

Engie: Business Model Transformation

Jorge Hernando Cuñado

International Coordinator. Business and Economics Professor. Business Department. Faculty of Social Sciences. Nebrija University. Spain. ORCID: [0000-0003-4025-1851](https://orcid.org/0000-0003-4025-1851).

Jorge Colvin Díez

Adjunct Professor. Department of Economics, Accounting and Finance. EAE Business School. Spain. ORCID: [0000-0001-8254-5757](https://orcid.org/0000-0001-8254-5757).

Javier Antonio Enríquez Román

Adjunct Professor. Marketing Department. School of Communications and Arts. Nebrija University. Spain. ORCID: [0000-0002-7141-2577](https://orcid.org/0000-0002-7141-2577).

jhernanc@nebrija.es, jcolvin@eae.es, jenrique@nebrija.es

Received: April, 2020.

Accepted: June, 2020.

Published: December, 2020.

Abstract

This article reviews the business model transformation of a French energy company, Engie. The company is adapting to a new energy business environment characterized by three trends: decarbonisation, decentralisation and digitalization. In order to achieve this objective Engie has carried out a three-year plan (2016-2019) focusing on renewable energy sources, local energy generation and new technologies. The company has developed a new strategy for the period 2019-2021, the aim is to become the world leader in zero-carbon transition “as a service” assisting business and local authorities to reduce their carbon footprint in their operations. This implies an asset light strategy, Engie provides tailor-made solutions and expertise to their customers while partnering with the owners of renewable power sources. The company is in line with the environmental concerns of all its stakeholders and believes in the profitability of this new strategy, centred on renewable energy sources.

Key words

Energy, Engie, environment, decarbonisation, renewable energy sources, asset light strategy, stakeholders.

How to cite this article

Hernando Cuñado, J., Colvin Díez, J., Enríquez Román, J. A. (2020). Engie: Business Model Transformation. *Harvard Deusto Business Research*, IX(2), 152-167. <https://doi.org/10.48132/hdbr.301>.

1. Introduction

This article is structured in four parts. The first one describes the problems of the global energy system and how Engie is facing them. The second part of the paper focuses on the strategy of the company, it was based on a three-year-transformation plan (2016-2019) to adapt to the new energy business environment. For the following three years the company concentrates on services to business and cities to foster energy transition. The actions carried out by the company are also reviewed, as well as what competitors are doing in relation to the energy transition. Finally, we analyse the “Asset Light Model” that Engie is implementing in order to differentiate and be successful in the Energy Market.

Case study is the methodology applied in the article, the case is the company Engie and the approach they are using to adapt to a new energy environment characterized by decarbonisation, decentralization and digitalization. Numerous companies will have to deal with this problem in the future and it is significant to understand how pioneer companies like Engie are facing the challenge. The sources of research used are mainly academic literature, Engie corporate reports, energy companies' reports and international energy agencies' reports.

2. Thinking of a fair energy transition

Energy has been one of the central themes of the political debate for quite some time. Oil prices, associated geopolitical conflicts, the impact on climate or supply problems are unfinished business in the global political agenda.

Energy transition is at the heart of the agenda of institutions, governments, civil movements and businesses. But does everyone understand and promote the same thing when it comes to energy transition?

In the last 150 years, the world's population has multiplied by 5.5 and energy consumption, due to the use of fossil fuels, has increased fiftyfold (Hughes, 2013).

This huge difference between the rate of population growth and energy consumption disarticulates the idea that the central problem is the increase of the world population. There are two key aspects at the core of the issue. Firstly, a strong trend towards urbanization; and secondly, a profound cultural change that has changed how we meet human needs.

If we had to define the current global energy system, we would do so with the term inequity. Per capita consumption of 18% of the world population living in OECD countries is four times higher than that of the rest of the world's population. For example, U.S. per capita consumption is 50 times higher than the one in Bangladesh (Bertinat, 2016). Furthermore, the weight of fossil fuels (oil and gas) in the global energy system and the perspective of economic gains exploiting them have played an important role in a great number of conflicts around the world: Irak, Syria, Ukraine, Nigeria or South Sudan are examples of this (Klare, 2014).

A report by the International Energy Agency (IEA, 2012) points out that there are 1.3 billion people who lack access to electricity and 2.6 billion people who cook with biomass in unhealthy conditions. According to this report, "only" 1 billion people are expected to have no access to electricity by 2030, although world production is expected to increase by 37%.

The current energy system is not designed to improve the life of citizens, as it is based on intensive use of fossil fuels that account for 81,3% of total primary energy supply. First Oil (32%), second coal (27,1%) and third Natural Gas (22,2%) (IEA, 2019a).

These studies are even more significant when applied to large energy companies since the same institution had foreseen five years ago that climate change could be avoided if the world did not consume more than a third of the current fossil reserves by 2030. But the scenario we find is that the exploitation of fossil resources has increased (Vilches & Gil-Pérez, 2016).

We should clarify that energy is much more than a physical issue. There are also social, political, economic and cultural sides to it. Some authors suggest that an increased energy production has allowed more people and territories to be controlled. On the other hand, it is in fact the ability to manage energy what allows social and environmental control (Castells, 2009).

While for many periods of history energy management has been –and continues being–, the management of resources, today the development of some modern renewable energy technologies seems to place the emphasis on technologies and materials.

There is an intense process of "financialising" nature in the proposals of the so-called green economy, instead of encouraging new alternatives for production, distribution and consumption of energy (Klein, 2015).

