GMP FirstEnergy

Equity Research

La Française de l'Energie SA[1,7]

Speculative Buy

LFDE-EPA

April 12, 2017

Last: **€11.91**
Target: **€40.00**

Initiating coverage: Genesis of a new national gas champion

Coal Bed and Coal Mine Methane in France

We are initiating coverage on La Française de l'Energie (LFDE FP) with a Speculative Buy recommendation and a target price of EUR40 per share.

LFDE is a EUR60 mm market cap company listed in Paris. It is a Coal Bed Methane (CBM) and Coal Mine Methane (CMM) player in France with very large resources. With concerns of constraints on nuclear power due to potential safety issues, minor black-outs occurred in France during the winter. With FY17 electricity production from nuclear power plants revised down, securing gas supply is a key concern.

LFDE holds large licences in former coal mining areas in Lorraine in the East of France and Nord Pas de Calais (NPdC) in the North of France with multi tcf of contingent resources. The coal is of very good quality and a very large amount of G&G historical data is available. Relative to most unconventional companies in Europe, LFDE is well ahead of its peers in terms of maturing its assets and has already produced a total of c. 5.4 mmcf/d of CMM gas (Jul-Dec 2016) and holds 253 bcf of 2P reserves. The addition of simple gensets will allow the company to sell gas at much higher price and grow production to over 20 mmcf/d by 2020 just at NPdC. Importantly, because the gensets work on gas with only 25% methane, if gas was only injected into the grid, the equivalent gas production would be four times higher. This could trigger an upwards revision of reserves as they were estimated on the basis of a 50% cut-off on methane content.

CBM reserves and resources have been certified, multiple wells drilled and a completion design has been implemented in the latest well. With support from local communities and drilling permits already in place, the CBM story is now about aggressive reserves and production growth. In the very near-term, the company is looking to double its 2P reserves and prove-up a development concept of derisking tcfs of CBM. With low costs and an easy market on the door step, the assets offer a positive NPV 10% at gas prices as low as c. US$4.5/mcf.

230% risked upside

Our target price of EUR40 per share is in line with our ReNAV. Our Unrisked NAV is EUR152 per share. Given the drop in share price since the IPO, against the limited appetite for E&Ps in France, our target offers a 230% upside.

Rating & target	
Rating	SPEC BUY
Target	€40.00
Yield	0%
Implied Total Return	248%

Share Data	2015/16	2016/17e	2017/18e
Shares dil., mm	5.5	5.2	5.2
Mkt Cap, US$mm	$70	$64	$65
EV, US$mm	$65	$78	$109

Financial Data	2015/16	2016/17e	2017/18e
Gas, mmcf/d	5.7	5.0	14.4
Liquids, bbl/d	0	0	0
Total boe/d (6:1)	955	833	2,406
CFO, US$mm	($6)	($2)	$10
Net Capex, US$mm	$19	$19	$35
Net Debt, US$mm	($6)	$14	$44
CFPS dil., US$/shr	n.a.	n.a.	n.a.
EPS dil., US$/shr	n.a.	n.a.	n.a.

Valuation	2015/16	2016/17e	2017/18e
Share price, €/shr	€11.50	€11.50	€11.50
EV/DACF	n.a.	n.a.	9.5x
EV per boe/d (US$)	n.a.	n.a.	$45,448

Net asset value	
CNAV, EUR mm	€9.43
RENAV, EUR mm	€40.49
Unrisked NAV, EUR mm	€152.46
P/CNAV	1.2x
P/RENAV	0.3x
P/E Unrisked NAV	0.1x

All figures in US$ unless otherwise noted

Current Chart Previous Research

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Finance and operations

Figure 1. Finance and operations table

La Francaise de l'Energie		Historical & GMP FirstEnergy Outlook						@ Futures Strip**	
Financial & Operating Information		**2015/16**	**2016/17e**	**2017/18e**	**2018/19e**	**2019/20e**	**2020/21e**	**2016/17e**	**2017/18e**
Commodity Prices									
Brent	US$/bbl	$44.56	$52.29	$64.50	$72.75	$78.00	$78.50	$51.77	$54.95
UK NBP	US$/mcf	$5.22	$5.83	$6.13	$6.23	$5.60	$6.81	$5.82	$6.18
USD/CAD	US$/C$	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
USD / EUR	US$/EUR	$1.11	$1.09	$1.10	$1.11	$1.15	$1.19	1.085	1.095
Production									
Oil and Liquids	bbl/d	0	0	0	0	0	0	0	0
Natural Gas	mmcf/d	5.7	5.0	14.4	23.8	30.2	30.9	5	14
Total (6 mcf = 1 boe)	boe/d	955	833	2,406	3,967	5,027	5,156	833	2,406
% Oil and Liquids	%	0%	0%	0%	0%	0%	0%	0%	0%
Netbacks									
Realized Price	US$/boe	$0.00	$17.24	$36.44	$36.61	$35.92	$40.41	$17.21	$36.74
Royalties	US$/boe	$0.00	$1.75	$1.82	$1.83	$1.80	$2.02	$1.75	$1.84
Production & Transport Costs	US$/boe	$1.31	$8.16	$15.54	$17.27	$16.25	$16.88	$11.73	$15.54
Operating Netback	US$/boe	($1.31)	$7.32	$19.08	$17.51	$17.87	$21.51	$3.73	$19.37
Taxes	US$/boe	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Cash Flow Netback	US$/boe	($18.11)	($11.11)	$10.94	$11.93	$13.36	$16.95	($14.70)	$11.23
Government Take	%	n.a.	10%	5%	5%	5%	5%	$0.10	$0.05
Financials									
Cash Flow (CFO)	US$mm	($6)	($3)	$10	$17	$25	$32	($4)	$10
CFPS - diluted	US$/shr	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
EBITDAX [a]	US$mm	($6)	($3)	$12	$20	$27	$35	($4)	$12
E&D Capex	US$mm	$1	$19	$35	$20	$7	$8	$19	$35
A&D Capex, Net	US$mm	$18	$0	$0	$0	$0	$0	$0	$0
Total Net Capex	US$mm	$19	$19	$35	$20	$7	$8	$19	$35
Total Net Capex/CFO	x	-3.0x	-5.5x	3.7x	1.2x	0.3x	0.2x	-4.2x	3.6x
Leverage									
Net Debt	US$mm	($6)	$16	$46	$50	$35	$12	$17	$47
Net debt/CFO (Trailing)	x	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Entry Net Debt/CFO	x	-6.4x	n.a.	n.a.	2.7x	2.1x	1.1x	n.a.	n.a.
Capital Structure									
Basic Shares o/s @ YE	mm	5.5	5.1	5.1	5.1	5.1	5.1	5	5
Diluted Shares o/s @ YE	mm	6	5	5	5	5	5	5	5
Market Capitalization	US$mm	$70	$64	$65	$66	$68	$70	$64	$65
Enterprise Value	US$mm	$65	$80	$111	$116	$103	$82	$81	$112
Dividends & Sustainability									
Dividends	US$mm	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Dividends	$/shr	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Dividend Yield	%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Free Cash Flow	US$mm	($26)	($22)	($26)	($3)	$17	$24	($23)	($25)
Cash Use/CFO	%	777%	163%	113%	43%	15%	15%	163%	113%
Performance									
Prod. Per Shr Growth (Y/Y) - dil.	%	n.a.	-53%	189%	65%	27%	3%	-53%	189%
PPS Growth (Y/Y) DDA - dil. [b]	%	n.a.	-21%	85%	42%	35%	26%	-21%	83%
CFPS Growth (Y/Y) - dil.	%	n.a.	-72%	-387%	83%	46%	35%	-63%	-323%
CFPS Growth (Y/Y) DDA - dil. [b]	%	n.a.	48%	-182%	154%	152%	160%	64%	-140%
ROCE	%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Net Asset Value [c]									
CNAV (Atax) - diluted	EUR mm	€ 9						€ 9	
RENAV (Atax) - diluted	EUR mm	€ 40						€ 40	
Unrisked NAV (Atax) - diluted	EUR mm	€ 152						€ 153	
P/CNAV	x	1.3x						1.3x	
P/RENAV	x	0.3x						0.3x	
P/Unrisked NAV	x	0.1x						0.1x	
Valuation		**2015/16**	**2016/17e**	**2017/18e**	**2018/19e**	**2019/20e**	**2020/21e**	**2016/17e**	**2017/18e**
Share Price, YE/Current	EUR/shr								
P/CF	x	n.a.	n.a.	6.2x	3.4x	2.4x	1.9x	n.a.	6.0x
EV/DACF	x	n.a.	n.a.	9.7x	5.9x	3.8x	2.4x	n.a.	9.5x
Target EV/DACF	x	n.a.	n.a.	23.6x	14.1x	9.9x	7.4x	n.a.	23.2x
EV per boe/d	$/boepd	n.a.	n.a.	$46,220	$29,315	$20,448	$15,982	n.a.	$46,574
EV per 2P boe	US$/boe	n.a.	$1.11	$1.54	$1.61	$1.42	$1.14	$1.13	$1.55
EV per 2P boe, with FDC	US$/boe	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

a) EBITDAX = Pre-Int. & Pre-Tax Cash Flow; b) DDA = Debt-and-Dividend-Adjusted

c) CNAV incl. 2P reserves, RENAV incl. 2P reserves + Risked LT inventory upside, ENAV incl. 2P reserves + Unrisked LT inventory upside

