La Française de l'Energie

Utilities / France

Document generated on the 10/01/2018

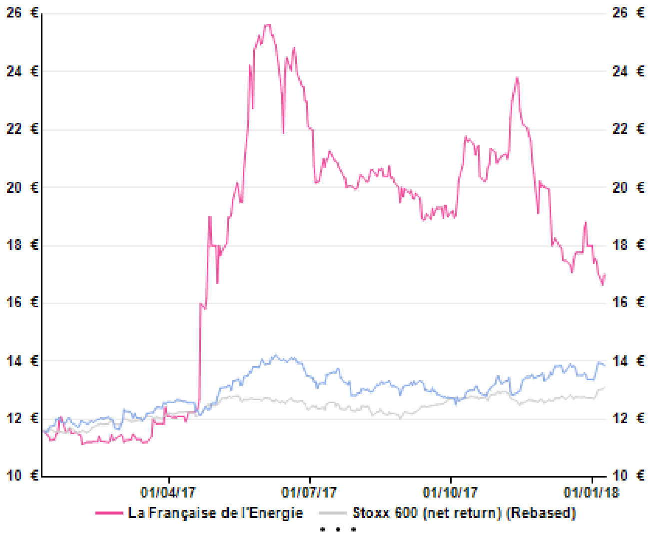
A leading clean energy player

KEY DATA	06/16A	06/17A	06/18E	06/19E	06/20E
Adjusted P/E (x)	**-16.9**	**-35.4**	**ns**	**31.6**	**13.0**
Dividend yield (%)	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*
EV/EBITDA(R) (x)	-13.8	-39.4	45.6	12.3	6.36
Adjusted EPS (€)	**-1.00**	**-0.46**	**-0.15**	**0.54**	**1.31**
Growth in EPS (%)	*n/a*	*n/a*	*n/a*	*n/a*	*144*
Dividend (€)	0.00	0.00	0.00	0.00	0.00
Sales (€M)	0.00	3.68	12.8	25.4	38.5
EBITDA/R margin (%)	*ns*	*-60.1*	*20.4*	*44.1*	*54.6*
Attributable net profit (€M)	-4.16	-2.32	-0.74	2.81	7.03
ROE (after tax) (%)	**-13.5**	**-4.43**	**-1.43**	**4.68**	**9.78**
Gearing (%)	*4.10*	*-11.1*	*28.1*	*51.6*	*53.0*

Last forecasts updated on the 13/11/2017

Benchmarks		Values (€)	Upside	Weight
DCF		39.1	130%	40%
NAV/SOTP per share		47.7	181%	40%
P/E	*Peers*	8.50	-50%	5%
EV/Ebitda	*Peers*	3.26	-81%	5%
P/Book	*Peers*	12.3	-28%	5%
Dividend Yield	*Peers*	0.00	-100%	5%
TARGET PRICE		35.9	111%	100%

Buy	Upside potential : 111%
Target Price (6 months)	35.9
Share Price	€ 17
Market Capitalisation €M	86.1
Price Momentum	**NEGATIVE**
Extremes 12Months	11.1 ▸ 25.6
Bloomberg ticker	LFDE FP



Conflicts of interest

Corporate broking	NO
Trading in corporate shares	NO
Analyst ownership	NO
Advising of corporate (strategy, marketing, debt, etc)	NO
Research paid for by corporate	YES
Provision of corporate access paid for by corporate	NO
Link between AlphaValue and a banking entity	NO
Brokerage activity at AlphaValue	NO
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Recent Updates

Updates

10/01/2018 Test campaign assessing the potential for further gas-to-power units in Northern France

Latest

Fact

LFDE has launched a test campaign to expand its coal mine methane business (capturing gas from the former coal mining galleries) in Northern France, in the Valenciennois area.

Analysis

The first test, in Rouvignies, confirmed the potential for a gas-to-power unit, as the gas had an 86% methane content.

The company plans to complete six tests, aimed at studying the potential for new gas-to-power units.

The tests should also help reassess the volumes LFDE can produce, as DMT should certify the resources in H2 18.

We expect the company to continue to develop an economically and ecologically competitive clean energy for local consumption.

20/12/2017 Positive results from the Lachambre production test

Latest

Fact

The production test at Lachambre, Lorraine (Eastern France) has given good results.

The production curve and the maximum flow levels confirm the potential for development. The tested vein (n.15) has technical specifications similar to, or better than, coalbed methane (CBM) projects currently producing in Australia, Asia and North America.

Analysis

This is a key step for LFDE in the context of its concession application, which should be submitted in H1 18.

In Lorraine, LFDE exploration permits have maturities ranging over 2018-19. The group should be able to apply for a concession on the back of the Lachambre test.

A word about French regulation

The French government in autumn 2017 issued a new regulation ("Loi Hulot") to stop the issuance of new exploration permits in France.

According to the company, the government's stance on hydrocarbon exploration only concerns new exploration permits, while the existing concessions and ongoing applications on existing discoveries would be unaffected.

Impact

In our SOTP, we may slightly increase the estimated probability of extracting the contingent resources in Lorraine and reduce the probability related to the Lorraine reserves, on the back of the regulatory environment.

13/11/2017 2016/17 update

La Française de l'Energie (Buy)

Alternative Energy / France

Updates

Change in EPS

	2017 : € -0.15 vs -0.15	ns
	2018 : € 0.54 vs 0.54	+0.00%

We have integrated the 2016/17 actual figures. The net loss, at €2.3m, was smaller than our estimate (-€3.8m).

09/11/2017 Green gas-to-power drives first positive cash flow

Earnings/sales releases

Fact

Q1 17/18 (to September 2017) revenues more than doubled to €1.4m.

Analysis

The growth is pulled by the green gas-to-power business in Northern France, which contributed €0.8m. LFDE's plants have generated 15GWh since the start of operations at the end of June.
The company is assessing new locations to increase capacity, and expects to make the investment decisions in early 2018.

In Lorraine (Eastern France), the production test in Lachambre is giving good results; gas output should be ramped up during the next few months.

LFDE posted its first positive cash flow starting in August.

We expect the company to continue to roll out its plan to provide an economically and ecologically competitive clean energy for local consumption in both Northern France and Lorraine.

Impact

The release confirms the growth potential of LFDE.

13/07/2017 Contract to supply green energy to Béthune in Northern France

Latest

Fact

LFDE has signed a partnership with Dalkia Group to supply gas, green electricity and heat to the city of Béthune.

Analysis

Gazonor will supply Béthune's heat network by replacing the imported gas with its local CMM captured from the former coal mine galleries. The company will also supply a 2MW co-generation unit.
The contract will start in 2021; it has a 22-year duration and should represent over €1m in recurring revenues. It should both reduce Béthune's CO_2 footprint by 30% and lighten the consumers' energy bill.
This confirms LFDE's proposition as a local green energy supplier.

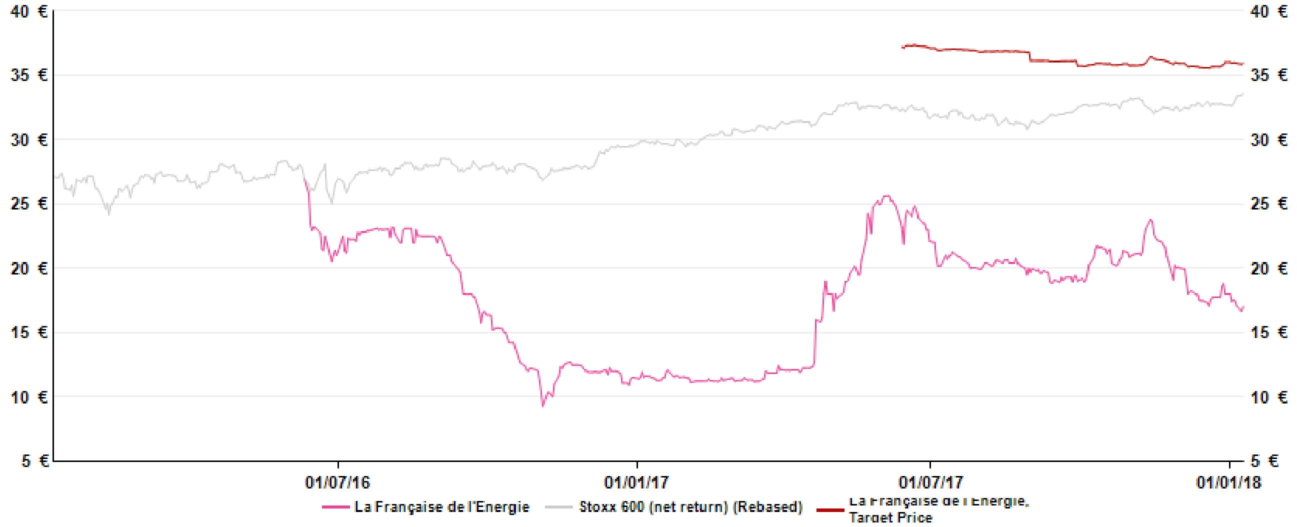
Body of research

La Française de l'Energie (Buy)

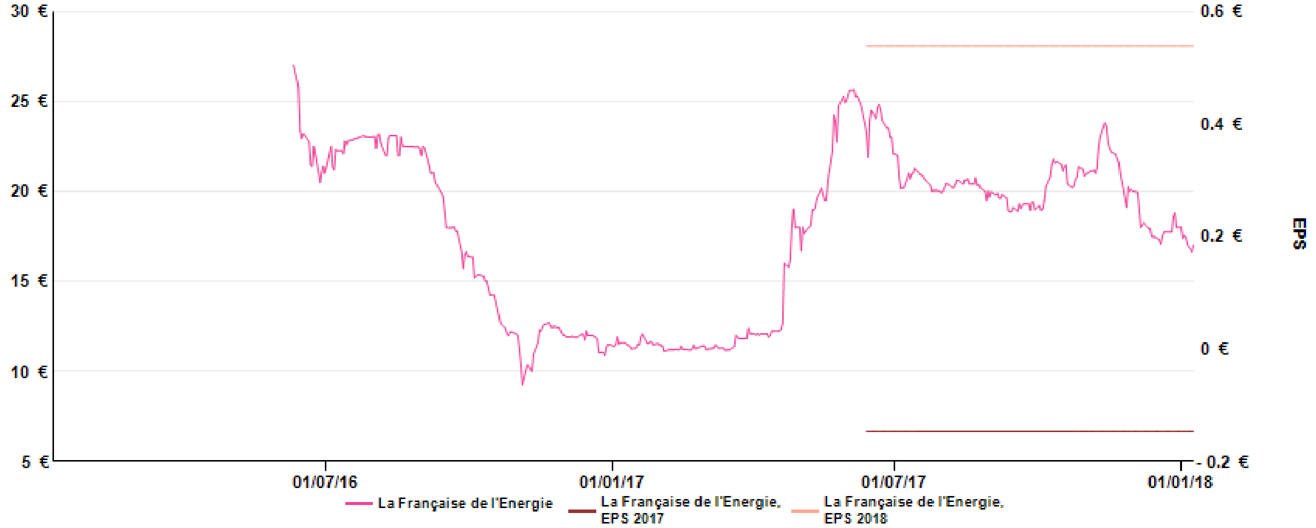
Alternative Energy / France

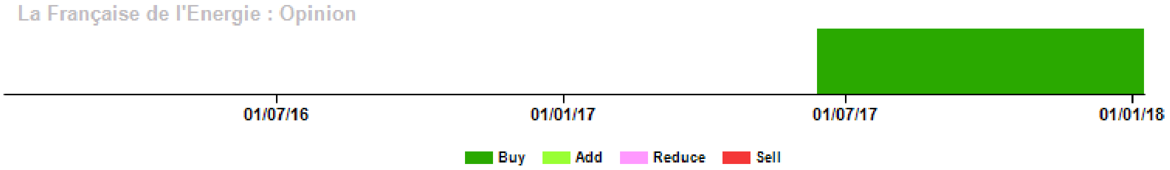
Target Price & Opinion

Stock Price and Target Price



Earnings Per Share & Opinion





Businesses & Trends

LFDE is a green energy company developing sustainable gas resources for local consumption.

LFDE produces gas and electricity via two related activities.
In Northern France, LFDE captures the gas that is accumulating in former coal mining galleries, thereby preventing this gas from being released into the atmosphere. This gas is sold at one site (Avion) as pipeline quality gas to Total Gas&Power. At other sites, the gas will be directly converted via gas engines into green electricity and sold under a 15-years Feed in Tarif (FiT) agreement with the French State, to EDF Obligation d'achat.

In Eastern France, the company recuperates the pure gas present in the coal seams lying at a depth of 700-1,500 metres. This gas will then be sold as gas to local utilities or industrial players.

As an energy source, coal gas is a large mature industry in most other coal basins globally (Australia, North America, China…) but is still poorly developed in France and Western Europe despite the resources being present. In Europe, France has the highest known potential with over 5,000bn m3 of gas in place present in the former coal basins in Les Hauts de France and Grand Est regions, according to IHS CERA. LFDE's portfolio of assets is very unique amongst the independent energy players in Europe, since it contains a mix of existing production, near-term development and a large untapped potential (over 300bn m3, representing more than six years of France's annual gas consumption). LFDE owns the vast majority of known gas reserves and resources in France, controlling 100% of the most prolific acreage in France. This represents a massive barrier to entry and also explains the attractiveness of the company's position.

The strategy of the group is to supply an economically and ecologically competitive clean energy for regional consumption in both Lorraine and Northern France, while growing its gas reserve base through further appraisal wells in Lorraine and expanding its operations in neighbouring countries.

Link to the company's video describing what CMM and CBM are (in French):
https://www.youtube.com/watch?v=-fp8BSDQeJk&feature=youtu.be

a. Northern France – Significant short-term value creation through massive increase of green energy production
The gas captured in the former coal mining galleries, preventing this gas from going into the atmosphere, is a mixture of methane and air. It is commonly recoverable for many decades after the end of mining operations as methane continues to be released by the coal seams in the void created by the mining galleries. Its methane content typically varies from 25% to 80% with the remaining components being a mix of other gases such as nitrogen, carbon dioxide, oxygen and ethane and propane in some cases. The methane content of LFDE's operations in the Nord's Pas de Calais basin averages 50%.

Methane has harmful effects when released into the atmosphere and can be a safety hazard. Therefore LFDE's operations in Northern France, by capturing the methane and preventing this gas from going into the atmosphere, has significant environmental benefits. These benefits have been recognised by the French government and the EU as key factors in the European energy transition. As such, power produced from this gas benefits from a favourable feed-in tariff (FiT) guaranteed over 15 years by the French State. Article L314-1 of the French Energy Code, Decree No. 2014-375 of 28 March 2014 and the 4 November 2016 Decree, signed by the Ministry of Environment and Energy, regulate the FiT.

This FiT decreases linearly with the increase in installed capacity, and ranges from up to €77.4/MWh for 1.5MW per unit of installed capacity down to €58.2/MWh for a 4.8MW or larger engine.