One of the first obstacles is the current regulation, which derives from the unprecedented process of market liberalization that took place in the 1900s. This process also leads to the segmentation of energy chains into business units, starting up a process of privatization of state energy, which remains in place until now.

One of the essential steps for a real change in the energy system is a change in the energy matrix. It is necessary to undertake a rapid and effective defossilization.

There is no doubt that the extraordinary economic growth that has taken place from the second half of the twentieth century has produced remarkable advances in the quality of life of millions of people. For example, life expectancy across the planet increased from 47 years in 1950 to 64 years in 1995. For this reason, there are many politicians, economists and sociologists who advocate to continue with this model of ongoing growth (Mulvaney, 2019).

Today we know that while economic indicators such as investment or production are positive, environmental indicators are increasingly negative. Some authors link economic growth to environmental degradation, questioning whether or not growth in the production of goods and services (including their consumption) is causing an ecological footprint impossible to ignore (Giddens, 2000).

The ecological footprint per inhabitant is 2.8 hectare, which means that the ecologically productive area, which barely reaches 1.7 hectares per inhabitant, is vastly exceeded. In 2020 the human species, which already exceeds 7.500 million inhabitants and continues to grow, is consuming more resources than the planet can regenerate. In the current ecological crisis, predatory consumption and unsustainable growth are the main factors for collapse, due to the degrading of ecosystems and growing inequalities and poverty (Taibo, 2019).

Evidence of this change is unequivocal, according to experts such as Carlos Taibo (2016). Since 1880 the average temperature of the world's surface has increased from 0.8 to 1.2 degrees Celsius and eight of the ten warmest years on record have occurred over the past decade (United Nations, 2019).

This lack of control has triggered a significant decline in the population of several species. Currently, 42% of terrestrial invertebrates, 34% of freshwater invertebrates and 25% of seafarers are on the verge of extinction. The world population of terrestrial vertebrates was reduced by an average of more than 60% between 1970 and 2014 (Planelles, 2019).

The UN believes that land degradation is likely to increase as long as there are no national and international management policies, accelerating the migration process in some regions. An estimated 4 billion people will live on barren lands by 2050, mainly in depressed regions of Africa or South Asia. Deforestation, which has slowed somewhat but is still advancing, is another major challenge, along with urban agglomerations, which in 2015 accounted for 7% of the world's land area (Moraleda, 2019).

Agriculture and livestock are another major environmental impact. Food production uses about 50% of the habitable land and 77% of agricultural areas are used for feed production, pastureland and grazing for meat production. To feed the 10 billion people expected to inhabit the world by 2050, a 50% increase in food production will be needed.

According to some scientific studies, we still have time (though not too much) to stop the current degradation process. The United Nations Environment Programme (UNEP), stresses that only a shift to an economy based on low-carbon consumption, renewable and efficient energy and food productivity will cause a decrease in ecological footprints (UNEP, 2019). Although global emissions from coal have reduced, the overall carbon dioxide emissions peaked in 2019 (Plumer, 2019)

This new economic and industrial revolution, which we can call "green" and which will replace the current "brown" one, will have to be carried out through an expensive transition full of constraints. It is no secret that the current productive system does not take into account the environmental costs in order to maximize its benefits.

To emerge from this "brown" crisis and create, at the same time, millions of new "green" employees, there is no need to reduce social rights, but to promote a more sustainable employment.

3. Engie: building a decarbonized future

In the summer of 2008 the French energy company Engie, former GDF Suez, changed its business model, aiming to create solutions for a decarbonized energy future.

Engie noticed the lack of access to energy in less developed countries and the growing concern of its stakeholders about the environment. Therefore, the company launched global initiatives to transform most of its energy production activities to low in carbon and to invest mainly in biogas and renewable energy.

The growth of the world population implies a great number of economic problems and social changes. Although this growth has concentrated in large cities of developed and emerging countries, the gap between urban and rural areas is widening in terms of housing quality, services or pollution.

Fortunately for younger generations, climate change awareness is increasingly important and therefore our understanding of its impacts is clearer. The concentration of CO₂ in the air has reached an all-time high, leading to fears of an increase in extreme weather events. In addition, biodiversity is declining dramatically: around 17,000 animal and plant species are currently endangered. However, in the face of these alarming findings, society has shown great concern. In order to reduce the impact of climate change around the globe, there is a change in behaviour in terms of energy consumption and production. This underlying trend has resulted in commitments by worldwide companies to limit global warming to +2 °C as a result of the 2015 Paris Agreement. To the same end, many governments are imposing increasingly severe regulations, as illustrated in France by the enactment of the 2015 law related to the energy transition for green growth and the Duty of Surveillance Act in 2017. Financial investors are also putting pressure on energy companies to be more transparent about their impacts on climate change (Engie, 2019).

For all these reasons, Engie has chosen new and innovative ways of producing, managing and supplying energy. Currently the company has more than 155,000 employees worldwide and presence in 70 countries to develop this new strategy.

4. Strategy

Continuous growth of the world population and the economic development of countries is increasing the access to energy, but also the global demand. Engie has carried out a three-year transformation plan (2016-2019) in order to adapt to the new environment in the energy sector. This new energy market is characterised by three major structural trends: decarbonisation, decentralisation and digitalisation (Engie, 2018).