Source: GMP FirstEnergy, Company Disclosures **Futures strip as of 11-Apr-17

Investment thesis: Executive summary

Rising from the ashes

LFDE was founded in the 1990s, as an ASX-listed company focused on developing gas and CBM projects in Australia. In 2009, the company was near bankruptcy and Julien Moulin, at the time running an asset management company out of Shangai and focused on resources in Asia, took control of the firm and transformed it into a pure French CBM player. He now holds the position of Executive Chairman and has reconstructed the company's board and key management. Johannes Niemetz, CFO, comes from GE Oil & Gas where he dealt with M&A. Antoine Forcinal, COO, worked with Perenco and has experience of conventional and unconventional projects in the North Sea, America and Africa. He was most recently involved in the large developments in the Ivory Coast at Foxtrot International, providing 75% of the country's energy supply. Bernard Michaud, Chief Geologist was with ConocoPhillips at the time it was working on what are now LFDE's CBM assets in Lorraine and in the Paris basin for Triton.

Very large CBM resources

LFDE holds 100% interests in about 4,700 sq km of CBM exploration licences covering old mining areas in Nord Pas de Calais (NPdC) and Lorraine in France. There are hundreds of thousands of kilometres of galleries in what were among the largest mines in Continental Europe, now abandoned and closed. The licences have been independently estimated to hold 3.9 tcf and 2.2 tcf of 2C contingent resources and P50 prospective resources, respectively. This represents over four years of annual gas consumption in France. With extensive mining data available from 100 years of exploitation and over 1,000 wells drilled, there is a high level of certainty around the high quality of the coal seams.

Boosting existing production and economics

In some areas in NPdC, gas naturally produced from the coal is extracted from the mines for safety reasons. LFDE produced commercially 5.4 mmcf/d between July and December 2016 (and 7.4 mmcf/d expected between July 2016 and June 2017) of such gas, i.e. Coal Mine Methane (CMM), with cash flow initially expected to cover G&A and working capital. The installation of electricity gensets on various CMM sites will allow the company to grow gas production to c. 20 mmcf/d and to sell the incremental production as electricity, benefiting from very high preferential prices. LFDE has already booked 27.9 bcf of 2P CBM reserves and 225 bcf of 2P CMM reserves. As 25% methane concentration is enough to run the gensets, rather than 50% as initially budgeted, there is the potential for the CMM gas reserves to be revised upwards.

Ideal location, profitable in the current environment

The recent safety issues with France's nuclear power plants are switching the focus to gas. LFDE's gas assets are strategically located at a crossroads of pipelines, providing privileged access to the gas distribution network and nearby industrial areas. There is no cheap import substitution possible given the limited LNG infrastructure. With minimal overall transport cost and tariffs from the well head to the consumer and EU regulation guaranteeing free access to the pipelines, there is no risk of being held to ransom by pipeline owners. The assets are very low cost with a full cycle, positive, economical gas price of c. US$4.5/mcf. This is well below the gas prices in the area as of December 2016 (c. US$7.0/mcf).

A pre-development phase to book 250 bcf 2P reserves and add over 10 mmcf/d production…

The near-term focus is on three Lorraine licences with independently audited 2C contingent resources of 2.0 tcf (3.1 tcf of 3C resources). These resources correspond to less than one third of the group's permit surface in Lorraine. Nine vertical wells were drilled by Enron and ConocoPhillips in previous campaigns in the mid-90s. At the time, ConocoPhillips decided to focus on Russia at the expense of France and Enron experienced technical difficulties followed by a financial meltdown. LFDE drilled three wells that confirmed the quality of the coal seam and demonstrated the company's ability to drill multi-lateral wells in coal seams in France and produce high-quality gas, while complying with strict environmental and regulatory constraints. One well flowed gas to surface with an estimated lateral production performance of 0.4 mmcf/d per 1,000 metres of lateral length. This allowed the firm to already book 27.9 bcf of CBM as 2P reserves in the surrounding area, representing just 0.9% of the overall permit surface. The next phase is a US$50 mm (15 x EUR3.0 mm), three year and fifteen producer well pre-development programme over four pads in the Bleue Lorraine Permit. These wells will confirm the commerciality of four coal seams in four different adjacent geological blocks. The objective of this pre-development phase is to (1) develop 26 bcf of resources with peak production of 10 mmcf/d by 2020 and (2) convert 250 bcf of resources into 2P reserves. Fifteen wells have already been permitted. The first one has already been spudded and the company anticipates drilling a further two this year.

… progressively scalable to the entire acreage

Following the pre-development phase, the company will embark upon a long-term development of the rest of its acreage. This will first consist of developing the South Longeville Area on Bleue Lorraine, with thirty pads covering an area representing only 2.8% of the overall licences in Lorraine. Fifty additional well permits application have already been sent to the French administration. Each pad is estimated to produce 4 mmcf/d and recover 9.4 bcf. LFDE will then start developing the rest of Bleue Lorraine as well as Bleue Lorraine Nord and Bleue Lorraine South. Bleue Lorraine, Bleue Lorraine Nord and Bleue Lorraine South hold 2C contingent resources of 1.1 tcf, 0.8 tcf and 0.2 tcf, respectively. Only the best coal seams out of eight were included in the resources assessment, leaving a significant additional gas resources upside, which is untapped at this stage. Resources on La Grande Garde, the largest block have not yet been estimated.

No fracking required and some support from local communities

There is a fracking moratorium in France. However, CBM does not require fracking and is therefore not subject to restrictions. Lorraine is also a very industrial area and therefore there is less risk of incremental visual pollution. The drilling fluid used in LFDE completions is water-based without the addition of chemicals. The water from the formation is fresh and already provided to various local industrial players. Larger quantities of water can also be used by the local industry. LFDE has also engaged with local communities and received support from various parties. Some NGOs have been involved since the early days of the project. The fact that a total of seven drilling permits have been awarded and the licences are being renewed is a good indicator of the success of LFDE's strategy.

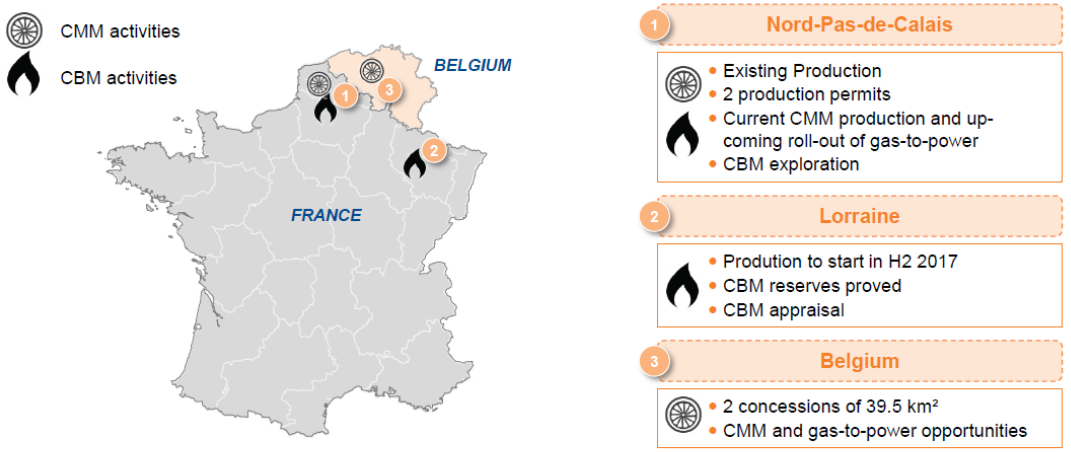
Funding and valuation

Gensets for NPdC are expected to be delivered by April/May and with a total of EUR6.4 mm cash at the end of December 2016 and cashflow from operations, the company can fund the drilling of two wells in Lorraine. LFDE anticipates it will secure a new debt/asset-back financing by June. This would be at a lower cost of capital than the EUR60 mm debt facility