This gives this gas-to-power activity a lower risk profile than other energy plays since it eliminates the pricing risk and the volatility of revenues associated with it. The gas to green power activity that LFDE develops in Northern France is very similar to an infrastructure project, with much better returns than comparable green energy production such as solar or wind power.

With over 7bn m3 (250 Bcf) of certified 2P gas reserves and 20bn m3 (700 Bcf) of certified 3P gas reserves, on its two main production permits in Northern France, LFDE is in a position to increase historical volumes of c.2.6 Bcf/y significantly

Businesses & Trends

to 8 Bcf/y or more. The investments into gas engines to monetise this gas through power production benefiting from the FiT will significantly enhance the profitability and risk profile of the company. Indeed, we anticipate the company will be able to boost its EBITDA in the Northern France Green Energy business from the €5m targeted for financial year June 2018 to over €10m by 2020 – and possibly more as LFDE could identify further projects.

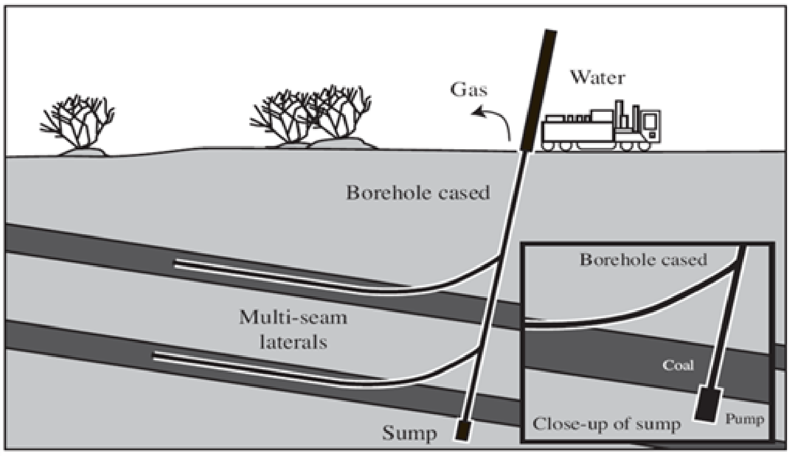
In addition to its gas sales and gas-to-power production, LFDE is also likely to be able to trade CO2 certificates at some point in the future given the hundred thousand tons of green gas emissions LFDE saves yearly by capturing gas in the former coal mines before it goes into the atmosphere (estimated at 250k per year by the French Energy department). This could be a significant additional source of revenues since CO2 currently trades at about $5 per ton. We do not taken into account any value for this potential additional source of net revenues for the company at the moment.

There is also the opportunity for LFDE to sell the heat generated by the installed gas engines used for electricity generation (CHP – combined heat and power). This is again an additional source of revenues that we have not taken into account at this stage but will be modelling in once there is a first CHP project.

This activity in Northern France is a key component of LFDE's business model. It provides the group with a predictable, steady and growing cash flow generation that should cover the whole cost base of the company from 2018 onwards and contribute, at a later stage, to the financing of other investments of LFDE.

b. Eastern France – massive green gas field largely derisked, with significant upside
In Lorraine, in Eastern France, LFDE is focusing on obtaining the quality gas present in coal seams which is mainly stored on the internal surfaces of coal. This gas is of very high calorific value with a methane content of over 95%, of similar or higher quality than the gas currently imported and consumed in France. This high quality energy is produced by drilling horizontal multilaterals in the coal seams, then dehydrating the coal seams by pumping water out to reduce pressure in the coal and allow the gas molecules to break away from coal surface and naturally move into the coal's natural fractures, flowing towards the lower pressure zone surrounding the wellhead. LFDE does not use any hydraulic fracking nor inject chemicals or sands at high pressure into the ground.

LFDE uses horizontal/multilateral drilling techniques that are mature in other parts of the world (Australia, Canada, USA,etc.) and applies these techniques within the stringent French regulatory environment. The well is drilled with a water-based mud (mix of water and clay) and no fracking is performed. Drilling operations have limited surface footprint (a pad typically occupies a surface of 100m x 100m), with limited landscape and noise impacts. The production process is almost the opposite of shale gas since LFDE does not inject water but produces water from the coal. Again, the water present in the coal matrix is pumped to the surface and only needs aeration and decantation of suspended solids to meet the standards set by DREAL (French state environmental agency) and the national water agency before being released into the surrounding natural environment. As LFDE is committed to being the leading industrial ecology player in France, the company choses to provide the produced water to local industrial facilities, rather than releasing the water into a local river.



Source: Thompson et al., repeated in CCTR Advisory Panel, 2009

1. *A vertical well is drilled through known coal seams*
2. *Horizontal drains are then drilled into the coal seams*
3. *Water within the seam is pumped to surface, treated, and disposed of*
4. *Gas desorbs from the coal seams and goes up to surface through the well thanks to the pressure differential*

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The gas produced is high quality and doesn't require treatment. Moreover, LFDE is at the heart of the market: close to end clients and gas pipelines, with a non-invasive production technique. The Lorraine region benefits from a developed infrastructure network, without the need of further investment. The gas produced by LFDE has a carbon footprint 10x lower than the current gas mix in France, as certified by IFEU (Institut für Energie-und Umweltforschung), the leading German institute for research on energy, the environment and ecology based in Heidelberg (2016 ISO 14067 research report reviewed by independent experts from CNRS and Bio-Deloitte in France and Integrahl in Germany).

LFDE has reached its key milestones on the technical, operational and financing fronts which are needed to launch its pre-develoment and development campaigns focused on production. Indeed, the pre-development phase has started, with the completion of the first recovery well in Lachambre, currently followed by the first production test.

On the technical front, LFDE has proved its ability to drill long multiple laterals into deeper coal seams.

With over 300bn m3 (10 Tcf) of gas resources certified on only 29% of its key permits, the group has plenty of room to develop into a leading European energy producer.

1) Strategy: production

The 2016 IPO confirmed the ability of LFDE's management team to secure funding for the development of its activity. LFDE raised €37.5m from a few prominent institutional investors such as Amundi, Deka, Credit Mutuel Nord Europe and Invesco, as well as from the historical backers of the company, such as the Lorenceau (ex Addax Petroleum), Michaud (ex Maurel&Prom) or the Chalopin (Deltec) families. Management also invested an additional €1m at the IPO to strengthen the share register. It is worth noting that LFDE owns 100% of its assets and should be able to make strategic deals with industrial and financial partners to monetise and further de-risk its developments.

1. a. Northern France: clear path to a steadily growing, low risk cash generation

The acquisition of Gazonor in Northern France completed at the IPO in June 2016 gave LFDE access to the largest coal gas reservoir in Western Europe.

In the long term, LFDE aims at growing its output from c. 85m m3/year (3Bcf) to 230m m3 a year (8Bcf/year; including the Belgian developments). The management team of LFDE has already revamped the Gazonor operations, strengthened the operational team, while taking advantage of the "green" label, obtained in November 2016 for converting the gas into green electricity benefiting from the 15 years guaranteed FiT by the French State at a price ranging from €76.7/MWh for small gas engines with 1.5MWh of installed capacity reducing to €57.6/MWh for 4.8MWh (or more) of installed capacity. Currently, the gas captured is injected into the national GRT gas network and sold as gas to Total Gas&Power. The optimisation initiatives currently being implemented are focused on the development of the gas-to-power production with the installation of gas engines and cogeneration plants at the Desiree, Lens, Avion and Divion sites, so that over 50% of the revenues will come from power generation starting in July 2017.

This gas-to-power production on the first four sites at Avion, Divion, Lens and Désirée is expected to generate monthly cash flows of over €400k to cover the full SG&A of the group.

In France, Gazonor owns two concessions (Poissoniere and Desiree) and two additional exploration permits called PER (Valenciennois and Sud Midi). Several sites have been revamped and are ready for production with only the Avion site currently producing. In Belgium, Gazonor owns two concessions and is waiting for its exploitation permits to start operations.

The key points of its clean gas and gas-to-power developments in Northern France are:

1) Gas injection

a. Increase current production through optimisation of control systems;

b. Improve compression efficiency (including reduced consumption of gas as fuel in the process).

2) Power generation

a. Convert c.94m m3 of gas mix into green electricity, by installing small gas engines with a capacity of 9MW across Avion, Divion, Lens and Désirée starting in July 2017 (total capex c.€9m);

b. Add additional production sites all through 2018-19 (20 sites already identified);

c. Start gas-to-power production sites in Belgium during 2018.

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The cash flow from the NPdC business is highly de-risked, both from a market and an operational standpoint:
1) Power generation benefits from guaranteed prices (FiT);
2) the operational risk is hedged by insurances:
a. from the power engine manufacturers: if an engine fails, LFDE gets compensated for up to three months (covering the time to repair or replace the engine) per year for the electricity;
b. business interruption insurance on Gazonor (gas and power).

This gas-to-power process is very popular in Germany with Evonik and E.On operating more than 250MW of gas engines in the Saar and Ruhr regions. In the UK, the leading clean tech operator, Alkane Energy, operates 145MW of gas engines. The company was listed on the AIM market in London before its acquisition by a private equity fund in 2015 for 12x EBITDA.

1. b. Eastern France => higher risk higher upside potential

1. b. I. Lorraine pre-development

LFDE started a three-year campaign that could lead to recovering gas from up to 15 wells on four pads. This activity in Lorraine will focus on an area that represents less than 1% of the group's total licences in the region. The company targets four pads (15 wells), in order to:
1) Produce c. 714m m3 of gas (25 Bcf) over 12 years;
2) Prove up to 7bn m3 of gas (250 Bcf) of 2P reserves, via the first four producing wells.

The four pads will require an investment over three years of a maximum of €50m. The company expects a breakeven (opex + capex) of around c. €9/MWh (€3/Mmcf), once full production is reached.
Drilling authorisations have already been obtained by LFDE from the French State so the company is now focusing on executing its plan while climbing up the learning curve and reducing its cost structure.

1. b. II. Lorraine's first full development (2019-24)

After the Lorraine pre-development phase is completed, starting from H2 18 until 2023, LFDE plans to drill up to 120 wells through 30 pads (capex per pad of €14m) in the South Longeville region on an area representing less than 2.8% of the group's permit surface in Lorraine. The objective is to produce 8bn m3 of gas (280Bcf) over 16 years, representing c.€2bn of gross revenues over the period.

1. b. III. Costs

In Lorraine, gas reserves have been certified by BEICIP (IFP Energies Nouvelles), which estimates the opex for the four pre -development pads in Folschviller within a range of €6.9 to 8.1 per m3 (€2.3/Mmcf to €2.7/Mmcf).

The company expects to be able to reduce its opex further, achieving a stable breakeven point (capex + opex, at project level) around €9MWh (€3/Mmcf). This level is below current natural gas prices in Europe and reflects:
- Low infrastructure and transport costs;
- Optimised multilateral wells drilling;

LFDE expects the learning curve to help reduce drilling time for its multilateral wells: from the current 90 days to c. 30 days in the medium term. Furthermore, the group estimates that scale, experience and supplier relations should allow it to reduce overall costs by 40-50% during the development phase.

It is important to note that the current difficulties experienced by oil services companies is expected to continue to have a positive impact on total capex from LFDE given the deflated prices LFDE will be able to enjoy for its investment over the next three years.

<u>2) Portfolio</u>

LFDE owns one of the largest portfolios of exploration and production permits in Western Europe, accounting for a surface area of 10,642km2 (mining rights at the environment and energy ministry), mostly in the Lorraine, Nord-Pas-de-Calais and Paris basins:
- Lorraine: the company owns Exclusive Exploration Permits (PER) and PER demands on an area of 2,769km2;
- NPdC; PERs and production licences on 1,911km2;

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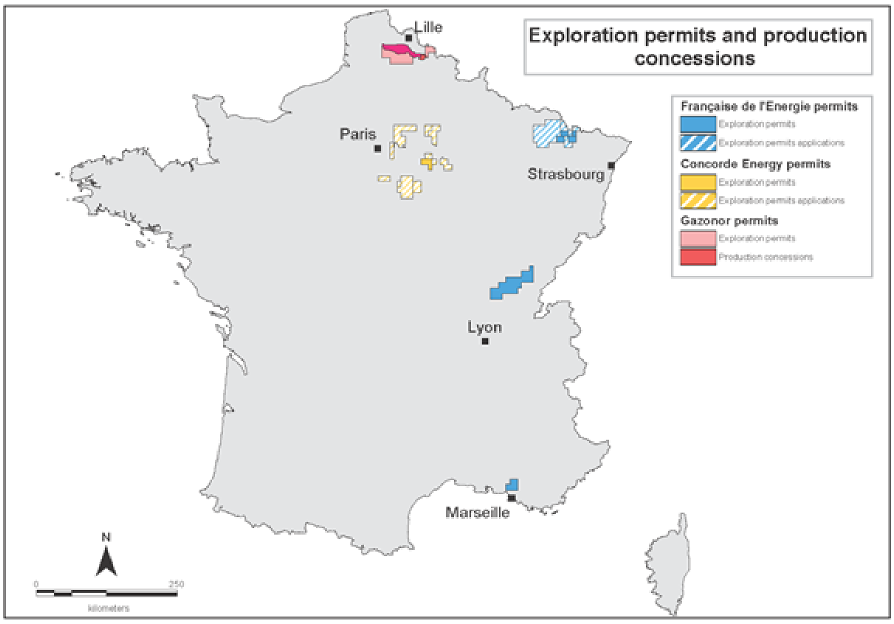
- Paris basin: PERs and PER demands on 3,737km2.



Source: LFDE

The company's portfolio includes certified gas reserves and resources as well as production:

- Lorraine: reserves and resources estimated and certified by BEICIP (IFP Energies Nouvelles) in 2015, on an area accounting for 0.9% of LFDE's permits in the region, while the audit of Lorraine gas resources (2015) covers an area of 29.4% of the permits in the region;

- NPdC: gas reserves estimated and certified by DMT in 2016, resources (CBM) audited and certified by BEICIP (IFP Energies Nouvelles) in 2015. Currently producing about 85m m3 of gas sold to Total. The green electricity production is expected to start by the end of June 2017 on its first 9MW sites.