Regarding decarbonisation, several studies show that the burning of fossil fuels and the consequent release of carbon dioxide to the atmosphere is the main cause of climate change (Letcher, 2019; Wuebbles & Jain, 2001). In response to this, Engie has focused on lowering its carbon portfolio and increasing the importance of low-carbon activities in EBITDA. It has passed from an 81% share of low carbon activities in EBITDA in 2016 to a 93% share in 2018 (Engie, 2019).

They are focusing on natural gas, hydropower, photovoltaic solar power, wind power, biomass and biogas.

The decentralisation of energy services means that energy generation is changing from large and centralised plants to local production at consumption locations through microgrids. Customers become “energy prosumers” because they can produce their own electricity through, for example, solar panels. This is possible due to the advanced and widespread use of technology at affordable prices. In order to adapt to this new situation, Engie has decentralised its organisation to become more flexible to satisfy customers’ needs and save costs through efficiency gains. Energy can be supplied at local level through local networks; this includes decentralised and smart energy models for cities and regions.

The digitalisation is changing the energy sector through Big Data analysis and artificial intelligence. This relates to innovation in the generation and storage of renewable energy, energy use monitoring, diagnosis or installation of equipment. It is easier for customers to control and optimise their energy use on account of the connection of everyday objects to the Internet. Engie has increase the expenditure in digital technologies from 0.5 billion euros in 2016 to 1.4 billion euros in 2018 (Engie, 2019).

With the aim of adapting to this new energy environment, Engie set three strategic objectives in its transformation plan: increase the share of low-carbon operations to more than 90% of EBITDA, increase the business of integrated customer solutions (over 50% of EBITDA by 2018) and improve the risk profile by reducing exposure to volatile commodity prices (Engie, 2017). Two of the objectives have been reached, as shown in Table 1.

Table 1

Engie's Strategic Objectives consecution 2016-2018

	2016	2017	2018	Objectives in 2018
Share of low-carbon activities in EBITDA	81%	91%	93%	> 90%
Increase in EBITDA from integrated customer solutions since the end of 2015 at constant exchange rates	+2%	+22%	+36%	+ 50%
Share of regulated or contracted activities in Group EBITDA	75%	89%	93%	> 85%

Source: Engie Integrated Report 2018 & 2019.

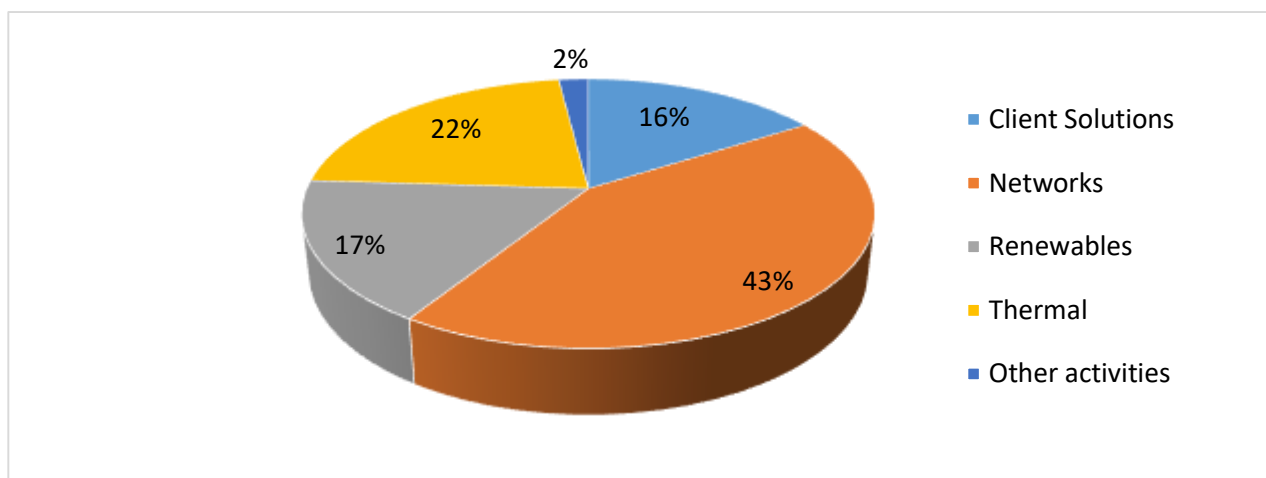
Integrated customer solutions include Energy Supply, Technical Services, Facility Management and Energy services. These customer solutions are focused on business, private and professional customers, cities and territories.

The company has elaborated a new strategic plan for the period 2019-2021, the objective of which is to become the world leader in zero-carbon transition as a service (Engie, 2019). Engie assists business and local authorities to achieve a zero-carbon transition in their sectors. In order to get this, the company will focus on four areas: (i) Client Solutions including Business to Business (B2B) and Business to Territory; (ii) Renewables (hydropower, photovoltaic solar power, wind power, biomass, biogas); (iii) Networks (gas and electricity infrastructure); and (iv) Generation and Supply (thermal, nuclear power, supply, etc.).

The contribution of these activities to EBITDA can be observed in Figure 1. The most important contributions come from Networks (43%) and Thermal (22%), followed by Renewables (17%) and Client Solutions (16%). Therefore, traditional activities (infrastructures and generation and supply) still plays an important role in the company but the innovative ones (renewables and client solutions) are the cornerstone of the future growth of the company.

Figure 1

Contribution to EBITDA by activities 2019



Source: Engie Integrated Report 2019.