with RGreen that LFDE recently cancelled. This new debt funding would allow the firm to be fully funded to deliver its EUR76 mm appraisal and development programme. Our ReNAV for the firm stands at EUR40 per share with an Unrisked NAV of EUR152 per share. Importantly, this is only based on the company's 2P reserves in Nord Pas de Calais and 2P reserves and 2C contingent resources on the Bleue Lorraine and Bleue Lorraine Sud licences. The area in Lorraine included in this valuation represents only 6.1% of the total area under licence. Assuming LFDE manages to book 250 bcf CBM 2P reserves in 2017 this would take our RENAV to c. EUR51 per share. Our Core NAV stands at EUR9 per share, which is close to the current share price. We are using a discount rate of 10% for our DCF in line with the way we value European assets held by peers.

Since the IPO in June 2016, the share price has more than halved. We attribute this drop to delays in starting the operation and more generally, the limited appetite from French investors for small cap E&Ps. As a result, our valuation represents about a 230% upside. We have a Speculative Buy recommendation on the firm with a target price of EUR40 per share in line with our ReNAV.

Figure 2. LFDE assets



	Acrage	Reserves			Contingent resources			Prospective resources		
Bcf	Km²	1P	2P	3P	1C	2C	3C	low	best	high
NPdC**	1,911	51.0	225	709.4	1,176	1,869	2,877	n.a.	n.a.	n.a.
Lorraine	2,769	5.3	27.9	73.5	1,240	2,032	3,085	1,183	2,209	3,637
LFDE	**4,680**	**56.3**	**252.9**	**782.9**	**2,416**	**3,901**	**5,962**	**1,183**	**2,209**	**3,637**

Source: LFDE

La Française de l'Energie (LFDE): The largest holder of CBM acreage in Europe

First mover advantage and very large acreage position

LFDE's focus is on developing gas resources often found in association with coal deposits. These deposits may be coals that have not been mined (CBM) or abandoned mines (CMM).

The company owns the second largest portfolio of hydrocarbon exploration rights in France, after Vermilion, totaling 10,642 square kilometres but ahead of IPC (spin-off from Lundin Petroleum); notably in Lorraine, Nord-Pas-de-Calais and the Paris basin.

Of particular importance is the fact that the company holds 100% WI in a total of 4,680 sq km (1.2 mm acres) of CBM exploration rights across eight permits, permit applications and

permit renewals in the two main historical coal mining areas in France. The key asset is Bleue Lorraine, an exploration permit awarded in 2010 and expiring in 2018 with a EUR7.7 mm commitment. This is where most of the near-term activities will take place. The formal award of some permits is still in process.

The group had already spent over EUR30 mm on Bleue Lorraine as at 31/12/2016.

Figure 3. LFDE permits

Area	Permits	Application Status	Project Maturity	Surface Area (km2)	Overall Historical Spending (EUR mm)	Financial Commitments (EUR mm)	End Date
NPdC	Valenciennois	Application for 2nd period submitted	Exploration	216	0.2	0.7	End 2017
	Sud-Midi	Application for 2nd period submitted	Exploration	929 (416)	0.4	1.9	Pending
	Poissoniere	**Concession**	**Development /Production**	**698**	**0.4**		**2042**
	Desiree	**Concession**	**Development**	**68**			**2042**
Total				*1,911*	*1.0*	*2.6*	
Lorraine	**Bleue Lorraine**	**Renewed (3rd period)**	**Exploration**	**168**	**27.3**	**7.7**	**2018**
	Bleue Lorraine Sud	**Renewed (2nd period)**	**Exploration**	**264**	**0.3**	**7.3**	**2016**
	Bleue Lorraine Nord	Application in Progress (favourable opinion)	Exploration	360		2.4	Pending
	La Grande Garde	Application in Progress	Exploration	1,977		8.0	Pending
Total				*2,769*	*27.6*	*25.4*	
Paris Basin	Ecole Superieure	Application in Process (Implicit rejection)	Exploration	201			Pending
	Cheroy	Application in Process (Implicit rejection)	Exploration	871			Pending
	Courgivaux	Application in Process (Implicit rejection)	Exploration	194			Pending
	Dexu-Nanteuil	Application in Process (Implicit rejection)	Exploration	841			Pending
	Dormans	Application in Process (Implicit rejection)	Exploration	362			Pending
	La Folie De Paris	**2nd Expl. Period Aug 7th 2016**	**Exploration**	**266**		**1.7**	**2016**
	La Sole	Application in Process (Implicit rejection)	Exploration	65			Pending
	Les Chollets	Rejected	Exploration	268			Pending
	L'Ourcq	Rejected	Exploration	197			Pending
	Marigny	Application in Process (Implicit rejection)	Exploration	274			Pending
	Ozoir	Application in Process (Implicit rejection)	Exploration	198 / 265			Pending
Total				*3,737*		*1.70*	
Belgium	**Anderlue & Peronne**	**Concession**	**Development /Production**	**40**			**2037**
Total				*40*		*0.0*	
Grand Total				***8,457***	***28.9***	***37.9***	

Source: LFDE

Certified 2P reserves of c. 28 bcf in Lorraine and 225 bcf in NPdC

In Lorraine, the main area of focus in the near term, LFDE's contingent resources have been estimated by Beicip Franlab at 2.0 tcf 2C on three licences (Bleue Lorraine, Bleue Lorraine Nord and Bleue Lorraine Sud) which represent only 29.4% of the company's acreages in this region. In Nord Pas de Calais, 1.9 tcf contingent resources are held on LFDE permits. In addition, 2.2 tcf prospective resources have been estimated across the various blocks in Lorraine.

The Competent Person Report (CPR) has applied (i) a cut off at 1,000 metres depth (no coal below that level has been factored into the resources numbers) although the CBM industry is used to producing CBM gas as far down as 1,500 m or more elsewhere in the world and that up to five gassy coal seams have been identified at depths between 1,000 m and 1,500 m. The report has also applied (ii) a cut off on coal seams thinner than 3 metres, whereas the industry is used to drilling into much thinner seams and that numerous 1 m to 3 m thick gassy coal seams have been identified. These two elements represent a very large further resource upside potential on the existing permits.

LFDE has booked 27.9 bcf of 2P reserves at Bleue Lorraine in the Folschviller area (25 sq km). This represents about 1.5% of the overall contingent resources at Bleue Lorraine. Importantly, these reserves have been booked in an area representing only 0.9% of the total Lorraine permits.

In an environment such as North America where other operators have proven CBM reserves or production in the same basin, LFDE believes that a significant portion of the 2C resources could have been classified as 2P Reserves by analogy, given the nature of the contingency identified by the CPR.

In Nord Pas de Calais (NPdC), LFDE holds 225 bcf of 2P CMM reserves, with 5.4 mmcf/d production between July 2016 and the end of December 2016. 2016/2017 fiscal year production is estimated by the company at 2.7 bcf (about 7.4 mmcf/d).

By generating and selling electricity instead of gas and potentially benefiting from preferential pricing, the company intends to boost realised prices, cash flow and value from its NPdC 2P CMM reserves.

Focus on developing Lorraine: reserves booking and production growth

The main near-term focus of the firm is to develop the Bleue Lorraine Asset and start derisking resources at Bleue Lorraine Sud and Bleue Lorraine Nord. Bleue Lorraine is divided into three areas: Saint-Avold, Faulquemont and Alsting, each validated by drilling activities.

Pre-development phase to book 2P reserves of 250 bcf and add over 10 mmcf/d production

The first phase (pre-development phase) consists of a four pad development with fifteen producers to be drilled between 2016 and 2018 to develop a small area on Bleue Lorraine. Already, fifteen drilling sites have been permitted. Fifty additional well permits application have already been sent to the French administration.