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	Reserves			Contingent resources			Prospective resources		
BCF	*1P*	*2P*	*3P*	*1C*	*2C*	*3C*	*Low*	*Best*	*High*
Concession d'Exploitation la Désirée	3.2[1]	225.0[1]	709.4[1]	114.0	161.2	223.1	n.a.	n.a.	n.a.
Concession d'Exploitation la Poissonnière	47.8[1]			971.9	1,430.7	2,066.4	n.a.	n.a.	n.a.
PER Sud Midi	-	-	-	85.5	246.0	503.1	n.a.	n.a.	n.a.
PER Valenciennois	-	-	-	4.6	30.9	84.3	n.a.	n.a.	n.a.
Total NPdC	**51.0**	**225.0**	**709.4**	**1,176**	**1,869**	**2,877**	**n.a.**	**n.a.**	**n.a.**
PER Bleue Lorraine	5.3[2]	27.9[2]	73.5[2]	646.0[3]	1,056.0[3]	1,543.0[3]	165.0[3]	283.0[3]	427.0[3]
PER Bleue Lorraine Sud	-	-	-	101.0[3]	194.0[3]	342.0[3]	927.0[3]	1,704.0[3]	2,786.0[3]
PER Bleue Lorraine Nord	-	-	-	493.0[3]	782.0[3]	1,200.0[3]	91.0[3]	222.0[3]	424.0[3]
Total Lorraine	**5.3**	**27.9**	**73.5**	**1,240**	**2,032**	**3,085**	**1,183**	**2,209**	**3,637**
Total	**56.3**	**252.9**	**782.9**	**2,416**	**3,901**	**5,962**	-	-	-

[1] mix gas
[2] reserve certification area in Lorraine represents 0.9% of the Group's permit surface in Lorraine
[3] resource audit area in Lorraine represents 29.4% of the Group's permit surface in Lorraine
BEICIP (IFP Energies Nouvelles) reserve figures result from a 20 year forecast plan, DMT reserve figures result from a 25 year forecast plan

Source: BEICIP audit report – 2015, DMT report – 2016

A relatively large portion of LFDE's portfolio of 6.0Tcf (170m m3) contingent resources and 9.6Tcf (272m m3) prospective resources are expected to convert into proven reserves and future production as LFDE progresses with its work programme and makes investments in Lorraine and Nord-Pas de Calais. LFDE's portfolio has been already largely de-risked, thanks to the data coming from 200 years of mining and drilling activity, and benefits from access to an existing infrastructure network. The volume of contingent resources are similar to Lacq and Meillon combined (historically, the largest gas-fields in France) and amounts to six-times France's annual gas consumption.

3) Relations with key stakeholders

LFDE's track record as a responsible local energy producer in France has been recognised by the key stakeholders of LFDE's projects.

Indeed, despite numerous changes in the majority at the upper and lower Houses of Parliament and supervising Ministers, the group has received ongoing support from political institutions across the country, at county, regional and national levels. This support, both at the national and the regional level, was formally ratified by the Pacte "Etat Region Lorraine" (a partnership between the State and the Region) signed in 2013 by the Prefect, the Prime Minister and the President of Lorraine's government. Its unique track record in obtaining exploration permits and concessions, as well as drilling permits, highlights LFDE's unique understanding of the operating environment in France and is an additional proof of support to LFDE's activities by the authorities. LFDE has received authorisations to drill over 15 wells and is applying for over 100 wells to be drilled from 2020 onwards.

The group has also received constructive support from the current government through the favourable answers provided to the National Assembly by the current Ministry of Energy and Ecology in response to various questions from Lorraine MPs as well as a FiT guaranteed for over 15 years by the French State for the green electricity LFDE will generate from the gas

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captured in the former coal mines of Northern France.

4) Natural gas demand: better days ahead

Following a difficult environment that combined a reduction in global demand with pressure on pricing due to massive growth of US shale gas production, pricing recovered significantly on the back of the security issues faced by nuclear power plants in France and an acute drop in production in the Netherlands due to restrictions at the Groningen field.

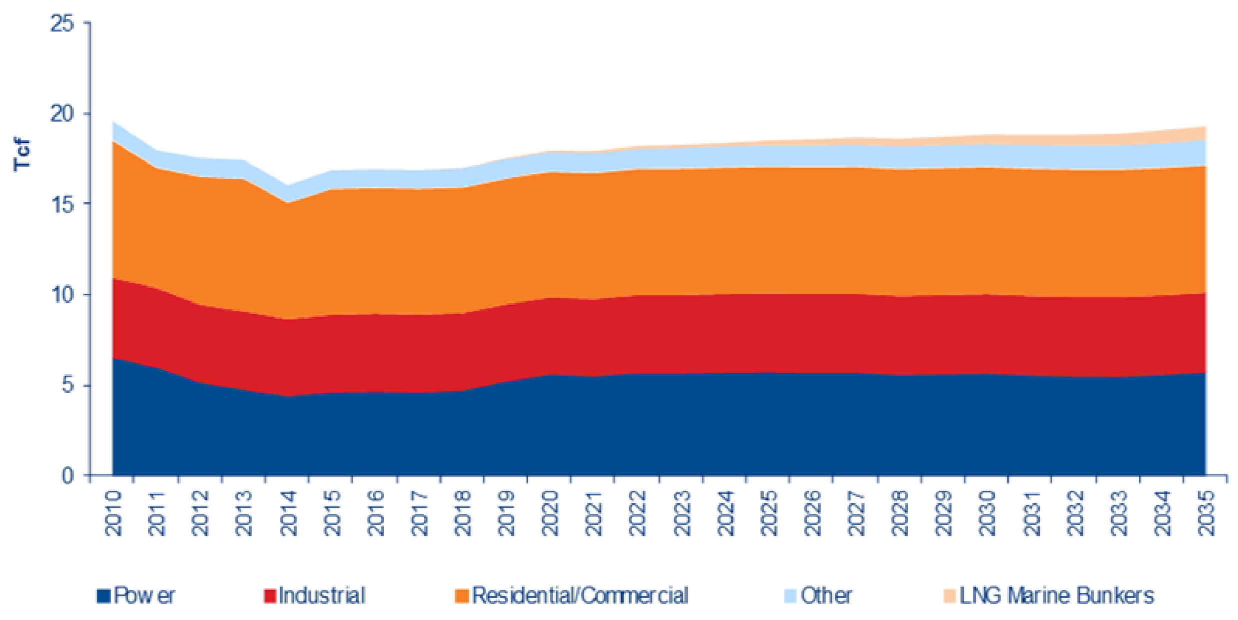
The overall pricing environment remains challenging and a significant increase in gas prices in Europe is not expected from the current levels around €16/MWh.

The outlook is relatively positive for natural gas demand globally. Indeed, we see three key factors leading to the change: cheap prices (becoming more competitive and supporting demand), the development of renewable and intermittent energies and the ongoing global effort to reduce greenhouse gas emissions.

Lower natural gas prices have resulted in gas being competitive vs. coal as a source of energy for power generation. Newer and more efficient gas power plants are becoming competitive again against coal power plants. The gas-to-coal switch is expected to reverse over the next few years; and this should significantly help gas demand in Europe. Furthermore, should France enact the expected carbon tax in the country, we could see an additional push for domestic gas power generation which would give a massive competitive advantage to LFDE.

All in all, we would agree with BP's figures which seem much more conservative than other institutions with natural gas demand up 20% by 2025 from 2015's level.

Demand evolution (in TCF)

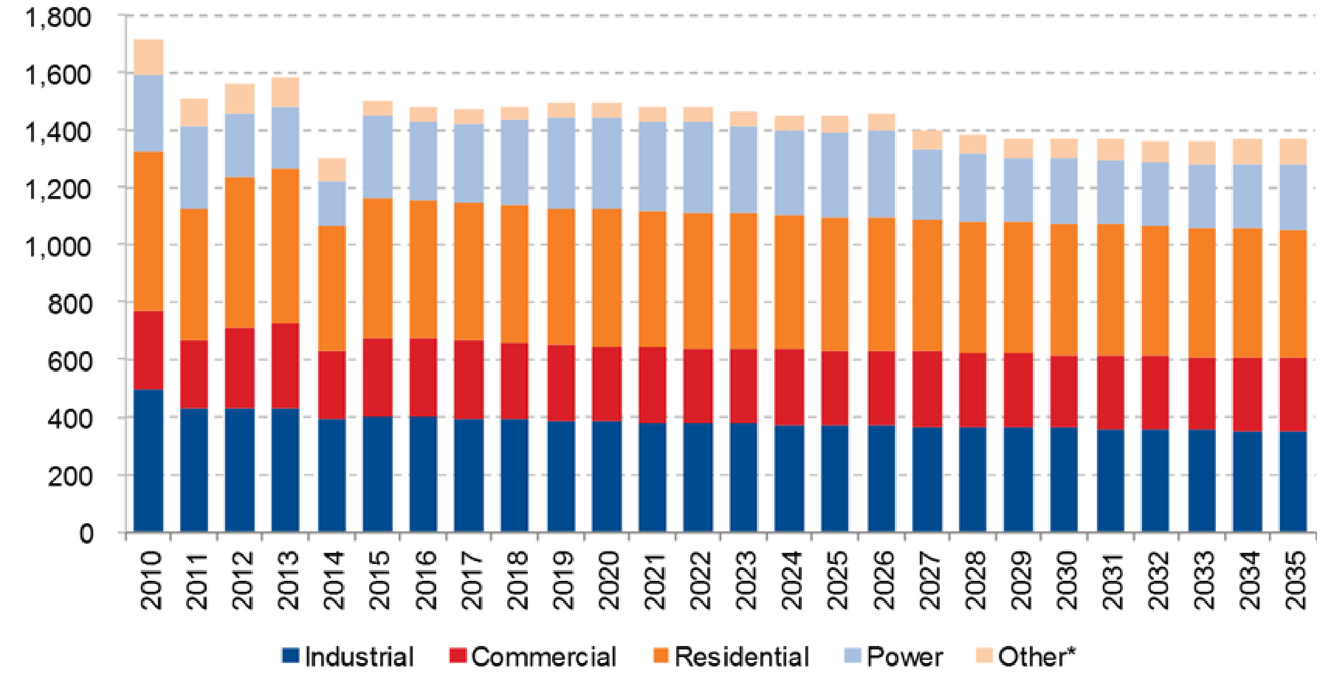


Sources: BP Statistical Review of World Energy June 2015 and Wood Mackenzie

However, the French situation is slightly different from European peers, as nuclear power clearly plays the main role in power generation where, due to the historical low power prices, electricity has been preferred over gas for heating purposes; nevertheless, the constant increases in the power prices paid by consumers (including both tariffs and taxes) have started a shift in the consumption trend.

Moreover, recent developments in the French energy market with cost increases for consumers and operators, while overcapacity is driving spot prices down, may support the need to find other ways to produce electricity. In addition to this, a recent law in the country requires a decrease in the country's dependency on nuclear power to reach 50% of the electricity produced by 2025 (from over 75% today): renewables and natural gas are the only serious possibilities and even further imports would be needed for a country fully dependent on fossil fuel from other countries. Nearly 86% is imported through pipelines and 14% from LNG.

French Gas Demand in Bcm



** "Other": includes transport, heat only plants, own use and distribution losses and statistical difference*
Source: Wood Mackenzie

5) Gas-to-power generation in France

The accelerated integration of renewable energies into the electricity system has created an increase in generation volatility as their electricity production is weather-dependent. This has created instability in the electricity networks, generating large intra-day variations in spot prices, going from high prices when there is a shortage to even reaching negative territory when there is an oversupply of renewable energy. The increased volatility of renewable energy and the substantial variation in power prices has raised the need for peak assets such as gas to stabilise the grid, while reducing that for base load assets (including nuclear).

Gas has some major advantages over other "conventional" generation units to cover for renewable volatility and is setting itself as the transition fuel towards a greener energy model. Gas-powered capacity takes less than 1.5 hours to generate electricity from the moment it is started, compared to 3 for coal, 6 for lignite and 40 for nuclear, making it one of the most reactive and adaptable conventional assets (beside pumped storage). Gas (CCGT) has greater energy efficiency than coal as it achieves between 45-55% (compared to 30-40%), while producing 66% lower carbon dioxide emissions. Therefore, this is the cleanest option to support renewables. Moreover the current low gas price environment is improving clean spark spreads, driving additional demand towards gas.

The benefit of gas over coal on the transition of the energy sector and its use for network stability will be accentuated in future years when the Emission Trading System (ETS) finally starts to increase the price for CO2 allowances once ETS permits are removed from the market in 2018. In addition to this, the expected increase in carbon taxes in France would provide a competitive advantage to CCGT over coal, or diesel, on peak generation from the lower emission profile, while

Businesses & Trends

allowing to profit from high electricity spot prices when needed.

Divisional Breakdown Of Revenues

	Sector	06/17A	06/18E	06/19E	06/20E	Change 17E/16		Change 18E/17E	
						€M	of % total	€M	of % total
NPdC CMM Green Energy	Alternative Energy	3.68	9.70	13.7	15.2	6	66%	4	32%
Lorraine Coalbed Methane	Explor. & Productn.	0.00	3.09	11.7	23.3	3	34%	9	68%
Other									
Total sales		**3.68**	**12.8**	**25.4**	**38.5**	**9**	**100%**	**13**	**100%**

Key Exposures

	Revenues	Costs	Equity
Dollar	0.0%	0.0%	0.0%
Emerging currencies	0.0%	0.0%	0.0%
Long-term global warming	-60.0%	0.0%	-60.0%
Oil price (Brent $/bl)	30.0%	30.0%	30.0%

Sales By Geography

France	100.0%

We address exposures (eg. how much of the turnover is exposed to the $) rather than sensitivities (say, how much a 5% move in the $ affects the bottom line). This is to make comparisons easier and provides useful tools when extracting relevant data.
Actually, the subject is rather complex on the ground. The default position is one of an investor managing in €. An investor in £ will obviously not react to a £ based stock trading partly in € as would a € based investor. In addition, certain circumstances can prove difficult to unravel such as for eg. a € based investor confronted to a Swiss company reporting in $ but with a quote in CHF... Sales exposure is probably straightforward but one has to be careful with deep cyclicals. Costs exposure is a bit less easy to determine (we do not allow for hedges as they can only be postponing the day of reckoning). How much of the equity is exposed to a given subject is rarely straightforward but can be quite telling
In addition, subjects are frequently intertwined. A $ exposure may encompass all revenues in $ pegged currencies and an emerging currency exposure is likely to include $ pegged currencies as well.
Exposure to global warming issues is frequently indirect and may require to stretch a bit imagination.

Money Making

1) The project's parts

1.a. Nord-Pas-de-Calais CMM Green Energy

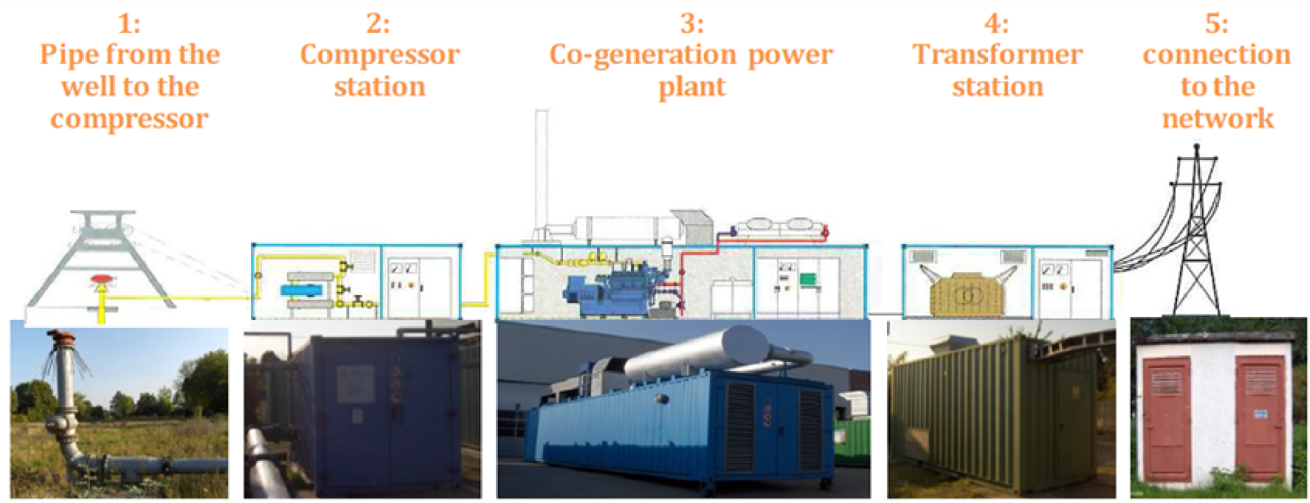
CMM is an 'infrastructure-type' business offering a clearly predictable growing cash flow stream over several decades. This activity covers the SG&A of the whole LFDE group from 2017 onwards while providing significant cash to fund CBM and other developments of the company.