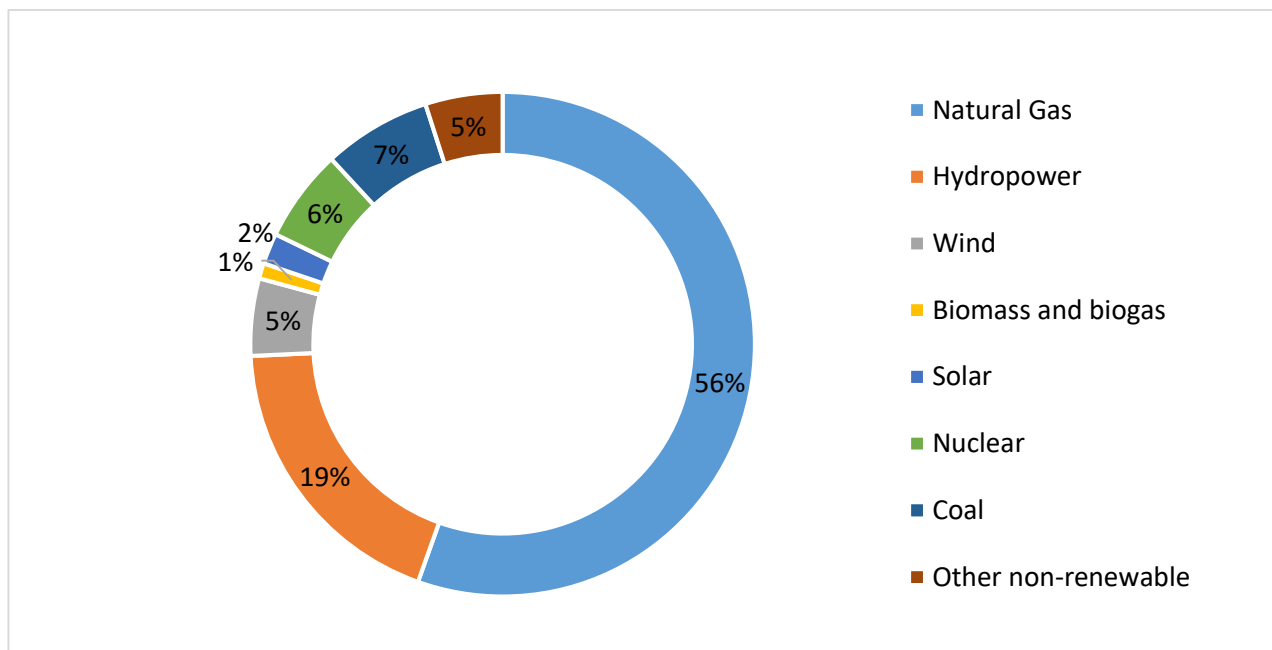
One of the limitations of renewable energies is storage. Wind and solar power are variable and intermittent. Additionally, batteries to store long-term energy are high-priced. Lithium-based batteries are considered a solution for the management of renewable energy and a potential economic opportunity for countries with large reserves of this element. The setbacks are the time required to implement the projects and the great increase in costs if that time is to be reduced (López, Obaya, Pascuini & Ramos, 2019). Nowadays, the most frequent option for long-term

storage is pumped-storage hydroelectricity. This consists of pumping water to a higher elevation reservoir when there is surplus of electric power; the water will then be released to a lower reservoir through turbines to generate electricity when needed. The difficulty is the land required to build these facilities (Thurber, 2020) and installation costs. Another option for storage is power-to-gas (P2G) whereby the surplus electrical power is converted into gas that can be used directly or transformed into electricity. This system relies on electrolysis, making use of electricity to split water into hydrogen and oxygen. This technology has its setbacks: it is expensive and there is loss of energy during the process. An additional solution could be to expand the grids that distribute the electricity. Electricity could be shared from places with surplus to places that need power. The obstacle is again the cost of expanding the grid. An alternative option is combining renewable energy with gas turbines that will complement the variability and intermittency of renewable sources. There is also the possibility of incorporating biomass, this is also a renewable source of energy and it is less irregular. Gas could play an important role in the energy transition from fossil fuels to renewable sources. Coal to gas substitution decreases, on average, CO₂ and methane emissions by 50% when generating electricity and 33% when producing heat (IEA, 2019b).

Figure 2 reveals the importance of natural gas and hydropower in electricity capacity in Engie's business model (75% of electricity capacity at the end of 2017).

Figure 2

Engie – Breakdown of Electricity Capacity 2017



Source: Engie Integrated Report 2018.

Following the concept of “Marketing Myopia” (Levitt, 1960), energy companies should focus on the customer need (energy) instead of the product (fossil fuels). Furthermore, innovations in the energy sector and the preoccupation with the environmental problems caused by fossil fuels are changing the energy sector environment. Companies that don’t adapt to this new environment are in danger of disappearing. Here applies the theory of “creative destruction” (Schumpeter, 1942), wherein obsolete companies close and innovative ones succeed and produce economic growth. It is a question of being better adapted to the environment and better satisfying customer needs. There is a growing concern among companies, consumers and states about the effects of fossil fuels on global warming. This is in line with the Paris Agreement of 2015, the objective of which was to reduce greenhouse gas emissions to limit global temperature rise well below 2°C above pre-industrial levels and to restrict the temperature increase to 1.5°C. To date, 187 parties have ratified the agreement (United Nations, 2020). On 4th November, 2019, the United States, under Donald Trump’s presidency, started the process to leave the Paris Agreement. The procedure completion needs one year; therefore, the country will leave the Agreement on 4th November, 2020, a day after the presidential elections.