These fifteen wells would allow the company to recover about 26 bcf and reach about 10 mmcf/d production by 2020. Only one or two of the best coal seams would be developed (out of a total of eight seams identified). LFDE feels that this leaves significant upside for a later stage.

Importantly, the first three wells of the programme would also allow the firm to book 250 bcf of 2P reserves in the surrounding project area. We believe that this reserve booking would reflect areal extent and the derisking of resources associated with seams above and below the producing seams.

We note that four well locations at Pontpierre, Zimming, La Chambre and Longeville are in in different geological blocks, suggesting that the wells could derisk resources on a large areal extent. If the continuity of the coal seams can be established, we believe that a large amount of reserves could be booked. Zimming is located to the north of Bleue Lorraine and the Pompierre area is also located at the very edge of the Bleue Lorraine Sud licence. A success would probably also derisk some prospective resources at Lorraine Bleue Sud.

2P reserves can be booked for resources associated with two seams below and above the producing seams. At Pontpierre for instance, only the two best seams with 16 bcf gas in place will be produced initially. However, we understand that reserves at six seams could be booked. Overall, the firm estimates that there is a total of 45 bcf gas in place over a total of eight coal seams. This represents almost three times the volumes being initially targeted for development.

The overall capital cost of this phase is estimated at about US$50 mm until end 2020 (15 x EUR3.0 mm).

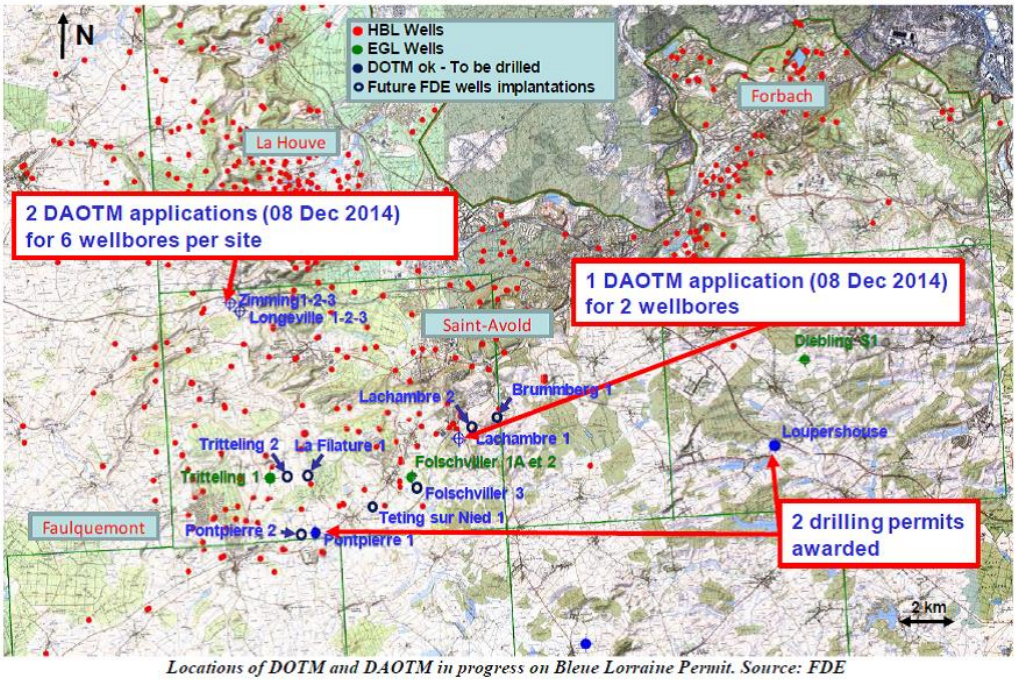
Scaling-up the model to a project zone with thirty pads…

LFDE will then scale-up the model by drilling thirty pads in the South Longeville project area on Bleue Lorraine. A pad could have up to fifteen wells, depending on coal thickness and the overall number of seams that will be developed per well. For modelling purposes, we have assumed four wells per pad in line with company guidance. Each pad with four wells is anticipated to recover 9.4 bcf for a total of over 280 bcf. Each pad is expected to produce 4 mmcf/d. This is also likely to allow the firm to book additional reserves. The overall development cost is estimated at about US$460 mm over a period of five years or slightly less than US$4.0mm per well. The company envisages drilling 10 wells per rig, per year. LFDE anticipates it will complete these drillings over a five year period, with peak production of c. 100 mmcf/d (in 2025).

Importantly, the project zone covers an area representing only 2.8% of the area covered by the various permits held by LFDE.

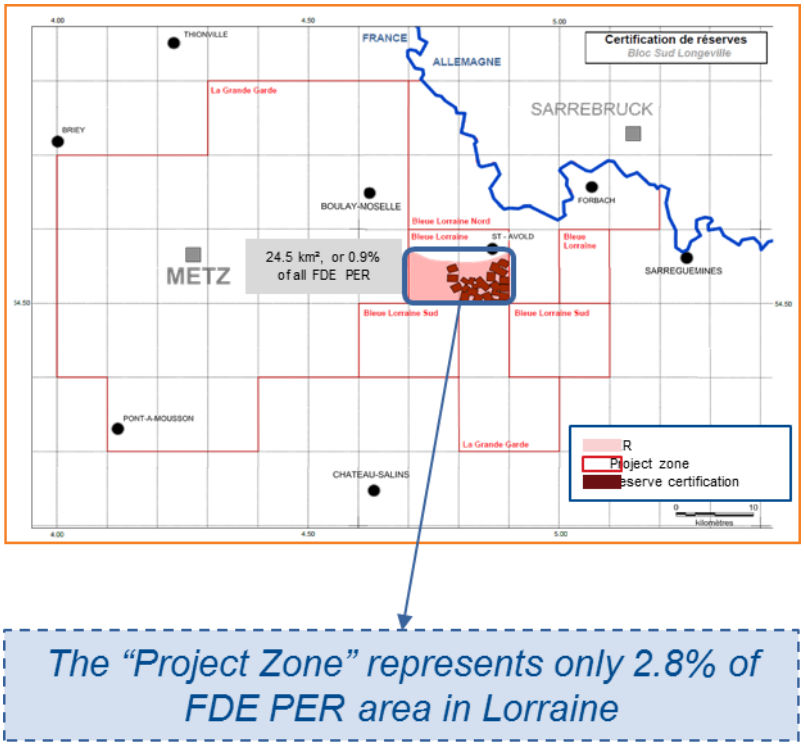
Again, the company took a conservative approach by taking into account the development of only the best coal seams, out of the eight coal seams that had been identified across the area in the CPR.

Figure 4. Drilling locations



Locations of DOTM and DAOTM in progress on Bleue Lorraine Permit. Source: FDE

Figure 5. Project zone



Source: LFDE

… and beyond

Overall, Bleue Lorraine holds 1.1 tcf 2C contingent resources and 283 bcf prospective resources, suggesting a lot of running room beyond the initial 280+ bcf targeted by the thirty pads in the project area. Furthermore, Bleue Lorraine Sud and Bleue Lorraine Nord are estimated to hold 2C contingent resources of 194 bcf and 782 bcf and P50 prospective resources of 1.7 tcf and 0.2 tcf, respectively. At Bleue Lorraine Sud, drilling authorisations for the Freybouse and Loupershouse wells have already been granted. Preliminary estimates of gas in place to be re-encountered by the Freybouse well are c. 400 bcf (base case) with approximately one third located in La Grande Garde. This well would allow the group to start derisking resources associated with the Alsting anticlinal. Overall, successes at Loupershouse and Freybouse could validate 500 bcf to 1 tcf of in-place resources across Bleue Lorraine, Bleue Lorraine Sud and La Grande Garde.

Note that Bleue Lorraine, Bleue Lorraine Nord and Bleue Lorraine Sud represent only 29.4% of the group's acreage in this region, with the La Grande Garde Permit not having been independently audited. La Grande Garge was considered by ConocoPhillips as its most attractive block in the area with only three wells drilled by Conoco in the 90s and is largely unexplored. The permit contains the western extension of the coal sequences in Bleue Lorraine. The permit has not been fully granted yet.

Overall, the company believes that the assets could produce over 200 mmcf/d.