Our model integrates initial capex of c. €9m by June 2017. CMM should initially contribute c. €4.7m to EBITDA for the FYE June 2018 then grow with the increase in production and the add-on of new production sites. The feed-in-tariffs (FiTs) guaranteed by the French State over a 15-year period will allow the group to be protected from market volatility, providing maximum long-term visibility to the company and its shareholders.

The company is currently installing its first power generation capabilities in Avion, Divion, Lens and Désirée. After these first investments, power generation should initially reach 50GWh per year (9MW of installed capacity), while gas sales (Avion) should average around 150GWh per year.

	End-2018				
	Avion	Lens	Divion	Désirée	Total
Gas mix (BCF)	2.4	1.6	0.3	0.1	**4.4**
Part of methane (%)	49.0%	35%	52%	52%	
1) Gas injection					
Gas mix (BCF)	1.2	0	0.0	0.0	**1.2**
Methane sold (GWh)	150.0	0	0.0	0.0	**150.0**
Gas sale price (€/MWh)	20.9	n/a	n/a	n/a	
2 Power generation					
Gas mix (BCF)	1.2	1.6	0.3	0.1	**3.2**
Installed capacity (MW)	3.0	3.0	1.5	1.5	**9.0**
Number of sites	1	1	1	1	**4**
Electricity sold (GWh)	16.5	16.9	11.1	7.3	**51.8**
Guaranteed tariff (€/MWh)	68	68	76.7	76.7	

Source: FdE, DMT report



Source: LFDE

Money Making

Picture of the first green power unit in Norther France.

The NPdC's CMM revenues are protected for loss of performance from electric motors/compressors and business interruption at gas for €2m.

1.b. CBM Pre-development

Lorraine

The group plans to complete a maximum of 15 wells during 2017-19, and expects to spend on average €3.2m per well (c. €48m in total). This plan is fully authorised and permitted so no additional administrative authorisation is requested.
We have modelled a standard pre-development pad and phased it along the investment schedule.

We have used the guidance provided by LFDE in its business plan. Key parameters are as follows:

Project conception CBM - 12 years	15 wells
Depth (m)	+/- 850 m
Average concentration (m3/t)	8.5 m3/t
GIP	45 BCF
Laterals per well	3 to 6
Aggregate production (12 years)	25.7 BCF
Production peak (2020)	3.5 BCF/year
Volume drained by well	1.7 BCF
Average catchment area	60%
Investments	€48 200 000
Opex on project life (/mscf)	€2.2
Netback (/mscf)	€4.4
Capex (/mscf)	€1.9
Total cost (/mscf)	€4.1

Source: FdE

1.c. CBM development

Starting from 2019 onwards, LFDE aims at applying its optimised wells on an industrial scale. Reproducing similar pads in South Longeville, on an area already certified by Beicip-Franlab (IFP Energies Nouvelles).
The development stage involves 30 pads in the Bleue Lorraine area. Based on the report released by BEICIP (IFP Energies Nouvelles) in 2015, this represents 2.8% of the group's permits in Lorraine.
The company plans to drill over five years (7 pads per year, on average).
We based our estimates on this stage on the application of a template for a standard pad, starting from the company's business plan. Holding the same production curve as in pre-development pads.

Money Making

Depth (m)	+/- 850 m
Surface developed	6.0 km2
Average concentration (m3/t)	8 m3/t
Coal thickness	7m
GIP	16.0 Bscf
N. wells (1 vein per well)	4
Laterals per well	4
Aggregate production (12 years)	9.4 Bscf
Volume drained	60%
Production peak	4.0 Mscf/day
Investments	€13 000 000
Opex on project life (/mscf)	€2.1
Capex (/mscf)	€1.4
Total cost (/mscf)	€3.5

Source: FdE

Drilling costs: according to the business plan, the average long-term cost per well (drilling only) is estimated at c. €3.0m (non -actualised). This includes drilling, compression, treatment, installations, etc.
Opex: estimated at around €2.1/mscf, lower than in pre-development, largely thanks to scale effects.

Total cost (capex + opex, i.e. the breakeven price) should be below €3.5/mscf (pre-tax) in the long term. This assumes continuous drilling of at least 10 production wells per year and by drilling platform, and the availability of drilling permits.

***2) Price dynamics: 35% linked to oil prices by 2025**
As a regional market, natural gas pricing in Europe depends mainly on supply and demand in the region. Imports of LNG and coal are, however, key with some disruptive elements. Demand is based on BP's assumptions (+20% by 2035).
We have based our forecast by integrating: 1) coal competition in the short term as the current prices are still attractive for power generation but may change with the carbon tax in the medium/long term, 2) Gazprom's current strategy (market share battle with an aggressive price strategy: 30% of EU gas consumption) with the potential to bring natural gas to the German border at a price of €3.5/mmbtu (break-even), and 3) rising LNG imports (from 7% in 2014 to 28% by 2035 with a gradual increase) with a break-even at €5/mmbtu.

On the pricing front, it is important to understand the structure of gas pricing in France.
Around 36-37% of the total cost to the consumers is made up of the actual price of the gas, the remainder is mainly related to import tax (called TICGN in France), transportation, storage obligation and distribution costs.

Given the quality of the gas produced by LFDE, LFDE can either sell the gas directly to a nearby client (industrial, local utilities, municipalities), inject it into the local low or mid pressure gas network or inject it to the transportation network (high pressure).

If LFDE injected into the high pressure pipeline, it would have limited cost advantages versus the imported sources of gas – other than transport.
If the company injects into the regional distribution network, it should reduce its costs by over 20% versus competition.
If LFDE sells to the local utilities, industrials or municipalities, it could reduce its costs by over 40% versus the competition.

Divisional EBITDA/R

	06/17A	06/18E	06/19E	06/20E	Change 17E/16		Change 18E/17E	
					€M	of % total	€M	of % total
NPdC CMM Green Energy	2.89	5.90	8.70	10.1	3	62%	3	33%
Lorraine Coalbed Methane	0.00	1.81	7.62	16.0	2	38%	6	68%
Other/cancellations	-5.10	-5.10	-5.10	-5.10	0	0%	0	0%
Total	-2.21	2.61	11.2	21.0	5	100%	9	100%

Money Making

Divisional EBITDA/R margin

	06/17A	06/18E	06/19E	06/20E
NPdC CMM Green Energy	78.6%	60.8%	63.5%	66.4%
Lorraine Coalbed Methane		58.6%	65.0%	68.8%
Total	-60.1%	20.4%	44.1%	54.6%

Debt

Debt

LFDE raised €37.5m at the IPO in June 2016. At the end of December 2016, LFDE had a €3m loan granted by European Gas Limited ("EGLUK") with a maturity date of December 2019.

CMM activities, thanks to their "infrastructure-type" business model, offer scope for project financing and or senior banking debt at a low cost.

Moreover, during the pre-development stage, the company may obtain debt financing (such as resource-based lending), related to the potential increase in proven reserves (reserve-based facilities) and the growth in production.

All in all, LFDE could finance with debt a large portion (up to 75%) of its capex until June 2019 in both Gazonor and Lorraine.

We expect the successful well-testing in Lorraine to prove the value and viability of the company's resources, while 9MW of installed gas-to-power capacity in NPdC should supply the cash to cover the overheads. In turn, this should de-risk LFDE's plans and improve the conditions to raise capital.

Funding - Liquidity

		06/17A	06/18E	06/19E	06/20E
EBITDA	€M	-2.21	2.61	11.2	21.0
Funds from operations (FFO)	€M	-9.89	0.26	5.09	10.6
Ordinary shareholders' equity	**€M**	**52.3**	**51.5**	**68.4**	**75.4**
Gross debt	€M	18.3	43.2	63.3	85.0
o/w Less than 1 year - Gross debt	€M	0.00	0.00	0.00	0.00
o/w 1 to 5 year - Gross debt	€M	3.30	3.30	3.30	0.00
of which Y+2	€M	0.00	0.00	3.30	0.00
of which Y+3	€M	0.00	3.30	0.00	0.00
of which Y+4	€M	3.30	0.00	0.00	0.00
of which Y+5	€M	0.00	0.00	0.00	0.00
o/w Beyond 5 years - Gross debt	€M	15.0	39.9	60.0	85.0
+ Gross Cash	€M	18.0	14.6	21.3	47.1
= Net debt / (cash)	**€M**	**0.35**	**28.6**	**42.0**	**37.9**
Bank borrowings	€M	15.0	39.9	39.9	39.9
Issued bonds	€M	3.30	3.30	23.4	45.1
Financial leases liabilities	€M	0.00	0.00	0.00	0.00
Mortgages	€M	0.00	0.00	0.00	0.00
Other financing	€M	0.00	0.00	0.00	0.00
of which commercial paper	€M	0.00	0.00	0.00	
Gearing (at book value)	%	-11.1	28.1	51.6	53.0
Adj. Net debt/EBITDA(R)	*x*	*-0.16*	*10.9*	*3.74*	*1.81*
Adjusted Gross Debt/EBITDA(R)	*x*	*-10.3*	*18.2*	*6.03*	*4.26*
Adj. gross debt/(Adj. gross debt+Equity)	*%*	*30.3*	*48.0*	*49.8*	*54.2*
Ebit cover	*x*	*-5.77*	*0.59*	*1.89*	*2.53*
FFO/Gross Debt	*%*	*-43.6*	*0.54*	*7.51*	*11.8*
FFO/Net debt	*%*	*-2,828*	*0.90*	*12.1*	*27.9*
FCF/Adj. gross debt (%)	*%*	*-92.1*	*-59.3*	*-34.6*	*4.57*

Valuation

Française de l'Energie offers a unique exposure to green energy, combining a largely de-risked resource base with a massive growth potential.

LFDE is a play on its ability to deliver its clean energy, namely:
1) NPdC gas production;
2) NPdC gas-to-power;
3) Lorraine CBM production
a. Pre-development (15 wells);
b. Development (30 pads);
c. Long-term: production of 70Bcf/y (c.5% of French annual gas consumption);
4) Increasing its CBM proved reserves.

The profitability of its Lorraine CBM project depends on a number of variables, and most notably the price of gas.

The group should be able to fund its projects with a mix of equity and debt. We expect the successful well-testing in Lorraine to prove the value and viability of the company's resources, while the installed gas-to-power capacity in NPdC should supply the cash to cover the overheads. In turn, this should de-risk LFDE's plans and improve the conditions to raise new equity (we assume €10m at €33 per share).

In our valuation, we emphasise the weight of fundamental metrics: the NAV-based SOTP and the DCF.

SOTP

The NPdC power generation and gas injection businesses benefit from recurring revenues and fixed tariffs. We value these activities based on the market for similar assets. This approach points to an 8x EV/EBITDA multiple applied to gas injection. For the gas-to-power business, we refer to Alkane Energy, the UK player (145MW of installed generating capacity), which was bought out and delisted in 2015 at 12x EBITDA; Alkane did not benefit from a FiT, hence it was exposed to market volatility.
Moreover, the cash flows are largely protected from operational risk by both the guarantee from the engine suppliers and the business interruption insurance covering Gazonor. We apply a 13x multiple, which may prove too cautious, as the project is at an early stage.
This approach is backed up by a look at the reserve-based valuation of the NPdC CMM Green Energy assets: LFDE has booked its 2P reserves with a cut-off at a 50% methane content. However, as the company's power generation engines can run with a methane content as low as 25%, the CMM reserves have probably been underestimated and could be increased.

		WI Reserves / resources (bcf)	NPV / mcf (€/mcf)	Unrisked NPV (€m)	CoS	EMV (€m)
NPdC CMM Green Energy						
Developed	P1	51	0,6	30	100%	30
Undeveloped	P2	174	0,6	101	75%	76
NPdC CMM Green Energy				**131**		**105**

For the company's portfolio of CBM gas reserves and resources, we estimate a risked exploration net asset valuation (RENAV).
1) Unrisked NPV: we apply a DCF-based value on the volumes in the portfolio of gas reserves and resources. For example, for Lorraine CBM development, we divide the DCF on the first planned 30 pads by the volume of gas related to the project, obtaining an estimate of c. €0.6/mcf. We multiply this value by the reserves and resources to get the unrisked NPV.
2) Expected monetary value (EMV): we attribute a CoS (chance of success) to the reserves, accounting for the likelihood that it will feed into the business. These rates are based on our judgement. Multiplying the unrisked NPV by the CoS, we get the EMV.

Valuation

		WI Reserves / resources (bcf)	NPV / mcf (€/mcf)	Unrisked NPV (€m)	CoS	EMV (€m)
CBM reserves						
Lorraine						
Pre-development (15 wells)		26	0,4	11	80%	9
Development (30 pads)		281	0,6	168	50%	84
Core Nav				**179**		**93**
Contingent resources (all is CBM)						
Lorraine	2C	2 032	0,6	1 216	5%	61
NPdC CBM	2C	1 869	0,6	1 119	5%	56
Contingent resources				**2 335**		**117**
CBM RENAV				**2 514**		**210**

DCF

Our DCF is articulated around the key components of the business plan:

1) NPdC's CMM, absorbing industrial capex of c. €27m over the period to June 2019 and generating an average EBITDA of €9m during the period 2017-26.

2) Lorraine's CBM pre-development, with capex totalling €48m until June 2019 and an EBITDA peak in 2020, at €18m.

3) Lorraine's CBM development, with investment in 30 pads during the five-year period from 2019 (capex at €14m per pad) and capex peaking at €112m in 2023. The development project represents a sharp increase in EBITDA, with a peak contribution of €131m expected in the financial year 2023-24.

Given the project-dependency of cash flows, we input our estimates on an annual basis until 2020. On the following years, the annualised growth rates applied to the EBITDA and capex give an order of magnitude of the expected development (which is non-linear).

Peers metrics

The peers metrics are attributed marginal weight in our valuation.

