



SUSTAINABILITY FOCUS

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FIFTY SHADES OF GREEN

GREEN INVESTMENTS: A COMPLEX DILEMMA

KEY TAKEAWAYS

“Green” products may not always be green as their entire environmental footprint remains quite difficult to assess.

Social issues such as the respect of human rights, promotion of labour relations, responsible management of supply chain remain relevant for all companies including those operating in the “green” industry. Universal standards that define social responsibility and ESG factors are complementary and interdependent.

A “Green Bond” needs to consider the environmental and social challenges of a specific project and a transparent and regular reporting on ESG integration within the bond framework.

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INTRODUCTION

In the fast moving industry of Responsible Investment, practices have been taking various forms over the past decade. Exclusion, ESG integration and engagement are among the mechanisms of action which have driven this development. One form has recently taken a whole new dimension with the launch of corporate “green bonds”. A green bond is the opportunity to invest in bonds which finance projects that have positive environmental outcomes. Initially, bond issuances were made by international institutions, in particular the European Investment Bank (EIB), the World Bank, and KEXIM, the Export-Import Bank of Korea in an effort to finance the transition to a low-carbon economy, and to respond to the demands of specific investors motivated to take action against climate change. Green bonds have become an actual trend since the beginning of 2013 on account of the issues made by large companies. Since January 2013, several green bonds have been issued from several companies including Iberdrola (EURO 750m), GDF Suez (EUR 2,500m) and Unibail Rodamco (EUR 750m) over a total of about EUR 11,260m¹ up to May 2014. According to Bloomberg, until October 2014, a total of USD 32.6bn of green bonds have been issued, and it is expected that, at the current pace, the total 2014 volume could surpass USD 40bn².



Along with the unique positive opportunity to invest responsibly, a number of questions arise from this trend. What companies/projects/products can reasonably be called “green”? Who is in capacity of setting such a definition?

To explore these questions, we will analyse the “greenness” of some of the green products and we will assess the various social responsibility challenges faced by companies investing in “clean” technologies.

GREEN TECHNOLOGIES VARY IN THEIR GREENNESS

There is sometimes a gap between how a “green product” is advertised and the more nuanced realities of its potential environmental impact. Depending on the perimeter considered, the actual environmental footprint of an activity can vary drastically, calling investors to pay close attention. The examples laid down below aim to give a report on this complexity.

For instance, electric vehicles (EVs), have been marketed for several years as “zero emissions” transportation. Although city pollution is indeed reduced, the bigger challenge of climate change remains to be addressed. EVs have their actual environmental performance strictly tied to the electricity source used to charge the battery. The mix of electricity generation sources at the moment of charging is strongly affected by the time of the day, time of the year, and the geographic location. For instance, regional characteristics such as fuel abundance, local regulation, water availability

and pollution levels have influenced the development of each region’s specific generation mix which can, therefore, vary substantially from one region to another. With regard to the efficiency of the vehicle itself, thanks to a much smaller number of moving parts, resulting in fewer energy losses, an electric vehicle is considered as seven times more efficient than a gasoline car and four times more efficient than a diesel car. However, in essence, an electric car has a combustion engine as well, at the power station. Taking into account the thermal efficiency of the power station, and the transmission and distribution losses associated with getting the electricity to the car, the efficiency of the car can vary greatly³.

The chart below shows that in Greece and China where coal represents a major share of primary energy sources used in electricity generation, an average electric car would actually emit more CO₂ than a diesel car⁴.