Figure 6. Lorraine resources

	Acreage	Reserves (bcf)			Contingent Resources (bcf)			Prospective resources (bcf)		
	sq km	1P	2P	3P	1C	2C	3C	Low	Best	High
Bleue Lorraine	168	5	28	74	646	1,056	1,543	165	283	427
Bleue Lorraine Sud	264				101	194	342	927	1,704	2,786
Bleue Lorraine Nord	360				493	782	1,200	91	222	424
La Grande Garde	1,977				?	?	?	?	?	?
Total	***2,769***	***5***	***28***	***74***	***1,240***	***2,032***	***3,085***	***1,183***	***2,209***	***3,637***

Source: LFDE

Project economics

Full development NPV positive at gas prices of just US$4.5/mcf

We estimate the pre-development phase in Lorraine of c. 26 bcf will be commercial for gas prices as low as US$4.5/mcf. The full thirty-pad development phase would have a positive NPV 10% at an even lower gas price. Using December 2016 gas prices in the area (US$7.0/mcf), a thirty-pad development at South Longeville, has an unrisked value of about EUR28 per share (EUR153 mm).

There are a variety of factors behind these numbers, including key metrics such as the initial flow rate of each well, the cost of a well and the amount of gas that can be recovered by a single well. These in turn depend on the extent of the area to be developed, the spacing between the wells (defining the number of necessary wells), the coal thickness and gas content (to establish the amount of gas in place), the number of laterals per well and the recoverable volume per laterals. Once a well has dewatered, production will progressively decline.

Our main assumptions stand below. Other assumptions can be found in Appendix 2.

The overall technical costs (development costs + opex) are estimated at US$4.0/mcf for the pre-development phase and at US$3.9/mcf for the South Longeville full development. This excludes the potential cost benefit of developing additional seams currently not included in the development plans.

Figure 7. NPV 10% of pre-development and development projects (unrisked)

				NPV 10% (EUR / sh) for gas price of:								
Phase	Volume Developped (bcf)	N. of pad	Capex (US$ mm)	US$3.00 /mcf	US$4.00 /mcf	US$5.00 /mcf	US$6.00 /mcf	FCC	US$7.00 /mcf	US$8.00 /mcf	US$9.00 /mcf	US$10.00 /mcf
Pre-Development	**25.7**	**4**	**50.0**	-3.2	-1.2	0.8	2.2	3.4	4.2	6.0	7.5	8.9
Full Development per pad	**9.4**	**1**	**12.8**	-0.7	-0.1	0.4	0.8	0.9	1.3	1.7	2.2	2.7
Full Development 30 pads	**282.0**	**30**	**385**	-21	-4	11	23	28	38	52	66	80

Source: GMP FirstEnergy

How does it compare to North America?

Comparing the economics of North America and Europe is not straightforward, given the stark differences in business and regulatory environments. For the sake of illustration, we have tentatively compared the value of a 250 bcf development in France CBM with the development of the same volume of shale gas in the Montney area in Canada. While the low drilling costs and the pace at which a gas field can be put in production are a clear advantage in Canada, at face value, the economics of a greenfield gas development in North America on an **undiscounted** basis are inferior to a CBM project in France. This reflects much higher gas prices in France offsetting higher costs. Our LT price deck of US$6.80/mcf in France is slightly lower than the prices achieved in December 2016 (US$7.00/mmcf). Note that the

development of a North American project would often not be 'entirely green' and would often benefit from existing infrastructure which would boost economics. In addition, a North American project is probably larger than 250 bcf.

Figure 8. Undiscounted economics of Montney shale and Lorraine CBM

US$ mm	Canada Montney Shale	France Lorraine CBM
Volume (bcfe)	250	250
Well Cost (US$mm)	2.78	3.21
Recovery per well (bcf)	7.30	2.35
Number of wells	34	106
Well IP (mmcf/d)	7	1
Peak Production (mmcf/d)	63	51
2021 Domestic Gas Price (US$/mcf)	3.75	6.80
- Opex/mcf (US$/mcf)	-0.45	-1.54
- Transport Cost (US$/mcf)	-0.23	0.00
- Processing and Compression Cost (US$/mcf)	0.00	-0.66
- Royalty Cost (US$/mcf)	-0.80	-0.32
= Net Back (US$/mcf)	***2.27***	***4.28***
Overall Revenue (US$mm)	938	1,700
- Overall Opex/Transport/Processing (US$mm)	-169	-550
- Overall Royalty (US$mm)	-200	-79
= Net Back (US$ mm)	***568***	***1,071***
-Total Drilling Capex	-95	-342
- Total Surface Capex	*-63*	*0*
= Pre Tax Cash Flow (US$mm)	***410***	***729***
- Total Corporate Tax	-117	-251
= Undiscounted FCF	***293***	***478***

Source: GMP FirstEnergy

Valuation

Absolute valuation

On our price deck (based on LT prices of US$6.80/mcf by 2020, no escalation), our Risked NAV based on the firm's fully awarded licences (Bleue Lorraine and Bleue Lorraine South), the 2P CMM Reserves at NPdC and near-term resources in Belgium, stands at EUR40 per share with an Unrisked NAV of EUR97 per share. Our valuation for the CMM is based on a minimum concentration of 25% methane in the CMM gas for the genset to generate electricity, which is better than what was initially budgeted for (50%). The area in Lorraine included in this valuation represents only 6.1% of the total area under licences. Including Bleue Lorraine Nord (permit in process of being awarded but with a favourable opinion), would take our nrisked NAV to EUR152 per share.

On the forward curve for NBP, our ReNAV would be EUR34 per share. The share prices of most of the UK E&Ps usually discount commodity prices well ahead of the forward curve. This highlights the resilience of the economics of LFDE's assets.

Once the pre-development is over, the full development of the asset is very modular with a ReNAV of EUR0.55 per share per pad (EUR0.92 per share Unrisked NAV) to recover 9.4 bcf. In theory, this figure (corrected for the time to development) could be applied to all the resources on the blocks with awarded permits. See Appendix 2 for detailed assumptions.

Figure 9. NAV table (GMPFE price deck)

Asset Valuation	WI Reserves / Resources (mmboe)	GCoS (%)	Unrisked NPV (US$mm)	EMV (US$mm)	Unrisked NAV - EUR/sh	EMV - EUR/sh	% Total
Corporate			***-70***	***-70***	***-12.49***	***-12.49***	***-31.1%***
Net Cash/Debt YE 17 (Dec)			-34	-34	-6.13	-6.13	-15.3%
G&A			-35	-35	-6.36	-6.36	-15.8%
Lorraine Pre-Development			***38***	***28***	***6.80***	***5.10***	***12.7%***
Folschviller 2P Reserves	5	100%	19	14	3.40	2.55	6.4%
Pre-Development Pontpierre, Longeville,-Zimming, La chambre	4	75%	19	14	3.40	2.55	6.4%
Nord Pas de Calais			***81***	***81***	***14.63***	***14.63***	***36.4%***
CMM - Poissoniere and Desiree (Gazonor)	38	100%	81	81	14.63	14.63	36.4%
Belgium			***10***	***10***	***1.86***	***1.86***	***4.6%***
Belgium Anderlue	1	100%	10	10	1.86	1.86	4.6%
Core NAV			**60**	**51**	**10.80**	**9.10**	**77.3%**
Lorraine	***330***		***787***	***173***	***141.33***	***31.06***	***77.3%***
South Longeville Development - 30 Pads	47	60%	153	92	27.52	16.51	41.1%
Remaining Acreage - Blue Lorraine (Remaining Contingent Resources)	120	25%	286	71	51.29	12.82	31.9%
Bleue Lorraine Nord Acreage	130	0%	310	0	55.62	0.00	0.0%
Bleue Lorraine Sud Acreage	32	25%	38	10	6.90	1.72	4.3%
Nord Pas de Calais	***312***		***740***	***0***	***0.00***	***0.00***	**0.0%**
CBM	312	0%	740	0	0.00	0.00	0.0%
Total Risked Exploration			**1,528**	**173**	**141.33**	**31.06**	**77.3%**
Risked NAV			**1,588**	**224**	**152.14**	**40.16**	**100.0%**
P/Core NAV				**6.1%**			
P/NAV				**1.4%**			
P/Unrisked NAV				**0.4%**			

Source: GMP FirstEnergy

Our NAV is clearly sensitive to gas price assumptions and we present our various NAV on different assumptions.