In spite of the efforts, 2019 was the second warmest year globally and the decade 2010-2019 was the warmest decade on record (Copernicus Climate Change Service, 2020). Global energy-related CO₂ emissions increased 1.7% in 2018, coal power generation being the higher contributor with 30% of all energy CO₂ emissions (IEA, 2019c).

In order to implement its transformation plan, Engie conducted several acquisitions and sales:

In 2015, the company acquired Solairedirect for 200 million euro, becoming the leader of solar power in France. In 2017, they bought La Compagnie de Vent SA, a wind and solar power company in France. Subsequently, in 2018, the group purchased Sameole, a wind farm developer with projects in seven regions in France. In 2019, Engie acquired ChargePoint Services Ltd, a British electric vehicle charging provider. The company also led a consortium that bought six hydroelectric dams in Portugal for 2.2 billion euros in December 2019.

In regard to disinvestments, the group sold its United States fossil portfolio in 2016. After that, the company liquidated Engie E&P International S.A., an oil and gas producer in Europe, Africa and Asia, for 3.6 billion euros in 2017. Subsequently, Engie sold its upstream and midstream Liquefied Natural Gas (LNG) activities in the United States and Europe to the French company Total. In 2019, the company sold several coal-fired power plants in Germany and the Netherlands following its decarbonisation strategy. The company also experienced some trouble with nuclear energy in Belgium due to unscheduled outages, which meant a loss in earnings in 2018.

The group is retreating in three years from twenty countries where it has a marginal role. The idea is to focus on fewer countries, but looking for a greater impact within the energy market of those countries. This is also related to efforts to reduce costs, increase efficiency and simplify strategy in the company. The company is also targeting some of the most important cities in developing countries.

Technology is a key factor in Engie’s strategy. The declining costs of wind and solar technology (Bogmans, 2019) have increased the profitability of renewable energies. Furthermore, smart grids,

energy storage (power-to-gas), web applications and blockchain services are being used in the company. The group has invested 1.5 billion euros in emerging and digital technologies in the period 2016-2018 (Engie, 2019).

There are other energy companies that are also focusing on the energy transition. Iberdrola, a Spanish company based on Bilbao, has a business model centred on the electrification and decarbonisation of energy and the use of renewable sources. The company has set the objective of reducing 50% of its CO2 emissions by 2030 compared to those of 2007 and reach carbon neutrality by 2050 (Iberdrola, 2019a).

This group is investing 34 billion euros in the 2018-2022 period; of which 86% will be in long-term or regulated activities; specifically, 47% in networks, 39% in renewables energies and 11% in generation and supply. The company has offshore wind farm projects in Saint Brieuc (France), Vineyard Winds (United States), Baltic Eagle (Germany) and the Tàmega hydroelectric project in Portugal (Iberdrola, 2019b).

Iberdrola, Energias de Portugal (EDP) and Enel have science-based targets, a set of goals that establish a clear route to reduce greenhouse emissions, specifying the quantities and the time to reach this objective. They are in conformity with the Paris Agreement goals limiting global warming.

There is also new competence from oil companies that are entering into renewable energies. Some companies, like Repsol, Total and Shell, are trying to diversify their operations and reduce their dependency on oil resources. In December 2017, Shell acquired the gas and electricity group First Utility in the United Kingdom, British Petroleum bought solar generator Lighthouse in 2017 and the French company Total purchased the 95% of the gas and electricity retailer Direct Energie in 2018. Furthermore, Repsol acquired Viesgo's low-emissions electricity assets and retail business, expanding its operations to the electricity sector in 2018.

In relation to oil majors, there are two groups with different strategies: Royal Dutch, Shell, Total, BP and Equinor have initiated the transition from oil to energy and Exxonmobil, Chevron and Petrobrass are more focused on hydrocarbon; oil majors with less oil reserves are progressing faster with the transition than companies with abundant deposits (Pickl, 2019).