Electric car emission by country charted against modern diesel and petrol cars



* based on average of Nissan Leaf, Mitsubishi and Renault Fluencz

** based on new Ford Focus 1.6 diesel

*** based on new Ford Focus 1.6 petrol

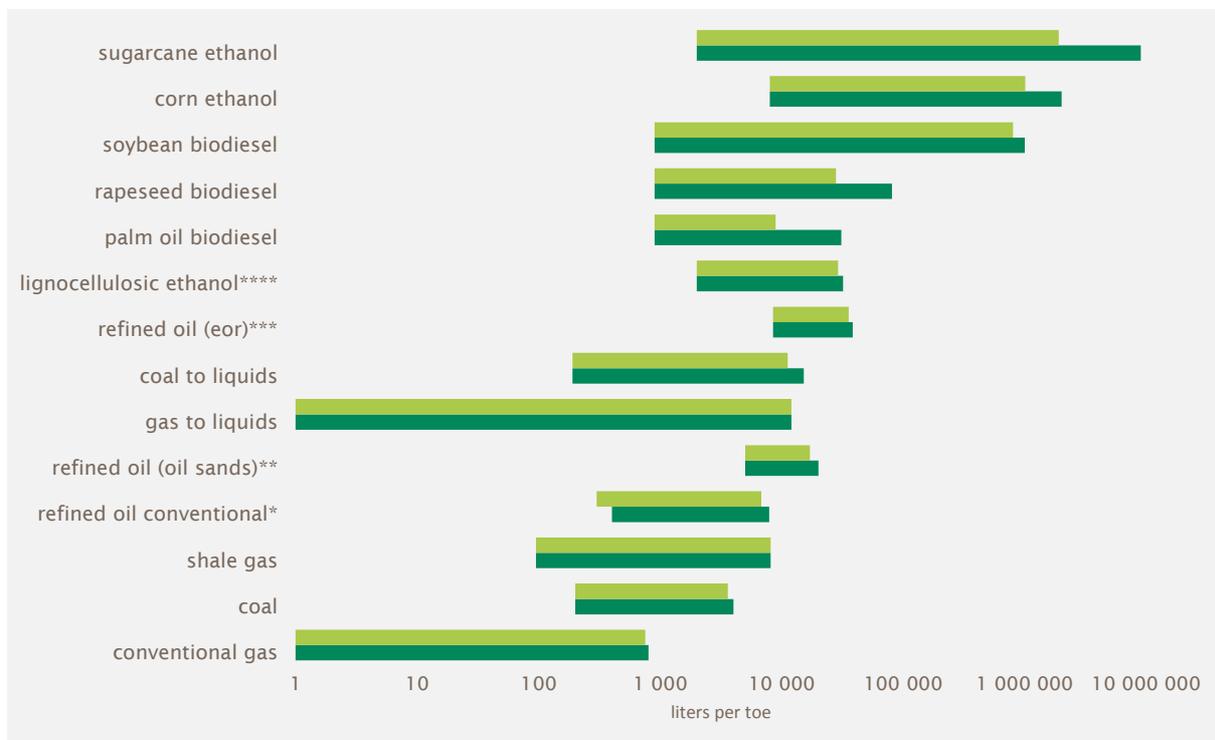


Another illustration of the difference between being described as "green" and a more nuanced reality is tied to biofuels. According to the Joint Research Centre (JRC) a number of environmental impacts from increased production of biofeedstocks and biofuel refining, can be listed including higher rates of nitrate and phosphate reaching surface and ground water, pesticide contamination, soil degradation and loss of biodiversity. Another study conducted by the EMPA in

2012, had concluded that on several environmental impact indicators, such as eutrophication, acidification, and water depletion, biofuel value chains have higher values than the fossil-fuel reference indicator.

Moreover, as shown in the graph below⁵, water consumption is quite significant in biofuels production process compared to conventional energy sources.

Water use for energy production



* the minimum is for primary recovery, the maximum is for secondary recovery
 ** the minimum is for in-situ production, the maximum is for surface mining
 *** includes CO₂ injection, steam injection and alkaline injection and in-situ combustion
 **** excludes water use for crop residues allocated to food production

■ Withdrawal
 ■ Consumption

In terms of particulate matter formation, biofuels' impact is higher than fossil fuels as a result of ammonia emissions due to the use of fertilizers. In addition, uncertainties with regard to nitrous oxide (N₂O) should lead to caution when it comes to promoting biofuels as stated by EMPA. Nitrous oxide is the result of nitrate leaching into ground water from fertilizer use. The Joint Research Centre stated that these nitrous oxide emissions have the potential to negate greenhouse gas savings from biofuels. When ground water

gets to the surface, N₂O is released with about 300 times the global warming potential of CO₂ emissions⁶.

These products are often called "green" because they focus on eliminating or mitigating their core impact (often GHG emissions). The reality of their entire environmental footprint is more nuanced and more difficult to assess. Recently, car producers in France have been sanctioned by advertising authorities for promoting their electric cars as "100% ecological".



Although these cars do not emit emissions while driving, most of their electricity comes from nuclear plants, and manufacturing them is not without environmental impact either.

The car producers, namely Renault and Bolloré, have thus been subject to allegations of false advertising⁷.

COMPANIES OPERATING IN THE “GREEN” SPACE STILL FACE STRONG ENVIRONMENTAL, SOCIAL AND GOVERNANCE CHALLENGES

Investing in projects with a low or lower carbon footprint does not eliminate all notion of ESG responsibility. Notably, it does not shield companies from being involved in controversies. The choice of an eligible project involves E-S and G dilemmas. For an investor to make an informed choice, it appears key to hold a reasonable assurance on the company’s capacity to master the various environmental and social impacts of its activities on a wide perimeter.

Hydroelectric projects stand as a good illustration of these dilemmas. They tend to be subject to recurrent and legitimate protests and critics, especially from local communities due to their significant impact on the surrounding regions which incur dramatic changes as a result of flooding:

In June 2014, Chile’s government repealed environmental permits for the HidroAysen plan (51% owned by Endesa Chile) that would have built 5 dams in the Patagonia region with a total cost of USD 8 billion. Local citizens, the Patagonian Defense Council and about 70 domestic and international organizations protested against the project because it would have flooded 14,000 acres (5,700 hectares), clear-cut parts of the Patagonian forest, eliminated some white water rapids and waterfalls, and destroyed the habitat for the endangered Southern Huemul deer. About 12 families would have been relocated as a result. Local citizens and community groups filed 35 appeals against the project⁸.