Figure 10. ReNAV and Unrisked NAV sensitivities on commodity prices and licences

	NAV (EUR per share) for gas price of:								
	US$3.00/ mcf	US$4.00/ mcf	US$5.00/ mcf	US$6.00/ mcf	FCC	US$7.00/ mcf	US$8.00/ mcf	US$9.00/ mcf	US$10.00 /mcf
Bleue Lorraine, Bleue Lorraine Sud CBM, NPdC 2P CMM & Belgium									
Core NAV	<0	0	5	8	9	13	19	20	24
ReNAV	<0	0	20	34	40	55	75	95	115

Source: GMP FirstEnergy

Relative valuation

LFDE shares trade at much lower EV/2P reserves and EV/2P+2C reserves and resources multiples than Green Dragon Gas, Great Eastern Energy and Igas Energy. Green Dragon Energy is a CBM player in China, while IGas holds conventional gas production and reserves as well as large gas shale potential resources. Great Eastern Energy is a CBM story in India.

Compared to small cap gas TSX names or UK-listed UK small cap with assets in Europe, LFDE shares trade at one of the steepest discounts to ReNAV.

Figure 11. Resources & reserves multiples

Ticker	Share Price	Market Cap (US$ mm)	YE16 Net Debt (US$mm)	EV (US$ mm)	2017 Production Guidance (boe/d)	YE16 2P Reserves (mmboe)	YE16 Contingent resources (mmboe)	EV/boe/d (US$/boe/d)	EV/2P (US$/boe)	EV/2P+2C (US$/boe)	Notes
IGAS LN (a)	£0.06	174	10	184	2,500	14	22	73,500	13.34	5.14	UK
GDG LN (c)	£1.11	215	120	335	1,557	93	149	214,915	3.59	1.38	China
GEEC LN (d)	£0.30	44	90	134	2,945	86	98	45,518	1.56	0.73	Indian assets China & getting paid for gas is a
SEH AU (b)	$0.09	147	-34	112	3,417	97	150	32,911	1.17	0.46	challenge
Average (IGAS, SEU AU, GDG, GEEC)								***91,711***	***4.91***	***2.42***	
LFDE FP*****	***€ 12.25***	***70***	***-6***	***65***	***833***	***43***	***208***	***77,559***	***1.52***	***0.26***	

(a) 2P and 2C are July 2016 Numbers, Production guidance for 2017, IGAS reported YE16 net debt of US$10 mm on 17/03/2017
(b) 2P + 2C are December 2016 Numbers, Net Debt is as of end of December 2016
(c) Net debt as of June 2016, Production based on FY16 actuals (no guidance for FY17)
(d) Reserves and resources as of end of April 2016, Financials as of end of March 2016, Production as of November 2016
(e) YE is June 2016. Only included in 2P and 2C CMM in NPdC + Bleue Lorraine and Bleue Lorraine Sud
Source: GMP FirstEnergy

Figure 12. NAV multiples for selected E&Ps

As of 06/04/2017		FCC Price Deck				NBP/Brent/HH Fwd Curve			
Ticker	Share price	Core NAV	ReNAV	Discount to Core NAV	Discount to ReNAV	Core NAV	ReNAV	Discount to Core NAV	Discount to ReNAV
European Listed									
LFDE FP	€ 12.25	€ 9.10	€ 40.16	135%	31%	€ 6.48	€ 26.71	189%	46%
PMO LN	£0.67	£0.49	£1.29	137%	52%	<0	<0	n.a.	n.a.
IAE LN	£1.16	£1.33	£1.33	87%	87%	£0.02	£0.02	5800%	5800%
ENQ LN	£0.46	£0.60	£0.60	77%	77%	<0	<0	n.a.	n.a.
FPM LN	£1.02	£0.96	£1.07	106%	95%	£0.20	£0.23	510%	443%
Average European E&Ps (1)				**108%**	**68%**			**2166%**	**2096%**
Small Cap TSX Listed									
MQX	$0.12	$0.03	$0.03	28%	22%	$0.11	$0.10	92%	81%
LFDE FP	€ 12.25	€ 9.10	€ 40.16	135%	31%	€ 6.48	€ 26.71	189%	46%
CKE CN	$0.36	$0.16	$0.44	123%	54%	<0	<0	n.a.	n.a.
IKM	$0.73	$0.88	$0.47	120%	64%	<0	<0	n.a.	n.a.
Average Small Cap Canada (2)				**126%**	**50%**			**189%**	**46%**

Source: GMP FirstEnergy

Figure 13. EV/DACF multiples

As of 06/04/2017		FCC Price Deck		NBP/Brent/HH Fwd Curve	
Ticker	share price	EV/DACF 17	EV/DACF 18	EV/DACF 17	EV/DACF 18
European Listed					
ENQ LN	£0.46	6.20	2.80	7.30	4.90
FPM LN	£1.02	2.20	2.30	2.40	3.20
IAE LN	£1.16	4.70	3.50	5.30	4.10
LFDE FP	€ 12.25	n.a.	9.67	n.a.	7.55
PMO LN	£0.67	3.40	2.80	3.60	3.70
Average European E&Ps		**4.05**	**5.32**	**4.45**	**5.12**
Small Cap TSX Listed					
CKE CN	$0.36	5.30	2.20	6.90	5.50
IKM CN	$0.73	5.10	3.30	6.10	7.20
MQX CN	$0.12	4.90	3.20	6.40	5.90
Average Small Cap Canada		**5.10**	**2.90**	**6.47**	**6.20**

Source: GMP FirstEnergy

Gazonor: Alkane Energy acquisition

Alkane Energy was acquired in 4Q15 by Balfour Beatty for £80.7 mm. Alkane runs gas to power electricity plants with 145 MW of installed generator capacity and has onshore petroleum exploration licences, which enable the group to extract methane from old coal pits.

Adjusted EBITDA of £3.8 mm in 1H15 suggests that the firm was acquired at 10.6 times annualised EBITDA. Applying this multiple to our FY2017/2018 EBITDA of US$11 mm suggests an implied value of US$117 mm for the CMM portfolio.

Cash flow & capex programme

We estimate the overall capex programme at US$81 mm until the end of the fiscal year 2019/2020 (30th June year-end). This includes US$50 mm in Lorraine (c. EUR45 mm for the pre-development phase) and c. US$28 mm to install electricity generators to have the option to sell electricity rather than Coal Mine Methane at NPdC and in Belgium (including only US$3.3 mm for the first site).

In essence, cash flow from the NPdC production more than covers G&A and early cash flow from Lorraine will cover the latter part of the capex of the CBM pre-development phase.

Gensets for NPdC are expected to be delivered by April/May and with a total of c. US$7 mm (EUR 6.4 mm) cash at the end of December 2016 and cash flow from operations, the company can fund the drilling of two wells in Lorraine. LFDE recently cancelled a EUR60 mm debt facility with RGreen as the firm indicated that it has the ability to reduce its cost of capital by structuring various debt facilities that are expected to be finalised by June.

As a matter of reference, the RGreen debt commanded an interest rate of 8% with a 12-month grace period on principal and interest repayments. Each tranche had an eight-year maturity. Circa 49% of the money could have been used outside of Gazonor to finance other activities. The only collateral for the asset was the NPdC CMM. A default was triggered by two consecutive non-payments of the coupon. Assuming a loan to value ratio of 60-70% would have suggested a collateral value of EUR85-100 mm, which is higher than the company's current market cap.

We also note that CMM is considered by the French State as green energy (recoverable energy source) and benefits from preferential, guaranteed feed-in tariffs for fifteen years. This provides for superior economics of CMM and excellent visibility on cash flow.