We use a mix of utilities (Drax, which is 1/ wholly focused on power generation; 2/ developing its biomass business, relying on FiTs, and 3/ a peak generation player), renewable energy producers (ERG and Acciona) and, in the oil & gas E&P space, Tullow Oil.

Valuation Summary

Benchmarks		Values (€)	Upside	Weight
DCF		39.1	130%	40%
NAV/SOTP per share		47.7	181%	40%
P/E	*Peers*	8.50	-50%	5%
EV/Ebitda	*Peers*	3.26	-81%	5%
P/Book	*Peers*	12.3	-28%	5%
Dividend Yield	*Peers*	0.00	-100%	5%
Target Price		**35.9**	**111%**	

Valuation

Comparison based valuation

Computed on 18 month forecasts	P/E (x)	Ev/Ebitda (x)	P/Book (x)	Yield(%)
Peers ratios	24.2	7.78	1.06	2.46
La Française de l'Energie's ratios	ns	17.5	1.46	0.00
Premium	0.00%	0.00%	0.00%	0.00%
Default comparison based valuation (€)	**8.50**	**3.26**	**12.3**	**0.00**
Acciona	12.1	6.36	0.96	3.61
Tullow Oil	ns	10.3	1.41	0.00
ERG	23.2	8.54	1.34	3.10
Drax Group	36.9	7.42	0.61	4.29

La Française de l'Energie (Buy)

Alternative Energy / France

ALPHAVALUE CORPORATE SERVICES

DCF

DCF Valuation Per Share

WACC	%	7.10
PV of cashflow FY1-FY11	€M	-20.7
FY11CF	€M	27.4
Normalised long-term growth"g"	%	2.00
Terminal value	€M	537
PV terminal value	€M	270
PV terminal value in % of total value	*%*	*108*
Total PV	€M	250

Avg net debt (cash) at book value	€M	35.3
Provisions	€M	4.41
Unrecognised actuarial losses (gains)	€M	0.00
Financial assets at market price	€M	0.00
Minorities interests (fair value)	€M	0.00
Equity value	€M	210
Number of shares	Mio	5.37
Implied equity value per share	€	39.1

Assessing The Cost Of Capital

Synthetic default risk free rate	%	3.50
Target equity risk premium	%	5.00
Tax advantage of debt finance (normalised)	%	30.0
Average debt maturity	Year	5
Sector asset beta	x	0.64
Debt beta	x	1.20
Market capitalisation	€M	91.2
Net debt (cash) at book value	€M	28.6
Net debt (cash) at market value	€M	19.9

Company debt spread	bp	600
Marginal Company cost of debt	%	9.50
Company beta (leveraged)	**x**	**0.74**
Company gearing at market value	%	31.3
Company market gearing	%	23.9
Required return on geared equity	**%**	**7.20**
Cost of debt	%	6.65
Cost of ungeared equity	**%**	**6.71**
WACC	%	7.10

DCF Calculation

		06/17A	06/18E	06/19E	06/20E	06/21E	Growth	06/22E	06/28E
Sales	€M	3.68	12.8	25.4	38.5	72.4	**9.00%**	78.9	132
EBITDA	€M	-2.21	2.61	11.2	21.0	45.3	**9.00%**	49.4	82.8
EBITDA Margin	*%*	*-60.1*	*20.4*	*44.1*	*54.6*	*62.6*		*62.6*	*62.6*
Change in WCR	€M	6.35	0.00	0.00	0.00	0.00	**8.00%**	0.00	0.00
Total operating cash flows (pre tax)	€M	-4.60	2.61	11.2	21.0	45.3		49.4	82.8
Corporate tax	€M	1.06	0.37	-1.40	-3.51	-10.7	**8.00%**	-11.6	-18.4
Net tax shield	**€M**	**-0.15**	**-0.82**	**-1.42**	**-2.07**	**-2.07**	**8.00%**	**-2.24**	**-3.55**
Capital expenditure	€M	-16.9	-28.5	-28.5	-6.50	-42.1	**-3.00%**	-40.8	-34.0
Capex/Sales	*%*	*-459*	*-223*	*-112*	*-16.9*	*-58.2*		*-51.7*	*-25.7*
Pre financing costs FCF (for DCF purposes)	€M	-20.6	-26.3	-20.1	8.92	-9.59		-5.28	26.9
Various add backs (incl. R&D, etc.) for DCF purposes	€M			-41.8 [1]					
Free cash flow adjusted	**€M**	**-20.6**	**-26.3**	**-61.9**	**8.92**	**-9.59**		**-5.28**	**26.9**
Discounted free cash flows	**€M**	**-20.6**	**-26.3**	**-57.8**	**7.78**	**-7.81**		**-4.01**	**13.5**
Invested capital	€	64.1	91.6	118	121	157		152	127

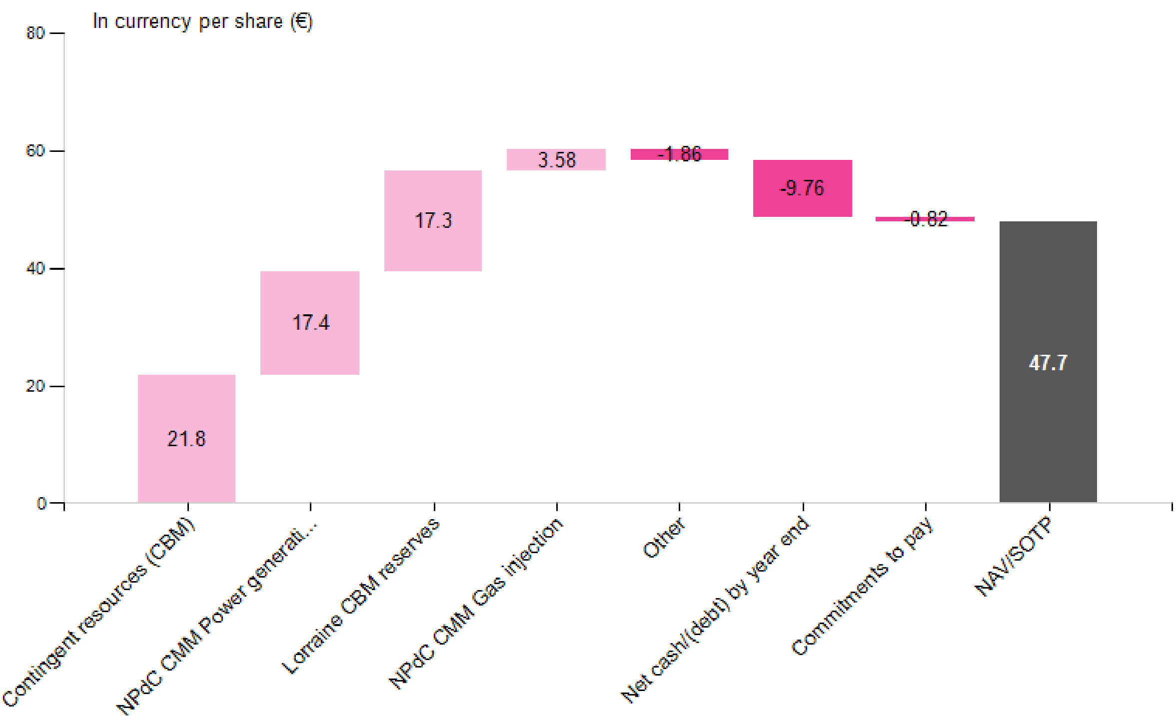
1. Accounting for the debt expected be issued at a later date than accounted for in the DCF template.

NAV/SOTP (edit)

NAV/SOTP Calculation

	% owned	Valuation technique	Multiple used	Valuation at 100% (€M)	Stake valuation (€M)	In currency per share (€)	% of gross assets
Contingent resources...	100%	Risk Adj. PV		117	117	21.8	37.4%
NPdC CMM Power g...	100%	EV/EBITDA	13	93.6	93.6	17.4	29.9%
Lorraine CBM reserves	100%	Risk Adj. PV		93.0	93.0	17.3	29.7%
NPdC CMM Gas injec...	100%	EV/EBITDA	8	19.2	19.2	3.58	6.14%
Other					-10.0 [1]	-1.86	-3.20%
Total gross assets					**313**	**58.3**	**100%**
Net cash/(debt) by year end					-52.3	-9.76	-16.7%
Commitments to pay					-4.41 [2]	-0.82	-1.41%
Commitments received							
NAV/SOTP					256	47.7	81.9%
Number of shares net of treasury shares - year end (Mio)					**5.37**		
NAV/SOTP per share (€)					**47.7**		
Current discount to NAV/SOTP (%)					**64.4**		

1. Actualised corporate costs
2. Well abandonment provisions



Worth Knowing

Background

Française de l'Énergie SA was previously known as European Gas (« EGL »). EGL was started by some Australian energy executives to develop gas projects in Australia, Asia and Europe. The company listed its shares on the Australian Stock Exchange (ASX) in last decade to grow this activity and focus on its key assets including the Lorraine project in France. Following the 2008 financial crisis and the inability of the former management team to restructure the balance sheet and the organisation, Julien Moulin took control of the company in December 2009 and initiated a significant restructuring. The restructuring of the group involved the following key features:

• Closure of all entities in Australia
• Delisting from the ASX
• Complete clean-up of the balance sheet
• Change of name (EGL became La Francaise de l'Energie)
• Relocation of the headquarters to France
• Operational focus on becoming the leading clean gas player in France thanks to the development of its local cleaner energy for local consumers
• Creation of an in-house team covering all key competences needed to develop such an ambitious project (geology, geophysicist, drilling engineer, reservoir engineer, mechanical engineer, production engineer, financial managers and communication specialists
• Listing of LFDE on the main market in France (Euronext)

Following all these efforts, La Francaise de l'Energie is now well positioned to grow as a leading independent energy player in France and Western Europe.

Gazonor

On 14 January 2016, LFDE signed an acquisition agreement with Transcor Astra Group ("TAG") on 100% of Transcor Astra Luxembourg ("TAL"), which owns through Gazonor Holding SAS ultimately Gazonor. Gazonor is a French gas producer of coal mine methane holding also the exploration permits and the licences to explore and produce gas (both CMM and CBM) in Northern France. The acquisition was completed in June 2016 on the back of the IPO of LFDE.

Gazonor is a well-known asset for LFDE's management since Julien Moulin managed the company from December 2009 to June 2011 before selling this asset to the Transcor Astra Group for €32m in June 2011 in order to clean up the balance sheet of the group.

LFDE acquired Gazonor for €16.8m in net cash and the cancellation of a +€30m litigation claim against the previous owner of Gazonor.

More on CBM

CBM extraction techniques were developed in the US in the 1980s. The industry has reached maturity, with large production sites in the USA, Canada, China, and Australia. CBM is extracted with both vertical and lateral wells. The latter is now a mature technique, having been refined in the USA in the 1980s. LFDE is the first company to apply the technique on coal seams in Western Europe.

CBM extraction techniques differ from those in other non-conventional gases: less equipment is needed.

The resources targeted by the company don't need hydraulic fracturing.

CBM in Lorraine: largely derisked exploration

The company highlights that, historically, Charbonnages de France drilled over 600 stratigraphic wells in Lorraine. Moreover, geological mapping of mining sites contributes a thorough knowledge of the structure of the veins. Parts of the basin have been subject to 2D seismic surveys; furthermore, players such as Esso and Conoco have drilled exploration wells. The company has access to data on 424 of these wells which, according to the group, should amount to hundreds of million euros saved on exploration spending.

Reserves & resources

The Petroleum Resources Management System (PRMS), used by BEICIP (IFP Energies Nouvelles), defines four types of

Worth Knowing

hydrocarbon resources: reserves, contingent resources, prospective resources and unrecoverable resources.

Share price performance

LFDE share price performance has been massively affected after the IPO by the sale on the market by a UK-based hedge fund that had participated in the IPO. These shares represented over 80% of the selling volume experienced from the IPO date to November 2016. This seller exited its position completely in November 2016, driving the share price from €27 per share down to €10 per share.

Since then, the performance has improved significantly, with a substantial increase in liquidity and regular announcements confirming the operational progress of the company being on track with its business plan.

Shareholders

Name	% owned	Of which % voting rights	Of which % free to float
DELTEC	18.0%	18.0%	18.0%
Management	10.0%	10.0%	10.0%
CMNE	4.00%	4.00%	4.00%
Amundi Asset Management	3.00%	3.00%	3.00%
Financière Gabrielle	3.00%	3.00%	3.00%
Financière Rosario	3.00%	3.00%	3.00%
Four Points AM	3.00%	3.00%	3.00%
Invesco Asset Management Ltd.	2.00%	2.00%	2.00%
Employees	2.00%	2.00%	2.00%
Apparent free float			**100%**

La Française de l'Energie (Buy)

Alternative Energy / France

ALPHAVALUE CORPORATE SERVICES

Financials

Valuation Key Data

		06/17A	06/18E	06/19E	06/20E
Adjusted P/E	x	-35.4	ns	31.6	13.0
Reported P/E	x	-35.4	-116	32.5	13.0
EV/EBITDA(R)	x	-39.4	45.6	12.3	6.36
P/Book	x	1.57	1.67	1.33	1.21
Dividend yield	%	0.00	0.00	0.00	0.00
Free cash flow yield	%	-25.4	-32.8	-25.7	4.48
Average stock price	€	16.3	17.0	17.0	17.0

Consolidated P&L

		06/17A	06/18E	06/19E	06/20E
Sales	€M	3.68	12.8	25.4	38.5
Sales growth	%	3,676,469,900	248	98.8	51.3
Sales per employee	€th	184	533	1,017	1,539
Purchases and external costs (incl. IT)	€M	-6.32	-10.2	-14.2	-17.5
Staff costs	€M	-1.19	-1.43	-1.49	-1.49
Operating lease payments	€M				
Cost of sales/COGS (indicative)	€M				
EBITDA	€M	-2.21	2.61	11.2	21.0
EBITDA(R)	€M	-2.21	2.61	11.2	21.0
EBITDA(R) margin	%	-60.1	20.4	44.1	54.6
EBITDA(R) per employee	€th	-111	109	449	840
Depreciation	€M	-0.48	-1.00	-2.28	-3.56
Depreciations/Sales	%	13.1	7.82	8.97	9.25
Amortisation	€M	0.00	0.00	0.00	0.00
Additions to provisions	€M	-0.19	0.00	0.00	0.00
Reduction of provisions	€M	0.00	0.00	0.00	0.00
Underlying operating profit	€M	-2.88	1.61	8.94	17.4
Underlying operating margin	%	-78.5	12.6	35.2	45.3
Other income/expense (cash)	€M	0.00	0.00	0.00	0.00
Other inc./ exp. (non cash; incl. assets revaluation)	€M	0.00	0.00	0.00	0.00
Earnings from joint venture(s)	€M				
Impairment charges/goodwill amortisation	€M	0.00	0.00	0.00	0.00
Operating profit (EBIT)	€M	-2.88	1.61	8.94	17.4
Interest expenses	€M	0.00	-2.72	-4.73	-6.90
of which effectively paid cash interest expenses	€M	0.00	0.00	0.00	0.00
Financial income	€M	0.00	0.00	0.00	0.00
Other financial income (expense)	€M	-0.50	0.00	0.00	0.00
Net financial expenses	€M	-0.50	-2.72	-4.73	-6.90
of which related to pensions	€M		0.00	0.00	0.00
Pre-tax profit before exceptional items	€M	-3.38	-1.11	4.21	10.5
Exceptional items and other (before taxes)	€M	0.00	0.00	0.00	0.00
of which cash (cost) from exceptionals	€M				
Current tax	€M	1.06	0.37	-1.40	-3.51
Impact of tax loss carry forward	€M	0.00	0.00	0.00	0.00
Deferred tax	€M	0.00	0.00	0.00	0.00
Corporate tax	€M	1.06	0.37	-1.40	-3.51
Tax rate	%	31.3	33.3	33.3	33.3
Net margin	%	-63.2	-5.80	11.0	18.3
Equity associates	€M	0.00	0.00	0.00	0.00
Actual dividends received from equity holdings	€M	0.00	0.00	0.00	0.00
Minority interests	€M	0.00	0.00	0.00	0.00
Actual dividends paid out to minorities	€M	0.00	0.00	0.00	0.00
Income from discontinued operations	€M	0.00	0.00	0.00	0.00
Attributable net profit	€M	-2.32	-0.74	2.81	7.03
Impairment charges/goodwill amortisation	€M	0.00	0.00	0.00	0.00
Other adjustments	€M	0.00	0.00	0.00	0.00
Adjusted attributable net profit	€M	-2.32	-0.74	2.81	7.03

