissions reductions directly on oil companies.

At a workshop in the European Parliament in 2007 Europa (the European association of oil companies, including Shell) argued that the oil industry itself can do nothing to reduce the greenhouse gas intensity of fuels. However, the industry's own data shows that reductions can be achieved by less gas flaring and venting, improved energy efficiency and fuel switching in oil refineries.

Despite sky-rocketing profits (Royal Dutch Shell profits leapt 23% to a record US \$31.3 billion in 2007) Shell and other oil companies show no sense of responsibility and are not willing to pay the costs involved in their emissions reduction.