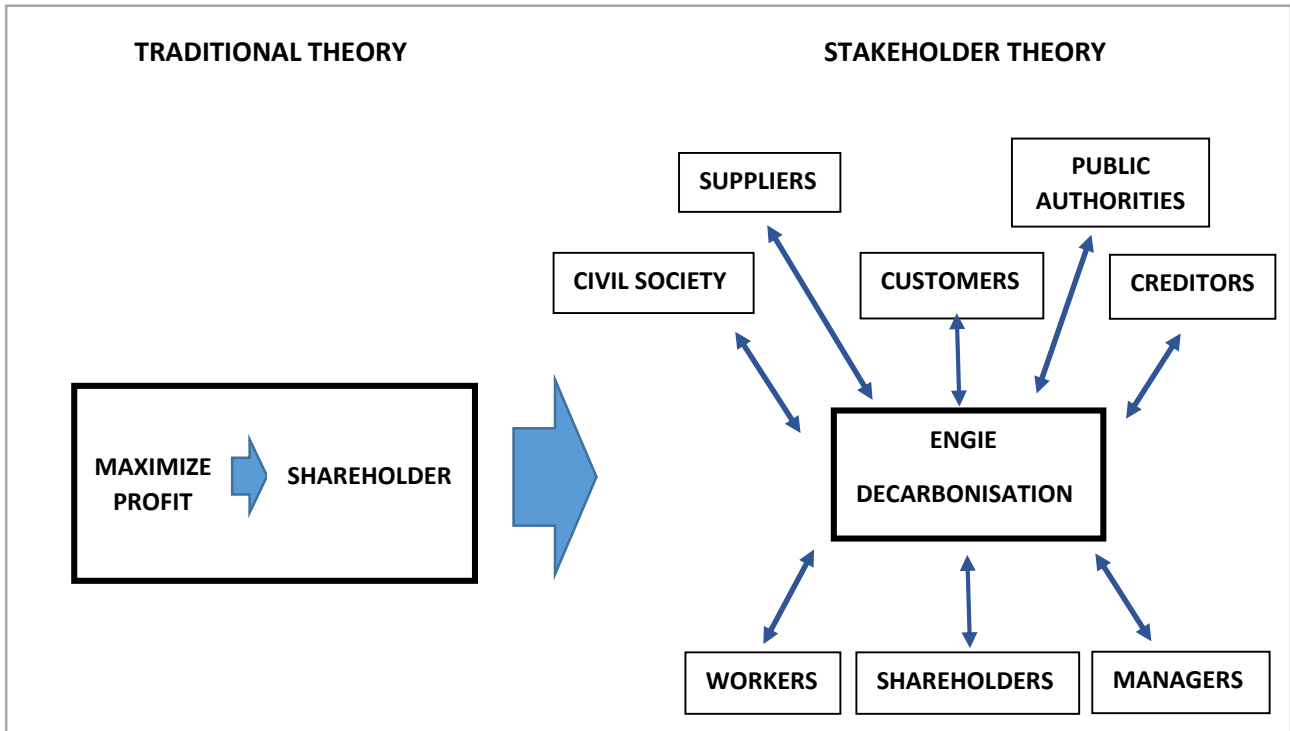
Engie, due to the transformation of its business model, is more in line with stakeholder theory (Freeman, 1984). The company is not only under obligation to its shareholders, it must also take into account anyone who is involved in or affected by the business: workers, shareholders, government, customers, providers, community, etc.

There is an increasing concern about environment among all stakeholders: some companies take into account the carbon footprint in order to select providers, governments and public authorities consider environmental factors in order to assign public projects, customers can discriminate products depending on ecological factors and firms are internally improving their sustainability in everyday activities. This is even more important in energy companies because of their large contribution to carbon emissions.

The change from a traditional model based on maximizing profit for shareholders to a new one including all the stakeholders of the company and centred on decarbonisation can be observed in figure 3.

Figure 3

Engie – Engie and Stakeholder Theory



Source: Own elaboration.

Therefore, Engie is adapting to an environment and to stakeholders who are concerned about sustainability. The company also believes in the profitability of this new scenario. However, some of the new investments of the company are long term and it will require time to see the effects on the company results. The objective is “the triple bottom line”, changing the traditional focus of companies on profits, return on investment and shareholder value to planet, people and profit (Elkington, 1997). Thus, they also take into account environmental and social factors that are important for the stakeholders.

5. Asset Light Model

Isabelle Kocher managed one of the top energy companies in France: Engie. Under her leadership the company followed a new and innovative strategy: selling fossil fuel assets and investing the proceeds in renewable energy and new sophisticated services. Her plan was transforming the former gas monopoly into a clean power champion. The objective was to boost profits and to be the first global utility to take the strategic shift to Asset Light.

Engie implemented the Asset Light approach: by leveraging on its leading B2B energy service activity it is in a unique position to build a comprehensive, global platform which will be difficult to replicate for competitors:

1. By leveraging on its leading B2B energy service activity. Infrastructure and Pension funds are investing in the energy sector. With their lower cost of capital, they are ultimately the new owners of renewable power sources.

A lower cost of capital is key, because renewables are very intensive in Capital Expenditure (Capex) and Operating Expenditure (Opex). Engie enters into partnerships with these Infrastructure and pension funds through structures that enable the company to propose financed, tailor-made solutions to industrials and municipalities. Engie thus shares ownership of the assets with its partners while providing specialised services. These shareholding and contractual structures are based in the so-called “Asset Companies” (AssetCo’s) and “Operating Contracts” (OpCo’s) through which Engie can create substantial shareholder value. The “AssetCo/OpCo” implies the structuring of high Intellectual Property (IP) design, develop and operate activities on a global platform and separate them from the classic Capital Expenditure (Capex) deployment and asset ownership.

2. Unique position to build a comprehensive, global platform which will be difficult to replicate for competitors. Engie is still deploying capital in areas with higher barriers of entry (e.g. decentralized energy generation, cold/heat systems in its Asset Based business, or Offshore wind), yet making the shift to the service business model.

Under this new business model, Engie is the first large utility to make the necessary adjustments to its business model to meet the challenges now facing the industry, by leveraging on its own expertise and taking an inferior stake in Capex and Opex.

This AssetCo/OpCo model based on the partnership with Infrastructure and Pension Funds and the implementation of tailor made solutions and can be observed graphically in figure 4.

Engie still works with nuclear generation and has a large exposure to gas. For these reasons, the market may still have doubts on the ability of Engie to grow organically.

However, the company is expected to simplify its operations even more in the following years: going asset light, improving returns, reducing exposure to gas.