Figure 14. Cash flow balance

	2016-2017	2017-2018	2018-2019	2019-2020	Total
UK NBP (US$/mcf)	**5.23**	**5.53**	**6.23**	**5.60**	
Production					
Production Lorraine (mmcf/d)	0.00	1.66	5.72	8.88	
Production Gazonor (mmcf/d)	5.00	11.27	16.08	19.28	
Total (mmcf/d)	**5.00**	**12.93**	**21.80**	**28.16**	
Cash Flow (US$mm)					
Gazonor	5	15	17	20	57
Lorraine	-0	1	7	11	18
Total (1)	**4**	**16**	**24**	**31**	**75**
- G&A (US$ mm) (2)	**-5**	**-5**	**-5**	**-6**	**-22**
- Capex (US$ mm)					
Gazonor	-11	-5	-4	-7	-28
Belgium	0	-3	0	0	-3
NPdC Drilling	0	0	0	0	0
Lorraine	-7	-26	-17	0	-50
Other (Paris Basin…)	0	0	0	0	0
Total (3)	**-18**	**-35**	**-20**	**-7**	**-81**
FCF US$ mm (1)+(2)+(3)+(4)	**-19**	**-25**	**-2**	**18**	**-28**
Cumulative FCF (US$ mm)	**-19**	**-44**	**-46**	**-28**	

Source: GMP FirstEnergy

Gas market in France: The perfect storm

France: Europe's fourth largest gas market – caught between Russia and serious issues at the national nuclear park

In 2015, France's gas consumption was 1.4 tcf. France is the fourth largest gas market in the EU (source: Wood Mackenzie), representing 8% of Europe's gas consumption (2015 figure). With minimal domestic production, the country currently imports about 100% of its gas needs, mostly from Norway (48% - 2015 figures), Russia (13%), the Netherlands (12%) and Algeria (10%) (source: "Commissariat Général au Développement Durable"). Gas imports from Russia represented 29% of the overall gas supply in Europe in 2014. Given the strained relationships with Russia, there is a strategic need to identify alternatives to Russian gas.

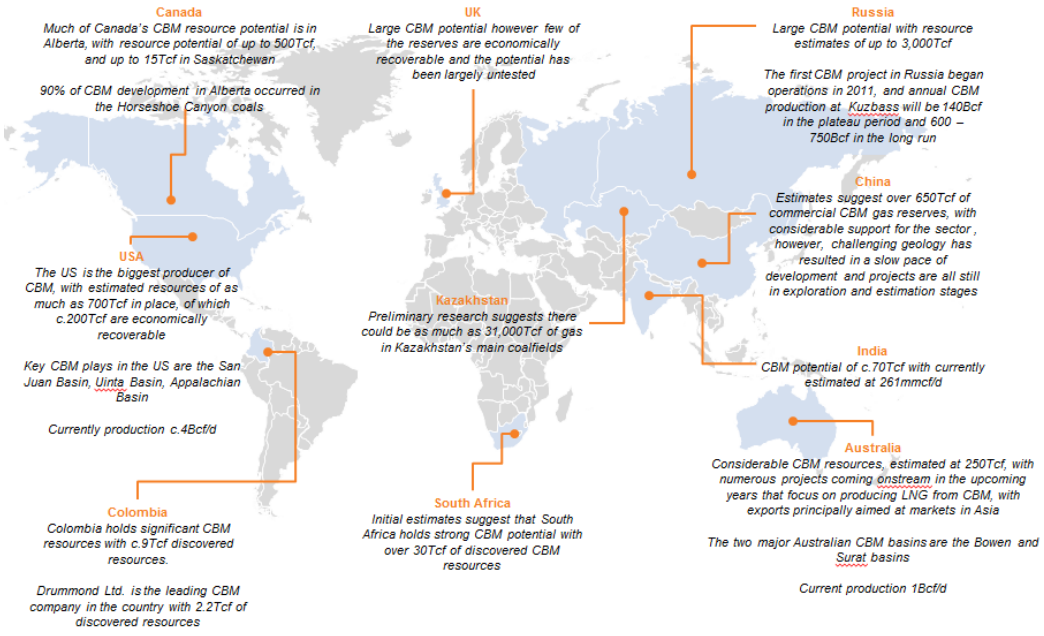
In addition, France is dealing with severe issues with its nuclear reactors that generate the bulk of electricity in France. The French regulator encountered high carbon levels in steel used in some pieces for the nuclear industry. In some pieces, carbon deposits were over 50% above permitted levels with higher risks of fracture. There were outages at no fewer than 18 reactors (out of a total of 58). FY16 annual reactor output has already been reduced by 20%. The extent of the issue is not yet well understood.

With fracking effectively banned in France, shale gas is off limits. However, given its strong mining industry heritage, there are a lot of coal mines in France that could support the development of CBM resources.

CBM is an important contributor to gas production in North America & Australasia

CBM, or coalbed gas, is a form of natural gas extracted from coalbeds. In recent decades, it has become an important source of energy for the United States, Canada, Australia and China. In 2013, CBM production in the US was 1.5 tcf, equivalent to almost the same amount of gas consumed in France that same year. The EIA estimated proven CBM gas reserves in the US were 12.4 tcf as of the end of 2013.

Figure 15. Overview of CBM activities worldwide



Source: Public domain information (World Coal Association, Halliburton, Norton Rose Fulbright, Deutsche Bank research, Gazprom)

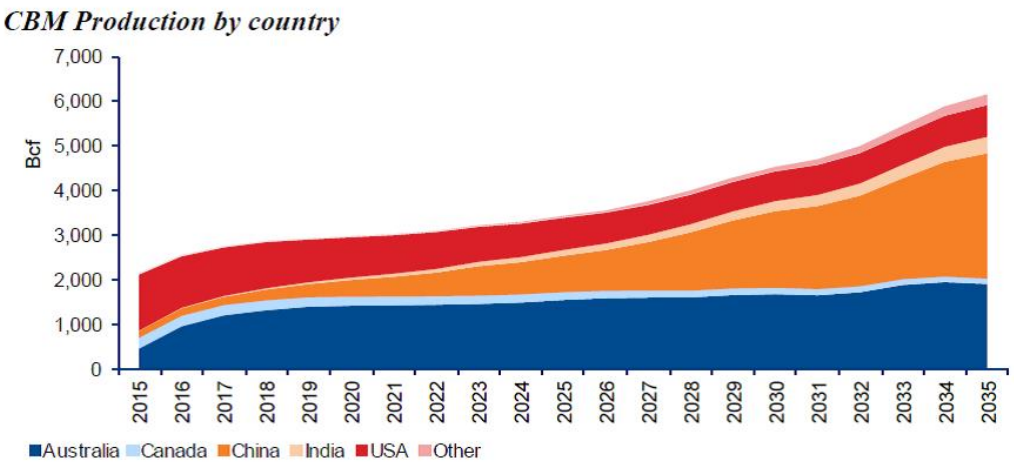
In Canada, the Alberta Energy Regulator estimates the remaining established reserves of CBM to be approximately 2.0 tcf, in areas of Alberta where commercial production occurs. We estimate CBM to generate about 170 bcf per year in Canada. In Australia, the industry has taken off over the last decade and in 2012, CBM was already generating about 250 bcf, representing about 35% of the Australian East Coast gas consumption. In China, 126 bcf of CBM gas was produced in 2014.

Figure 16. CBM production as a % of France gas demand

Country	Production/gas used (bcf/y)	% of 2013 France Gas Consumption
US (2013)	1,466	95%
Canada (estimate)	170	11%
Australia (2012)	250	16%
China (2014)	126	8%

Source: EIA, Australian Government, Platts

Figure 17. CBM production by country



Source: Wood Mackenzie

It is also worthwhile reporting recent large CBM transactions in Australia, with BG Group buying Queensland Gas for US$3.5 bn in 2008 and Royal Dutch Shell and Petrochina acquiring Arrow Energy in 2010 for US$4 bn.

Coal Bed Methane in France

A lot of coal…

The potential for CBM production in France is high, as the country has the largest currently known CBM basins in Europe and also due to the fact that French CBM resources are located adjacent to existing gas infrastructure (allowing for transportation after extraction).

Figure 18. CBM resources overview

Source: IHS Cera

Since the Industrial Revolution, France has also developed an extensive mining industry, principally in two areas: Nord Pas de Calais and Lorraine, two very industrial regions that contribute 75% of France's total coal production. Both basins are very large: for instance, there are 4,000 hectares in Nord Pas de Calais and less than 10% of the coal there has been extracted.

…with promising coal seam characteristics

The quality of a CBM seam depends on a variety of factors.