Financials

Interest expense savings	€M	0.00	0.00	0.00	0.00
Fully diluted adjusted attr. net profit	€M	-2.32	-0.74	2.81	7.03
NOPAT	€M	-2.02	1.13	6.26	12.2

Cashflow Statement

Cashflow Statement		06/17A	06/18E	06/19E	06/20E
EBITDA	€M	-2.21	2.61	11.2	21.0
Change in WCR	€M	6.35	0.00	0.00	0.00
of which (increases)/decr. in receivables	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
of which (increases)/decr. in inventories	*€M*	*-0.07*	*0.00*	*0.00*	*0.00*
of which increases/(decr.) in payables	*€M*	*6.42*	*0.00*	*0.00*	*0.00*
of which increases/(decr.) in other curr. liab.	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
Actual dividends received from equity holdings	€M	0.00	0.00	0.00	0.00
Paid taxes	€M	0.00	0.37	-1.40	-3.51
Exceptional items	€M	0.00	0.00	0.00	0.00
Other operating cash flows	€M	-7.68	0.00	0.00	0.00
Total operating cash flows	€M	-3.54	2.98	9.82	17.5
Capital expenditure	€M	-16.9	-28.5	-28.5	-6.50
Capex as a % of depreciation & amort.	*%*	*3,498*	*2,850*	*1,250*	*183*
Net investments in shares	€M	0.00	0.00	0.00	0.00
Other investment flows	€M	6.50	0.00	0.00	0.00
Total investment flows	€M	-10.4	-28.5	-28.5	-6.50
Net interest expense	€M	-0.50	-2.72	-4.73	-6.90
of which cash interest expense	*€M*	*0.00*	*-2.72*	*-4.73*	*-6.90*
Dividends (parent company)	€M	0.00	0.00	0.00	0.00
Dividends to minorities interests	€M	0.00	0.00	0.00	0.00
New shareholders' equity	€M	0.00	0.00	10.0	0.00
of which (acquisition) release of treasury shares	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
(Increase)/decrease in net debt position	€M	2.73	24.9	20.1	21.7
Other financial flows	€M	0.00	0.00	0.00	0.00
Total financial flows	€M	2.73	22.2	25.4	14.8
Change in scope of consolidation, exchange rates & other	€M	0.00	0.00	0.00	0.00
Change in cash position	€M	-11.2	-3.34	6.69	25.8
Change in net debt position	€M	-13.9	-28.2	-13.4	4.09
Free cash flow (pre div.)	€M	-20.9	-28.2	-23.4	4.09
Operating cash flow (clean)	€M	-3.54	2.98	9.82	17.5
Reinvestment rate (capex/tangible fixed assets)	*%*	*54.4*	*48.7*	*33.6*	*7.42*

Financials

Balance Sheet

		06/17A	06/18E	06/19E	06/20E
Goodwill	€M	0.00	0.00	0.00	0.00
Contracts & Rights (incl. concession) intangible assets	€M	43.7	43.7	43.7	43.7
Other intangible assets	€M	0.00	0.00	0.00	0.00
Total intangible	€M	43.7	43.7	43.7	43.7
Tangible fixed assets	€M	31.0	58.5	84.7	87.6
Financial fixed assets (part of group strategy)	€M	0.00	0.00	0.00	0.00
Financial hedges (LT derivatives)	€M	0.00	0.00	0.00	0.00
Other financial assets (investment purpose mainly)	€M	0.22	0.22	0.22	0.22
of which available for sale	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
WCR	€M	-10.5	-10.5	-10.5	-10.5
of which trade & receivables (+)	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
of which inventories (+)	*€M*	*0.51*	*0.51*	*0.51*	*0.51*
of which payables (+)	*€M*	*11.0*	*11.0*	*11.0*	*11.0*
of which other current liabilities (+)	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
Other current assets	€M	3.75	3.75	3.75	3.75
of which tax assets (+)	*€M*	*0.78*	*0.78*	*0.78*	*0.78*
Total assets (net of short term liabilities)	€M	68.1	95.6	122	125
Ordinary shareholders' equity (group share)	€M	52.3	51.5	68.4	75.4
Quasi Equity & Preferred	€M	0.00	0.00	0.00	0.00
Minority interests	€M	0.00	0.00	0.00	0.00
Provisions for pensions	€M	0.02	0.03	0.03	0.03
Other provisions for risks and liabilities	€M	4.38	4.38	4.38	4.38
Deferred tax liabilities	€M	7.03	7.03	7.03	7.03
Other liabilities	€M	4.03	4.03	0.00	0.00
Net debt / (cash)	€M	0.35	28.6	42.0	37.9
Total liabilities and shareholders' equity	€M	68.1	95.6	122	125
Average net debt / (cash)	€M	-5.81	14.5	35.3	40.0

EV Calculations

		06/17A	06/18E	06/19E	06/20E
EV/EBITDA(R)	**x**	**-39.4**	**45.6**	**12.3**	**6.36**
EV/EBIT (underlying profit)	**x**	**-30.2**	**73.9**	**15.4**	**7.65**
EV/Sales	**x**	**23.7**	**9.31**	**5.41**	**3.47**
EV/Invested capital	x	1.36	1.30	1.17	1.11
Market cap	€M	82.3	86.1	91.2	91.2
+ Provisions (including pensions)	€M	4.40	4.41	4.41	4.40
+ Unrecognised actuarial losses/(gains)	€M	0.00	0.00	0.00	0.00
+ Net debt at year end	€M	0.35	28.6	42.0	37.9
+ Leases debt equivalent	€M	0.00	0.00	0.00	0.00
- Financial fixed assets (fair value) & Others	€M				
+ Minority interests (fair value)	€M				
= Enterprise Value	**€M**	**87.1**	**119**	**138**	**134**

Financials

Per Share Data

		06/17A	06/18E	06/19E	06/20E
Adjusted EPS (bfr gwill amort. & dil.)	**€**	**-0.46**	**-0.15**	**0.54**	**1.31**
Growth in EPS	*%*	*n/a*	*n/a*	*n/a*	*144*
Reported EPS	€	-0.46	-0.15	0.52	1.31
Net dividend per share	**€**	**0.00**	**0.00**	**0.00**	**0.00**
Free cash flow per share	€	-4.13	-5.58	-4.49	0.76
Operating cash flow per share	€	-0.70	0.59	1.88	3.26
Book value per share	€	10.3	10.2	12.7	14.1
Number of ordinary shares	**Mio**	**5.07**	**5.07**	**5.37**	**5.37**
Number of equivalent ordinary shares (year end)	Mio	5.07	5.07	5.37	5.37
Number of shares market cap.	Mio	5.07	5.07	5.37	5.37
Treasury stock (year end)	Mio				
Number of shares net of treasury stock (year end)	Mio	5.07	5.07	5.37	5.37
Number of common shares (average)	**Mio**	**5.07**	**5.07**	**5.22**	**5.37**
Conversion of debt instruments into equity	Mio				
Settlement of cashable stock options	Mio				
Probable settlement of non mature stock options	Mio				
Other commitments to issue new shares	Mio				
Increase in shares outstanding (average)	Mio	0.00	0.00	0.00	0.00
Number of diluted shares (average)	**Mio**	**5.07**	**5.07**	**5.22**	**5.37**
Goodwill per share (diluted)	€	0.00	0.00	0.00	0.00
EPS after goodwill amortisation (diluted)	€	-0.46	-0.15	0.54	1.31
EPS before goodwill amortisation (non-diluted)	€	-0.46	-0.15	0.54	1.31
Actual payment	€				
Payout ratio	**%**	**0.00**	**0.00**	**0.00**	**0.00**
Capital payout ratio (div +share buy back/net income)	**%**	**0.00**	**0.00**	**0.00**	**0.00**

Financials

Funding - Liquidity

		06/17A	06/18E	06/19E	06/20E
EBITDA	€M	-2.21	2.61	11.2	21.0
Funds from operations (FFO)	€M	-9.89	0.26	5.09	10.6
Ordinary shareholders' equity	**€M**	**52.3**	**51.5**	**68.4**	**75.4**
Gross debt	€M	18.3	43.2	63.3	85.0
o/w Less than 1 year - Gross debt	€M	0.00	0.00	0.00	0.00
o/w 1 to 5 year - Gross debt	€M	3.30	3.30	3.30	0.00
of which Y+2	€M	0.00	0.00	3.30	0.00
of which Y+3	€M	0.00	3.30	0.00	0.00
of which Y+4	€M	3.30	0.00	0.00	0.00
of which Y+5	€M	0.00	0.00	0.00	0.00
o/w Beyond 5 years - Gross debt	€M	15.0	39.9	60.0	85.0
+ Gross Cash	€M	18.0	14.6	21.3	47.1
= Net debt / (cash)	**€M**	**0.35**	**28.6**	**42.0**	**37.9**
Bank borrowings	€M	15.0	39.9	39.9	39.9
Issued bonds	€M	3.30	3.30	23.4	45.1
Financial leases liabilities	€M	0.00	0.00	0.00	0.00
Mortgages	€M	0.00	0.00	0.00	0.00
Other financing	€M	0.00	0.00	0.00	0.00
of which commercial paper	€M	0.00	0.00	0.00	
Gearing (at book value)	%	-11.1	28.1	51.6	53.0
Adj. Net debt/EBITDA(R)	*x*	*-0.16*	*10.9*	*3.74*	*1.81*
Adjusted Gross Debt/EBITDA(R)	*x*	*-10.3*	*18.2*	*6.03*	*4.26*
Adj. gross debt/(Adj. gross debt+Equity)	*%*	*30.3*	*48.0*	*49.8*	*54.2*
Ebit cover	*x*	*-5.77*	*0.59*	*1.89*	*2.53*
FFO/Gross Debt	*%*	*-43.6*	*0.54*	*7.51*	*11.8*
FFO/Net debt	*%*	*-2,828*	*0.90*	*12.1*	*27.9*
FCF/Adj. gross debt (%)	*%*	*-92.1*	*-59.3*	*-34.6*	*4.57*

ROE Analysis (Dupont's Breakdown)

		06/17A	06/18E	06/19E	06/20E
Tax burden (Net income/pretax pre excp income)	x	0.69	0.67	0.67	0.67
EBIT margin (EBIT/sales)	%	-78.5	12.6	35.2	45.3
Assets rotation (Sales/Avg assets)	%	6.31	15.6	23.4	31.2
Financial leverage (Avg assets /Avg equity)	x	1.11	1.58	1.81	1.71
ROE	**%**	**-4.43**	**-1.43**	**4.68**	**9.78**
ROA	%	-4.50	1.76	7.59	14.4

Shareholder's Equity Review (Group Share)

		06/17A	06/18E	06/19E	06/20E
Y-1 shareholders' equity	€M	53.4	52.1	51.5	68.4
+ Net profit of year	€M	-2.32	-0.74	2.81	7.03
- Dividends (parent cy)	€M	0.00	0.00	0.00	0.00
+ Additions to equity	€M	0.00	0.00	10.0	0.00
o/w reduction (addition) to treasury shares	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
- Unrecognised actuarial gains/(losses)	€M	0.00	0.00	0.00	0.00
+ Comprehensive income recognition	€M	1.00	0.16	4.03	0.00
= Year end shareholders' equity	**€M**	**52.1**	**51.5**	**68.4**	**75.4**

La Française de l'Energie (Buy)

Alternative Energy / France

Financials

Staffing Analytics

		06/17A	06/18E	06/19E	06/20E
Sales per staff	€th	184	533	1,017	1,539
Staff costs per employee	€th	-59.7	-59.7	-59.7	-59.7
Change in staff costs	*%*	*25.0*	*20.0*	*4.17*	*0.00*
Change in unit cost of staff	*%*	*0.00*	*0.00*	*0.00*	*0.00*
Staff costs/(EBITDA+Staff costs)	*%*	*-118*	*35.4*	*11.7*	*6.64*
Average workforce	**unit**	**20.0**	**24.0**	**25.0**	**25.0**
Europe	unit	20.0	24.0	25.0	25.0
North America	unit	0.00	0.00	0.00	0.00
South Americas	unit	0.00	0.00	0.00	0.00
Asia	unit	0.00	0.00	0.00	0.00
Other key countries	unit	0.00	0.00	0.00	0.00
Total staff costs	**€M**	**-1.19**	**-1.43**	**-1.49**	**-1.49**
Wages and salaries	€M	-1.19	-1.43	-1.49	-1.49
of which social security contributions	*€M*	*-0.37*	*-0.44*	*-0.46*	*-0.46*
Equity linked payments	€M				
Pension related costs	€M		0.00	0.00	0.00

Divisional Breakdown Of Revenues

		06/17A	06/18E	06/19E	06/20E
NPdC CMM Green Energy	€M	3.68	9.70	13.7	15.2
Lorraine Coalbed Methane	€M	0.00	3.09	11.7	23.3
Other	€M				
Total sales	**€M**	**3.68**	**12.8**	**25.4**	**38.5**

Divisional Breakdown Of Earnings

		06/17A	06/18E	06/19E	06/20E
EBITDA/R Analysis					
NPdC CMM Green Energy	€M	2.89	5.90	8.70	10.1
Lorraine Coalbed Methane	€M	0.00	1.81	7.62	16.0
Other/cancellations	€M	-5.10	-5.10	-5.10	-5.10
Total	**€M**	**-2.21**	**2.61**	**11.2**	**21.0**
EBITDA/R margin	%	-60.1	20.4	44.1	54.6

Revenue Breakdown By Country

		06/17A	06/18E	06/19E	06/20E
France	%	100	100		
Other	%	0.00	0.00		

ROCE/CFROIC/Capital Invested

		06/17A	06/18E	06/19E	06/20E
ROCE (NOPAT+lease exp.(1-tax))/(net) cap employed adjusted*	*%*	*-3.15*	*1.23*	*5.31*	*10.1*
CFROIC	*%*	*-32.6*	*-30.8*	*-19.9*	*3.38*
Goodwill	€M	0.00	0.00	0.00	0.00
Accumulated goodwill amortisation	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
All intangible assets	€M	43.7	43.7	43.7	43.7
Accumulated intangible amortisation	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
Financial hedges (LT derivatives)	€M	0.00	0.00	0.00	0.00
Capitalised R&D	€M	0.00	0.00	0.00	0.00
PV of non-capitalised lease obligations	€M	0.00	0.00	0.00	0.00
Other fixed assets	€M	31.0	58.5	84.7	87.6
Accumulated depreciation	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
WCR	€M	-10.5	-10.5	-10.5	-10.5
Other assets	€M	0.00	0.00	0.00	0.00
Unrecognised actuarial losses/(gains)	€M	0.00	0.00	0.00	0.00
Capital employed after deprec. (Invested capital)	**€M**	**64.1**	**91.6**	**118**	**121**
Capital employed before depreciation	€M	64.1	91.6	118	121

Financials

Divisional Breakdown Of Capital

		06/17A	06/18E	06/19E	06/20E
NPdC CMM Green Energy	€M				
Lorraine Coalbed Methane	€M				
Other	€M	64.1	91.6	118	121
Total capital employed	**€M**	**64.1**	**91.6**	**118**	**121**

Pension matters

There are 18 people in the team in Lorraine and 6 in Northern France. Most of the modelling of the sub surface, the reservoir end drilling engineering is done internally as is the production side of the business. The subcontractors' headcount increases significantly during the drilling operations with over 50 people working full-time on site for LFDE.