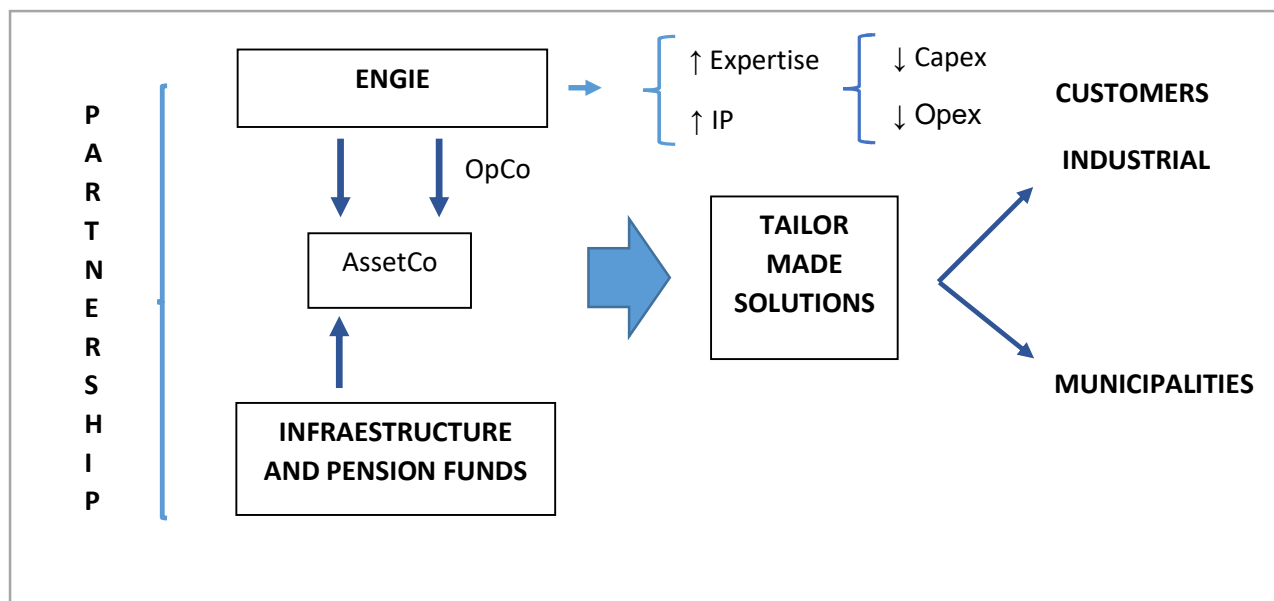
Although there are risks on the horizon:

- Deteriorating European generation commodities could keep earnings under pressure in the medium term.

- A weaker growth outlook in the Renewables and Customer Solutions business because of a drying pipeline of new investment projects at acceptable returns.
- The return of “transformative” Mergers and Acquisitions, perceived to be driven by the need to sustain falling earnings at the expense of shareholder value.
- Failure to deliver on medium term earnings guidance could mean a derating of Engie shares.

Figure 4

The AssetCo/OpCo model promoted by Engie



Source: Own elaboration.

6. Conclusions

Engie has implemented a transformation plan in the period 2016-2019 to adapt to a new energy business environment based on decarbonisation, decentralisation and digitalisation. The company has focused on renewable sources of energy and reducing fossil fuels dependency. It is important to understand how they are implementing the change, as most energy companies are going to face the same situation in the future.

The Energy transition is a matter of urgency due to the environmental consequences of fossil fuels in the planet. It is not just a question of “getting greener”, the objective is find out a model which is respectful with the environment and, at the same time, profitable. All the stakeholders of the company benefit from this transformation. The problem of renewable energy is intermittence and the impossibility of storage. Gas could play an important role in the energetic transition,

complementing renewable sources when needed. Engie has concentrated on the need (energy) and not on the product (fossil fuels) confronting the “marketing myopia” described by Levitt. The increasing concern about global warming and the limited future of fossil fuels requires energy companies to innovate and drive the energetic transition to renewable sources. The risk of not doing so for business could be becoming obsolete and their disappearance through the process of Schumpeterian creative destruction.

The objective of Engie for the period 2019-2021 is to centre on tailor made-solutions to assist customers in their zero-carbon transition. In order to achieve this, they follow an Asset Light strategy, they partner with infrastructure and pension funds that are the new owners of renewable sources due to their lower cost of capital, Engie delivers expertise and reduces asset ownership. This business model transformation is satisfying better the needs of Engie’s main stakeholders: civil society, public authorities, business community, financial community and human resources. Only future will tell the potential of this new business model in terms of growth and profitability.

7. References

- Bertinat, P. (2016). Transición energética justa. Pensando en la democratización energética. *Revista FES*, 13(2), 395-407.
- Bogmans, C. (2019). Falling costs make wind, solar more affordable. 26 April. Retrieved from <https://blogs.imf.org/2019/04/26/falling-costs-make-wind-solar-more-affordable/>.
- Castells, M. (2009). *Comunicación y poder*. Madrid: Alianza.
- Copernicus Climate Change Service (2020). *Copernicus: 2019 was the second warmest year and the last five years were the warmest on record*. Retrieved from <https://climate.copernicus.eu/copernicus-2019-was-second-warmest-year-and-last-five-years-were-warmest-record>
- Elkington, J. (1997). *Cannibals with forks: The Triple Bottom Line of 21st Century Business*. Oxford: Capstone.
- Engie (2017). *2017 Integrated Report*. Retrieved from https://www.engie.com/sites/default/files/assets/documents/2019-09/2017_IntegratedReport.pdf
- Engie (2018). *2018 Integrated Report*. Retrieved from <https://ddd.uab.cat/pub/infanu/169244/iaENGIEa2018ieng1.pdf>
- Engie (2019). *2019 Integrated Report*. Retrieved from https://www.engie.com/sites/default/files/assets/documents/2019-11/engie_ri_2019_va_v2_12-06-19.pdf
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Boston: Pitman.
- Giddens, A. (2000). *Un mundo desbocado. Los efectos de la globalización en nuestras vidas*. Madrid: Taurus.
- Hughes, J. D. (2013). *Perfora chico, perfora*. Santa Rosa, California: Post Carbon Institute.
- Iberdrola (2019a). *Integrated Report/February 2019*. Retrieved from https://www.iberdrola.com/wcorp/gc/prod/en_US/corporativos/docs/IB_Integrated_Report.pdf