Biofuel production is also often subject to criticism from environmental activists such as

Greenpeace for its less direct negative impacts on the local biodiversity:

Neste Oil, a refining company, is considered as one of the leading suppliers of renewable diesel with an annual production of about 2 million tonnes representing 11% of its total revenues in 2012. However, the company has faced allegations on account of this active involvement in biofuels. Notably, in October 2013, a report titled ‘License to Kill’⁹ was published by the NGO Greenpeace. The report stated that several major international corporations, including Neste Oil are linked to Wilmar, from whom they source the alleged ‘dirty’ palm oil. The report alleged that Wilmar is harvesting its palm oil from “illegally cleared land” in Indonesia and thus contributes to the destruction of the habitat of critically endangered Sumatran tigers. Consequently, Neste Oil has been denounced as complicit in the alleged deforestation and the progressive extinction of Sumatran tigers in Indonesia through its association with Wilmar¹⁰.

Companies involved in the renewable energy industry are, like any other sector, prone to potential social allegations.

In 2013, Gamesa, a Spain-based technological company, whose activity includes the development and manufacturing of wind turbines, as well as the operation and maintenance of wind farms around the world announced the closure of two turbine blade manufacturing plants in Spain, leading to 394 redundancies, as well as the restructuring of one plant in Spain.



The company also announced 52 additional individual dismissals in Spain in November 2013. The plants' work councils announced their intention to lock themselves up inside the concerned buildings. The trade unions reproach the company for proceeding to dismissals whereas it is making profit and increasing its margin¹¹.

As illustrated, the ESG challenges associated with green projects are highly significant. NGOs show increased activity around these types of operations, creating reputational stakes to companies while the less mature legal framework creates uncertainty around companies' legal security. For instance, on account of their significant footprint, not only on local biodiversity but also on local communities, hydro-electric projects, even though they may be considered as low-carbon projects, need to be preceded by extensive social consultation and social & environmental impact assessment and management. Otherwise, such projects could face continuous fierce opposition as is the case for the HidroAysen project and could be permanently suspended, affecting along the way not only the company's reputation, but also its operations in the case that investments were already made. Regarding biofuels, Neste Oil's involvement in the production of these "green" fuels and the

allegations it has faced in this regard are obliging the company to make significant efforts to promote environmental factors in its supply chain with its reputation being at stake. For instance, Neste Oil stated in its response to the report, that it buys only sustainable palm oil, and that 100% of the purchased palm oil is certified. Neste Oil added that it buys only traceable palm oil of which it knows the exact location of the plantations. Moreover, the company reported taking the issue of deforestation associated with the palm oil industry seriously, which is the reason why it adopted new No Deforestation Guidelines in 2013¹². The company said is in active discussions with Wilmar to address the issues raised by the Greenpeace report. **As for companies mainly engaged in the "green" industry, the nature of their product or service does not achieve their whole environmental and social responsibilities nor prevent them from getting involved in social conflicts; thus, the respect of human rights, promotion of labour relations, business ethics, and responsible management of supply chain, remain relevant for all companies. Environment cannot be dissociated from social responsibility, and international standards that define social responsibility and ESG factors are complementary and interdependent.**

CONCLUSION

It may appear a nice, simple and positive solution to focus an investment on a project or product providing direct environmental benefits. However, the responsibility to take into account all the indirect environmental and social impacts throughout the entire life-cycle of projects brings complexity for the investor. Building wind or solar farms certainly offers significant environmental benefits through the production of carbon-free electricity. However, all the "annex" operations from the mining of raw materials, their transportation, the manufacturing of the

products, their installation to be ready for use, their maintenance, and last but not least, how they are dealt with at the end of their useful life, cannot be ignored or considered as less important compared to the direct environmental benefit.

Those questions are closely linked to the issues facing the growing green bond market. Currently, issuer companies freely choose their selection criteria and the projects they intend to fund. In January 2014, the Green Bond Principles were launched in New York and signed by major investment banks.



These principles were drafted with a combined effort of investors, bond issuers and organizations.

They aim to support the integrity and transparency of green bonds, and to provide a framework for the assessment and selection of projects and the effective use of proceeds. According to these principles, a special attention should “be paid to the accuracy and integrity of sustainable information and data”. Moreover, several levels of assurance can be provided to the market. Those principles distinguish second party opinion of sustainability experts and third party certification / verification by auditors aimed at verifying the compliance of the fund allocation and the respect of bond commitments¹³. These principles form a solid

baseline that will be developed and refined over time with the maturing of the green bond market.

In conclusion, a reasonable assurance that a bond is green starts with the incorporation of environmental and social goals. Due to the inevitable complexity of these projects, the bond must establish clearly the environmental and social dilemmas that may exist and the footprints that are foreseen. To do this, it must address transparently these two questions; what is the benefit the investment is trying to reach? What are the potential negative consequences of this investment? As a crucial final dimension, it must allow for the transparent and periodic reporting on the integration of ESG within the bond framework.

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