Summary Of Pension Risks

		06/17A	06/18E	06/19E	06/20E
Pension ratio	**%**	**0.08**	**0.06**	**0.04**	**0.03**
Ordinary shareholders' equity	€M	52.3	51.5	68.4	75.4
Total benefits provisions	**€M**	**0.04**	**0.03**	**0.03**	**0.03**
of which funded pensions	*€M*	*0.04*	*0.03*	*0.03*	*0.03*
of which unfunded pensions	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
of which benefits / health care	*€M*		*0.00*	*0.00*	*0.00*
Unrecognised actuarial (gains)/losses	€M	0.00	0.00	0.00	0.00
Company discount rate	*%*	*1.50*	*1.50*	*1.50*	*1.50*
Normalised recomputed discount rate	%		1.50		
Company future salary increase	*%*	*2.00*	*2.00*	*2.00*	*2.00*
Normalised recomputed future salary increase	%		2.00		
Company expected rate of return on plan assets	*%*	*1.50*	*1.50*	*1.50*	*1.50*
Normalised recomputed expd rate of return on plan assets	%		1.50		
Funded : Impact of actuarial assumptions	**€M**		**0.00**		
Unfunded : Impact of actuarial assumptions	**€M**		**0.00**		

Geographic Breakdown Of Pension Liabilities

		06/17A	06/18E	06/19E	06/20E
US exposure	%				
UK exposure	%				
Euro exposure	%	100	100	100	100
Nordic countries	%				
Switzerland	%				
Other	%				
Total	%	100	100	100	100

Balance Sheet Implications

		06/17A	06/18E	06/19E	06/20E
Funded status surplus / (deficit)	€M	-0.04	-0.04	-0.04	-0.04
Unfunded status surplus / (deficit)	€M	0.00	0.00	0.00	0.00
Total surplus / (deficit)	€M	-0.04	-0.04	-0.04	-0.04
Total unrecognised actuarial (gains)/losses	**€M**	**0.00**	**0.00**	**0.00**	**0.00**
Provision (B/S) on funded pension	€M	0.04	0.03	0.03	0.03
Provision (B/S) on unfunded pension	€M	0.00	0.00	0.00	0.00
Other benefits (health care) provision	€M		0.00	0.00	0.00
Total benefit provisions	**€M**	**0.04**	**0.03**	**0.03**	**0.03**

P&L Implications

		06/17A	06/18E	06/19E	06/20E
Funded obligations periodic costs	€M	0.00	0.00	0.00	0.00
Unfunded obligations periodic costs	€M	0.00	0.00	0.00	0.00
Total periodic costs	**€M**	**0.00**	**0.00**	**0.00**	**0.00**
of which incl. in labour costs	*€M*	*0.00*	*0.00*	*0.00*	*0.00*
of which incl. in interest expenses	*€M*	*0.00*	*0.00*	*0.00*	*0.00*

Pension Risks

Funded Obligations		06/17A	06/18E	06/19E	06/20E
Balance beginning of period	**€M**	**0.04**	**0.04**	**0.04**	**0.04**
Current service cost	€M		0.00	0.00	0.00
Interest expense	€M		0.00	0.00	0.00
Employees' contributions	€M				
Impact of change in actuarial assumptions	€M		0.00	0.00	0.00
of which impact of change in discount rate	*€M*		*0.00*		
of which impact of change in salary increase	*€M*		*0.00*		
Changes to scope of consolidation	**€M**				
Currency translation effects	€M				
Pension payments	€M				
Other	€M				
Year end obligation	**€M**	**0.04**	**0.04**	**0.04**	**0.04**

Plan Assets		06/17A	06/18E	06/19E	06/20E
Value at beginning	**€M**		**0.00**	**0.00**	**0.00**
Company expected return on plan assets	€M		0.00	0.00	0.00
Actuarial gain /(loss)	€M		0.00	0.00	0.00
Employer's contribution	€M	0.00	0.00	0.00	0.00
Employees' contributions	€M	0.00	0.00	0.00	0.00
Changes to scope of consolidation	€M				
Currency translation effects	€M				
Pension payments	€M	0.00	0.00	0.00	0.00
Other	€M				
Value end of period	**€M**	**0.00**	**0.00**	**0.00**	**0.01**
Actual and normalised future return on plan assets	€M	0.00	0.00	0.00	0.00

Unfunded Obligations		06/17A	06/18E	06/19E	06/20E
Balance beginning of period	**€M**	**0.00**	**0.00**	**0.00**	**0.00**
Current service cost	€M		0.00	0.00	0.00
Interest expense	€M		0.00	0.00	0.00
Employees' contributions	€M				
Impact of change in actuarial assumptions	€M		0.00	0.00	0.00
of which Impact of change in discount rate	*€M*		*0.00*		
of which Impact of change in salary increase	*€M*		*0.00*		
Changes to scope of consolidation	€M				
Currency translation effects	€M				
Pension payments	€M				
Other	€M				
Year end obligation	**€M**	**0.00**	**0.00**	**0.00**	**0.00**

Governance & Management

Management

The company is chaired by its Chairman and CEO, Julien Moulin.

Julien Moulin served as Chairman of the Board and Executive Director of European Gas Limited (Australia) and European Gas Limited (EGLUK) when these companies were the head companies of the group. This was before the restructuring which resulted in the company becoming the head of the group.

Julien Moulin is an entrepreneur and energy specialist. He co-founded and managed Maoming Investment Manager Ltd, an investment management company investing globally in listed and unlisted companies with a significant focus on the energy sector in Asia. Mr Moulin also served on the boards of several listed and unlisted companies in China, Australia and the US. He was seed capital investor and former Vice-Chairman of Envision Energy which has become one of the largest wind turbine producers globally. He previously was an investment manager at Barclays, UBS Global Asset Management and Axis Capital in London.

Julien Moulin holds a BA in Economics and Business Sciences (Hons) from Sorbonne University and a Master Degree in Asset Management and Financial Markets (Hons) from the University of Paris-Dauphine. His mandate is to focus on investor relations, key stakeholders and both domestic and international growth.

The day-to-day management of the company is run by the COO, Antoine Forcinal.

Antoine Forcinal has been COO since 2015. Antoine FORCINAL was Deputy General Manager at Foxtrot International, the private E&P entity of the Bouygues brothers, producing 70% of the electricity needs of the Ivory Coast from two offshore gas fields. From 2010 to 2014, he led and built the Technical Department for the sister subsidiary of Foxtrot International in Canada, Investcan Energy Corporation, to develop the Canadian portfolio that included three onshore permits in Western Newfoundland, a dozen exploration licences onshore Québec and one offshore licence in Labrador with major unconventional targets.

He started his career in operations as Production Engineer for both Onshore and Offshore in West Africa for Perenco DRC and later Perenco Gabon. Following various assignments in Africa, he was responsible for the reservoir management of some 250+ offshore gas wells for Perenco UK, with particular responsibility for production, operations, reserves booking and optimisation.

Antoine holds an MSc in Mechanical Engineering and Project Management from Arts et MétiersFrance and also a fully sponsored MSc in Petroleum Engineering from Imperial College, London.

The Finance team is run by Johannes Niemetz, CFO, who has been CFO since 2011.

Johannes was previously a Director at Strata Partners, a London-based boutique investment bank focusing on M&A advisory and debt and equity placements in the clean tech, energy and infrastructure space.

Johannes Niemetz started his career at General Electric in the financial management programme and worked inter alia at GE Infrastructure and GE Oil&Gas focusing on M&A, integration, and implementation of synergies. He worked inter alia on the Nuovo Pignone integration as well as the Jenbacher acquisition and integration into GE.

Johannes Niemetz holds a BSc from the London School of Economics and has a joint MSc degree in Management from the London School of Economics and ESADE.

The board

LFDE has built an independent board composed of five experienced individuals coming from various backgrounds including regulatory, industry and finance.

Jean Fontourcy is the Chairman of the Audit Committee and is a representative of key shareholders on the board.

Jean Fontourcy had a long career in managing financial departments as well as running companies in various sectors. He is the former CEO of CDR Entreprises (ex Altus), of Cartier Industries (automotive equipment) and a member of the executive committee of the Caisse Nationale de Crédit Agricole (CNCA, later becoming CASA).

A graduate from ENA in France, he started his career working for the French State at the Treasury department setting the direction of the French's economic policy and controlling public spending.

Christophe Charlier is the chairman of the Audit Committee and an independent board member since 2016.

Governance & Management

Christophe Charlier is currently Chairman of the Board of Renaissance Capital. Mr Charlier is an experienced finance professional, including most recently as Deputy CEO of ONEXIM Group. Mr Charlier has served in executive positions and on the boards of directors of some large energy and mining companies, including RusAl, Polyus Gold and Norilsk Nickel. Mr Charlier also served as Chairman of the Board of the basketball team, the Brooklyn Nets and remains a board member of both the Brooklyn Nets and Barclays Centre.
Mr Charlier graduated cum laude in 1994 with a BSE with a specialisation in Finance from the Wharton School and a BA in International Relations from the College of Arts & Sciences of the University of Pennsylvania.

Alain Liger has been an independent board member since 2016.
He has a high-level of experience regarding the development of mineral resources and, in particular, regarding the relationships between operating companies and administrations of host States.
A former student of Mines ParisTech, Alain Liger held operational positions and strategic responsibility of exploration-development positions in the mining industry, in the French mining group BRGM for 17 years, then in the British mining and metallurgical group Billiton for four years. He led the negotiations for the acquisition of new exploration areas and the supervision of mining projects in numerous countries. From 2002 to 2013, as the regional director, he represented the ministry of industry in Alsace and the ministry of sustainable development in Lorraine. From 2013 to 2016, he was a member of the General Council for economy, industry, energy and technologies in economic and financial ministries. He has been, amongst others, general secretary of the Committee for Strategic Metals (COMES) and chairman of the Steering Committee of the “Responsible Mine” (“Mine responsable”) initiative launched in 2015.

Cécile Maisonneuve has been an independent board member since 2016.
Cécile Maisonneuve is on the council of the Centre Energie of the Institut français des Relations Internationales (IFRI), she is also chairman of La Fabrique de la Cité.
Cécile Maisonneuve previously held various positions in the AREVA group, relating to prospective and international and European public business and started her career as an administrator at the French National Assembly, where she worked successively for the Defence, Law and Foreign Affairs committees.
A former student of the Ecole Normale Supérieure, a lauréate of the Paris Institute of Political studies, Cécile Maisonneuve also holds a Master 2 in History from the University Paris IV Sorbonne.

Shareholders
In order to fully align the interest of the shareholers, investors, management and employees of LFDE, all LFDE’s team members are shareholders in LFDE. Including the stake held by the Chairman of the group, c. 10% of the company is held by the LFDE team.

LFDE is also supported by a strong combination of industrial and financial families representing in total about 60% of the share capital. This includes Financière de Rosario & Gabriel (ex Maurel&Prom), the Lorenceau family (co-founder of Addax Petroleum), Bac Investissements, the Eberlé Labruyère Group, Visvires Capital, Four Points AM, the Durr Family and the Chalopin family (Deltec Bank).

A few UK and European institutional long-only investors, such as Credit Mutuel Nord Europe (3.7%), and Amundi (2.1% of the share capital), are shareholders of the company. The remainder is held by various private or smaller institutional investors.