- Iberdrola (2019b). *Iberdrola speeds up global growth with investments of €34 billion by 2022*. February 26, Retrieved from <https://www.iberdrola.com/press-room/news/detail/iberdrola-speeds-global-growth-with-investments-billion-2022-1>
- International Energy Agency (2012). *World energy Outlook 2012*. Retrieved from <https://www.iea.org/reports/world-energy-outlook-2012>
- International Energy Agency (2019a). *Oil Information 2019*. Retrieved from <https://www.iea.org/reports/oil-information-2019>
- International Energy Agency (2019b). *The Role of Gas in Today's Energy Transition*. Retrieved from <https://www.iea.org/reports/the-role-of-gas-in-todays-energy-transitions>
- International Energy Agency (2019c). *Global Energy & CO2 Status Report 2019*. Retrieved from <https://www.iea.org/reports/global-energy-co2-status-report-2019>
- Klare, M. T. (2014). Twenty-first century energy wars: how oil and gas are fueling global conflicts. *Le Monde Diplomatique*. 8 July. Retrieved from <https://mondediplo.com/openpage/twenty-first-century-energy-wars>
- Klein, N. (2015). *Esto lo cambia todo*. Barcelona: Paidós.
- Letcher, T. M. (2019). Why do we have global warming? In T. M. Letcher (Ed.), *Managing Global Warming* (pp. 3-15). <https://doi.org/10.1016/B978-0-12-814104-5.00001-6>
- Levitt, T. (1960). Marketing Myopia. *Harvard Business Review*, 38, 45-56.
- López, A., Obaya, M., Pascuini, P., & Ramos, A. (2019). *Litio en la Argentina. Oportunidades y desafíos para el desarrollo de la cadena de valor*. Buenos Aires: Presidencia de la Nación y BID. Retrieved from [https://publications.iadb.org/publications/spanish/document/Litio en la Argentina Oportunidades y desafíos para el desarrollo de la cadena de valor es es.pdf](https://publications.iadb.org/publications/spanish/document/Litio%20en%20la%20Argentina%20Oportunidades%20y%20desafíos%20para%20el%20desarrollo%20de%20la%20cadena%20de%20valor%20es%20es.pdf)
- Moraleda, A. (2019). 2019, el año del desastre: cierra con un récord histórico de emisiones de CO2. *El Español*. 5 December. Retrieved from https://www.elespanol.com/ciencia/medio-ambiente/20191205/ano-desastre-cierra-record-historico-emisiones-co2/449456033_0.html
- Mulvaney, K. (2019). Climate change report card: These countries are reaching targets. *National Geographic*. 24 September, Retrieved from <https://www.nationalgeographic.co.uk/environment-and-conservation/2019/09/climate-change-report-card-these-countries-are-reaching>
- Pickl, M. J. (2019). The renewable energy strategies of oil majors – From oil to energy? *Energy Strategy Reviews*, 26. <https://doi.org/10.1016/j.esr.2019.100370>
- Planelles, M. (2019). Crisis climática: 2019 marcará máximos históricos de emisiones de CO2 y temperaturas. *El País*. 4 December. Retrieved from https://elpais.com/sociedad/2019/12/03/actualidad/1575400446_816435.html
- Plumer, B. (2019). Carbon Dioxide Emissions Hit a Record in 2019. *The New York Times*. 3 December. Retrieved from <https://www.nytimes.com/2019/12/03/climate/carbon-dioxide-emissions.html>
- Schumpeter, J. A. (1942). *Capitalism, Socialism and Democracy*. New York: Harper&Row.
- Taibo, C. (2016). *Colapso*. Madrid: Los Libros de la Catarata.
- Taibo, C. (2019). *Ante el colapso*. Madrid: Los Libros de la Catarata.
- Thurber, M. (2020). Power-to-gas for long term energy storage. 16 January. Retrieved from <https://www.energyforgrowth.org/memo/power-to-gas-for-long-term-energy-storage/>

- United Nations (2019). Global Environment Outlook 6. Summary for Policymakers. Retrieved from <https://www.unenvironment.org/resources/assessment/global-environment-outlook-6-summary-policymakers>
- United Nations (2020). Paris Agreement – Status of Ratification. 5 February. Retrieved from <https://unfccc.int/process/the-paris-agreement/status-of-ratification>
- United Nations Environment Program (2019). Emissions Gap Report 2019. UNEP, Nairobi. Retrieved from <https://wedocs.unep.org/bitstream/handle/20.500.11822/30797/EGR2019.pdf?sequence=1&isAllowed=y>
- Vilches, A., & Gil-Pérez, D. (2016). La transición a la sostenibilidad para la superación de la crisis sistémica actual. *Revista Eureka*, 13(2), 395-407.
- Wuebbles, D. J., & Jain, A. (2001). Concerns about climate change and the role of fossil fuel use. *Fuel Processing Technology*, 71(1-3), 99-119. [https://doi.org/10.1016/S0378-3820\(01\)00139-4](https://doi.org/10.1016/S0378-3820(01)00139-4)