La Française de l'Energie (Buy)

Alternative Energy / France

Governance & Management

Governance parameters

	Yes ✓ / No ✗	Weighting
One share, one vote	✓	20%
Chairman vs. Executive split	✗	5%
Chairman not ex executive	✗	5%
Independent directors equals or above 50% of total directors	✓	20%
Full disclosure on mgt pay (performance related bonuses, pensions and non financial benefits)	✓	10%
Disclosure of performance anchor for bonus trigger	✗	15%
Compensation committee reporting to board of directors	✓	5%
Straightforward, clean by-laws	✓	20%
Governance score	75	100%

Existing committees

- ✓ Audit / Governance Committee
- ✓ Compensation committee
- ✓ Financial Statements Committee
- ✗ Litigation Committee
- ✓ Nomination Committee
- ✓ Safety committee
- ✓ SRI / Environment

Management

Name		Function	Birth date	Date in	Date out	Compensation, in k€ (year) Cash	Equity linked
Julien MOULIN	M	Chairman	1977	2009		895 (2016)	523 (2016)
Johannes NIEMETZ	M	CFO	1979	2011		260 (2016)	417 (2016)
Antoine FORCINAL	M	COO	1982	2015		230 (2016)	420 (2016)

Board of Directors

Name		Indep.	Function	Completion of current mandate	Birth date	Date in	Date out	Fees / indemnity, in k€ (year)	Value of holding, in k€ (year)
Jean FONTOURCY	M	✗	Member		1939	2016		17.5 (2016)	
Christophe CHARLIER	M	✓	Member		1971	2016		15.0 (2016)	
Alain LIGER	M	✓	Member		1951	2016		12.5 (2016)	
Cécile MAISONNEUVE	F	✓	Member		1971	2016		12.5 (2016)	

La Française de l'Energie (Buy)

Alternative Energy / France

ALPHAVALUE CORPORATE SERVICES

Governance & Management

Human Resources

Accidents at work	Human resources development	Pay	Job satisfaction	Internal communication
25% Of H.R. Score	35% Of H.R. Score	20% Of H.R. Score	10% Of H.R. Score	10% Of H.R. Score

HR Breakdown

		Yes ✓ / No ✗	Rating
Accidents at work	**25%**		**25/100**
Set targets for work safety on all group sites?	40%	✓	10/100
Are accidents at work declining?	60%	✓	15/100
Human resources development	**35%**		**35/100**
Are competences required to meet medium term targets identified?	10%	✓	4/100
Is there a medium term (2 to 5 years) recruitment plan?	10%	✓	4/100
Is there a training strategy tuned to the company objectives?	10%	✓	4/100
Are employees trained for tomorrow's objectives?	10%	✓	4/100
Can all employees have access to training?	10%	✓	4/100
Has the corporate avoided large restructuring lay-offs over the last year to date?	10%	✓	4/100
Have key competences stayed?	10%	✓	4/100
Are managers given managerial objectives?	10%	✓	4/100
If yes, are managerial results a deciding factor when assessing compensation level?	10%	✓	4/100
Is mobility encouraged between operating units of the group?	10%	✓	4/100
Pay	**20%**		**20/100**
Is there a compensation committee?	30%	✓	6/100
Is employees' performance combining group performance AND individual performance?	70%	✓	14/100
Job satisfaction	**10%**		**10/100**
Is there a measure of job satisfaction?	33%	✓	3/100
Can anyone participate ?	34%	✓	3/100
Are there action plans to prop up employees' morale?	33%	✓	3/100
Internal communication	**10%**		**10/100**
Are strategy and objectives made available to every employee?	100%	✓	10/100
	Human Ressources score:		**100/100**

HR Score

H.R. Score : 10.0/10

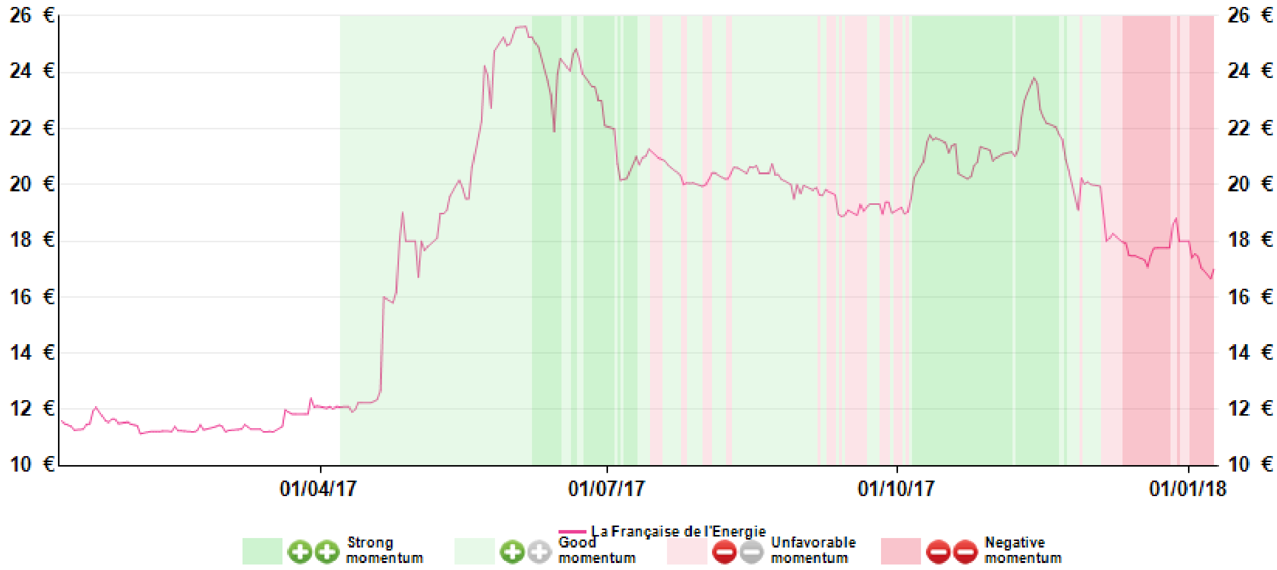
▼ Utilities
■ La Française de l'Energie

La Française de l'Energie (Buy)

Alternative Energy / France

Graphics

Momentum



: Strong momentum corresponding to a continuous and overall positive moving average trend confirmed by volumes

: Relatively good momentum corresponding to a positively-oriented moving average, but offset by an overbought pattern or lack of confirmation from volumes

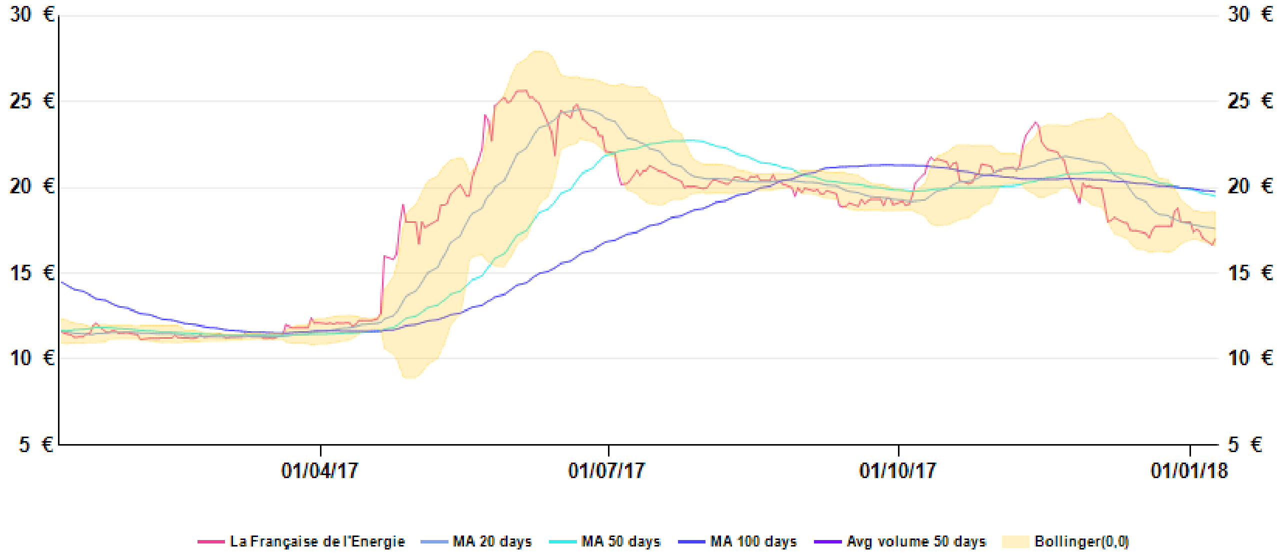
: Relatively unfavorable momentum with a neutral or negative moving average trend, but offset by an oversold pattern or lack of confirmation from volumes

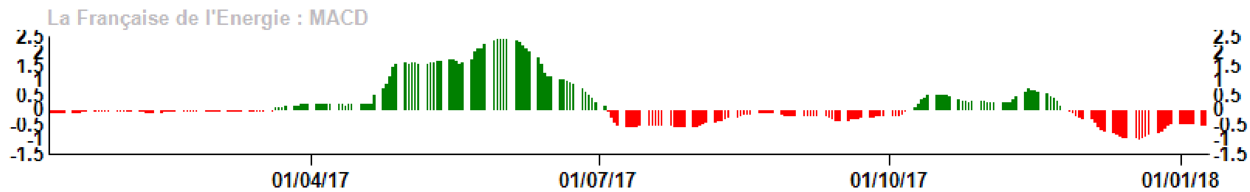
: Strongly negative momentum corresponding to a continuous and overall negative moving average trend confirmed by volumes

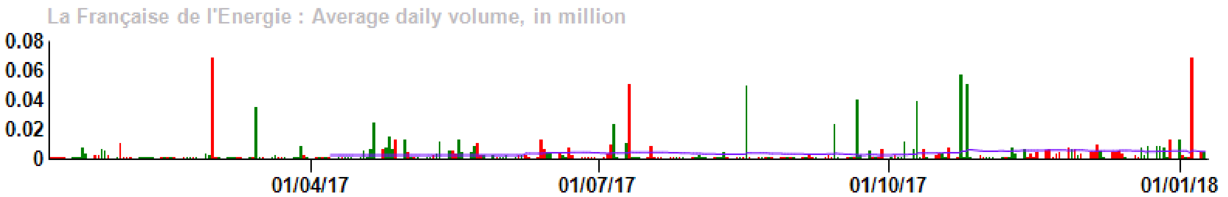
Momentum analysis consists in evaluating the stock market trend of a given financial instrument, based on the analysis of its trading flows.
The main indicators used in our momentum tool are simple moving averages over three time frames: short term (20 trading days), medium term (50 days) and long term (150 days). The positioning of these moving averages relative to each other gives us the direction of the flows over these time frames.
For example, if the short and medium-term moving averages are above the long-term moving average, this suggests an uptrend which will need to be confirmed. Attention is also paid to the latest stock price relative to the three moving averages (advance indicator) as well as to the trend in these three moving averages - downtrend, neutral, uptrend - which is more of a lagging indicator.
The trend indications derived from the flows through moving averages and stock prices must be confirmed against trading volumes in order to confirm the signal. This is provided by a calculation based on the average increase in volumes over ten weeks together with a buy/sell volume ratio.

Graphics

Moving Average MACD & Volume



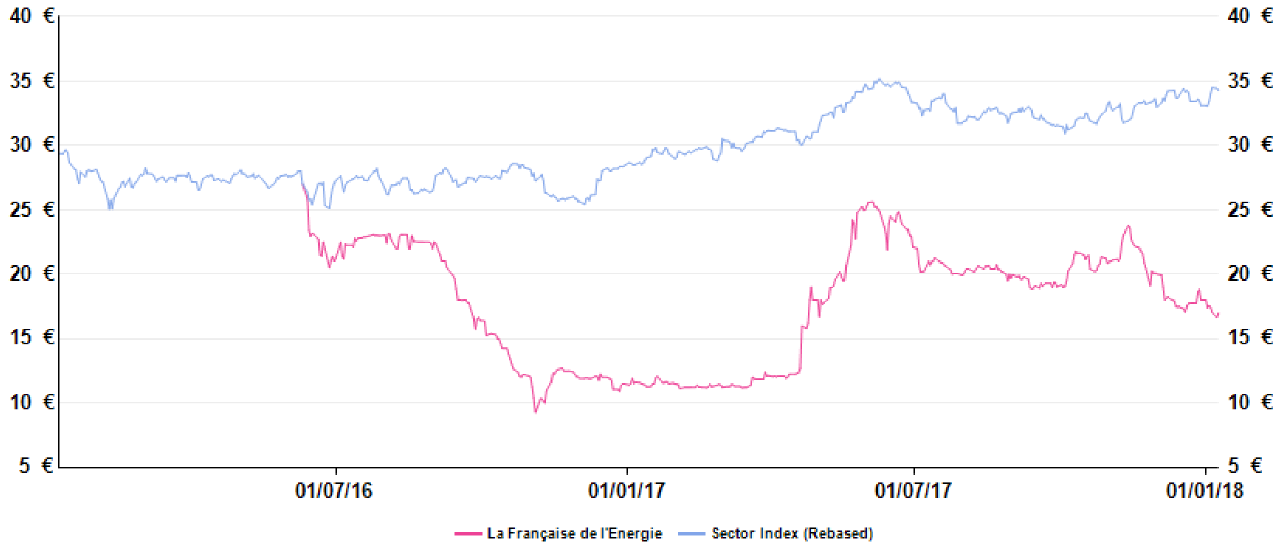




Graphics

Brent $/bl sensitivity

Sector Utilities



Methodology

Methodology

Fundamental Opinion

It is implicit that recommendations are made in good faith but should not be regarded as the sole source of advice.

Recommendations are geared to a "**value**" approach.

Valuations are computed from the point of view of a **secondary market minority holder** looking at a medium term (say 6 months) performance.

Valuation tools are built around the concepts of **transparency,** all underlying figures are accessible, and **consistency,** same methodology whichever the stock, allowing for differences in nature between financial and non financial stocks. A stock with a target price below its current price should not and will not be regarded as an Add or a Buy.

Recommendations are based on target prices with no allowance for dividend returns. The thresholds for the four recommendation levels may change from time to time depending on market conditions. Thresholds are defined as follows, ASSUMING long risk free rates remain in the 2-5% region.

Recommendation	Low Volatility 10 < VIX index < 30	Normal Volatility 15 < VIX index < 35	High Volatility 35 < VIX index
Buy ●	More than 15% upside	More than 20% upside	More than 30% upside
Add ●	From 5% to 15%	From 5% to 20%	From 10% to 30%
Reduce ●	From -10% to 5%	From -10% to 5%	From -10% to 10%
Sell ●	Below -10%	Below -10%	Below -10%

There is deliberately no "neutral" recommendation. The principle is that there is no point investing in equities if the return is not at least the risk free rate (and the dividend yield which again is not allowed for).

Although recommendations are automated (a function of the target price whenever a new equity research report is released), the management of AlphaValue intends to maintain global consistency within its universe coverage and may, from time to time, decide to change global parameters which may affect the level of recommendation definitions and /or the distribution of recommendations within the four levels above. For instance, lowering the risk premium in a gloomy context may increase the proportion of positive recommendations.

Methodology

Valuation

Valuation processes have been organized around transparency and consistency as primary objectives.

Stocks belong to different categories that recognise their main operating features : Banks, Insurers and Non Financials.

Within those three universes, the valuation techniques are the same and in relation to the financial data available.

The weighting given to individual valuation techniques is managed centrally and may be changed from time to time. As a rule, all stocks of a similar profile are valued using equivalent weighting of the various valuation techniques. This is for obvious consistency reasons.

Within the very large universe of Non Financials, there are in effect 4 sub-categories of weightings to cater for subsets: 1) 'Mainstream' stocks; 2) 'Holding companies' where the stress is on NAV measures; 3) 'Growth' companies where the stress is on peer based valuations; 4) 'Loss making sectors' where peers review is essentially pointing nowhere (ex: Bio techs). The bulk of the valuation is then built on DCF and NAV, in effect pushing back the time horizon.

Valuation Issue	Normal industrials	Growth industrials	Holding company	Loss runners	Bank	Insurers
DCF	35%	35%	10%	40%	0%	0%
NAV	20%	20%	55%	40%	25%	15%
PE	10%	10%	10%	5%	10%	20%
EV/EBITDA	20%	20%	0%	5%	0%	0%
Yield	10%	10%	20%	5%	15%	15%
P/Book	5%	5%	5%	5%	15%	10%
Banks' instrinsic method	0%	0%	0%	0%	25%	0%
Embedded Value	0%	0%	0%	0%	0%	40%
Mkt Cap/Gross Operating Profit	0%	0%	0%	0%	10%	0%