- **The seam must be thick enough** to allow horizontal drilling to maximise the number of seams and the amount of coal in contact with the well. The thickness of the coal in Lorraine compares very well with other basins around the world. The Lorraine basin thickness could reach 3,000 m and 3,500 m for the prospective zone Westphalian D and Westphalian C. Overall, the depth targeted by LFDE is 750-1,500 m. In the section drilled by LFDE in the Lorraine basin (1,500 m depth), in excess of 60 m of cumulative coal thickness has been recorded and the firm anticipates 40 to 50 m of coal in Nord Pas de Calais. Some individual layers encountered in Lorraine have a thickness of 10-20 metres. In the Lorraine basin, the number of coal seams in the prospective zone varies from 5 to 15.
- **The coal must have a high gas absorption capacity**. This represents the amount of gas contained in the coal. Per the table on the next page, the gas content in Lorraine is comparable to the Bowen Basin in Australia and the North Appalachian in the US.
- **A high fracture permeability would allow the gas to flow**. The higher the permeability, the higher the gas production. For most coal seams found in the US, the permeability lies in the range of 0.1–50 mD. Again, Lorraine compares well, with one of LFDE's wells encountering coal with a permeability of 0.1-20 mD.
- **Gas composition (limited amount of CO2 and H2S) and methane content (as high as possible)**. The gas present in the coal in Lorraine is of high calorific value, with methane representing about 95% of the gas content. There is no H2S and minimal CO2 (below transport infrastructure requirements) in Lorraine coal gas.
- **Reservoir pressure – the higher the better to provide energy to release the maximum amount of gas**. Here again, Lorraine is comparable to most plays.
- **Dewatering requirement**. Water must be removed from the coal seams to decrease reservoir pressure and release the gas, in order to produce CBM from the coalbed. After the detachment of gas molecules from the coal surface occurs, the gas and water diffuses through the coalbed's cleats and fractures, towards the wellbore. Water production declines as CBM production increases. Dewatering of a well may generally range in length from a few weeks to many months or more, depending on the attributes of the coal seam and the type of well. There are several types of CBM wells and drilling methods, including conventional vertical wells, multilateral drilling wells, pad-drilled wells and single-lateral horizontal wells. Most of the wells drilled in the Lorraine Basin are multi-lateral wells, whereas in Nord-Pas de Calais, the wells are anticipated to be deviated wells. The water in Lorraine is fresh (i.e. low salinity). This is important because it implies much less water treatment.

Figure 19. CBM basins comparison

Basin	Ranigank East India	Black Warrior US	North Appalachian US	Powder River US	San Juan US	Quinshui China	Bowen Australia	Lorraine France	Nord Pas de Calais France
Depth (ft)	1,300-4,500	800-3,500	1,030-6,570	400-1,800	500-5,000		900-2,700	2,400-5,000	2,400-5,000
Thickness of Coal Formation (ft)	20-160	1-10	2-20	70-150		20-40	50-100	210-245	140-175
Coal Rank	HV Bit	HV-LV Bit	HV-LV Bit	Lignite-Sub Bit	Sub Bit - LV	Anthracite	Bit	HVB - LVB	LVB - Anthracite
Gas Content (scf/tn)	88-353	125-680	26-445	25-75	100-6002	300-900	200-400	175-420	245-420
Permeability (md)	0.5-40	0.01-40	0.01-41	1-1,000	1-60	1-5	100	0.1-20	0.02-3
Reservoir Fluid Saturation (5)	70-100	80-100	50-100	100	100				
Reservoir Pressure (Psi)/(psi/ft)	0.433-0.5	0.0875-0.12	0.30		0.40			0.38	?
No. of Coal Seams	6	3	6	6	2			5-15	5-10
Reserves (bcf/well)	1-2	0.5-1.5		0.2-0.5	3-15	04-0.8	2.5-3.5	2.35	0.5-2.8

Source: Essar Energy, SPE 103514, Government of Australia, FDE (Full Scale Development for Lorraine and NPdC excluding Coal Rank

Assets strategically located

LFDE's CBM assets are located in a strategic position, maximising margin with high realisations and low connecting costs.

Lorraine and Nord Pas de Calais are two very industrial regions where gas demand is on the doorstep and there is privileged access to the gas distribution network. Overall, the cost to take gas from well head to tie-in to the existing gas pipeline infrastructure and reach industrial buyers is expected to be approximately EUR0.6/mcf (for a full development).

Both Nord Pas de Calais and Lorraine are located near the end of the Russian and Norway pipeline and the local domestic prices are prices for gas from these two countries. There is also no cheap substitution possible given limited LNG infrastructure. Price for substitution gas is currently priced on a formula tied to Brent (with prices in mcf/d often defined at Brent price x 0.1). Gas prices in the North of France have actually been higher than this formula.

A large amount of quality data provides some comfort with regards to repeatability and scalability

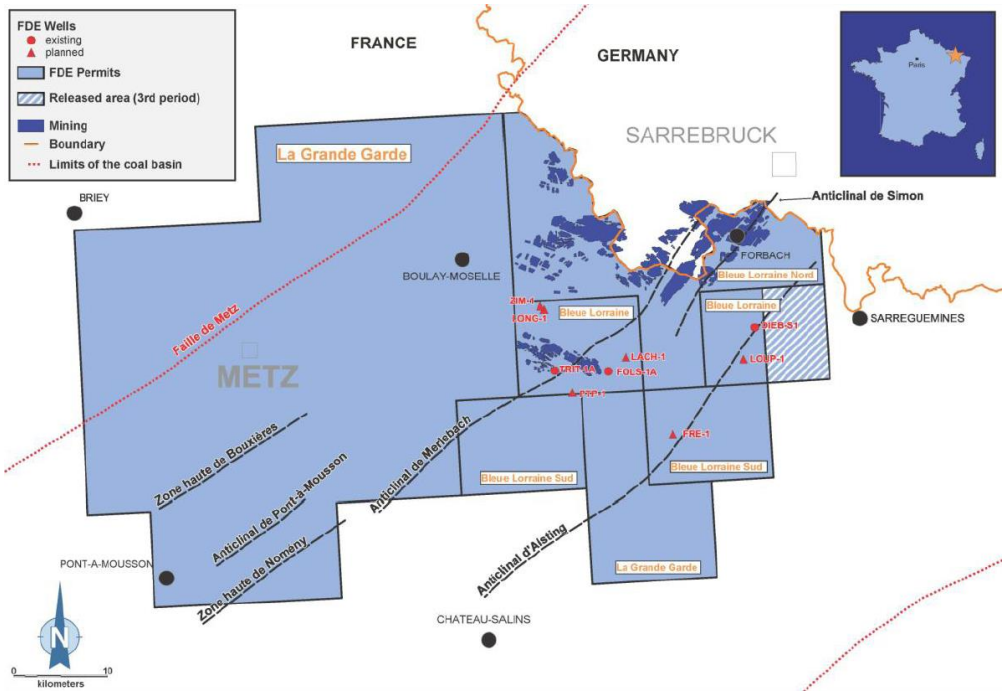
Plenty of historic data derisks the plays

Both the coal mines in Lorraine and Nord Pas de Calais were in operation for over 100 years before being closed. In Nord Pas de Calais alone, hundreds of thousands of km of galleries were dug, with over eight hundred stratigraphic wells drilled before the mines were closed in the early 2000s. In Lorraine, over 600 stratigraphic wells were drilled up to 1,000 m depth until the complete closure of the mines in the 90s. As a result, a formidable amount of data is available indicating the presence of high-quality coal seams. Importantly, this data is available publicly.

In addition, in some areas gas is naturally produced from the coal and has to be vented from the galleries. In Nord Pas de Calais, the company produces 7 mmcf/d (2.6 bcf/y on average over the last five years) of such commercially sold gas.

In Lorraine, the CBM licences were previously owned by Esso (ExxonMobil), Enron and ConocoPhillips, which drilled a total of nine exploration wells and shot seismic surveys from 1987 to 1995. The latter two companies dropped their permits as ConocoPhillips decided to focus on Russia at the expense of France and Enron experienced technical difficulties followed by a financial meltdown. Bernard Michaud, LFDE Chief Geologist worked with ConocoPhillips on the Lorraine CBM licence at the time.

Figure 20. Existing & planned well locations of LFDE permits in Lorraine



Source: LFDE

Encouraging recent activities in Lorraine with regards to commercial potential

Recent activities have been focused around Lorraine where LFDE has already drilled a total of three wells on the Bleue Lorraine permit. This has allowed correlation with the old mining data and provided a very high level of certainty around the geology and the high-quality nature of the coal seams. Tests on the multilateral Folschviller-2 well proved that gas could flow from the seam to the surface. Based on the rate achieved on a pilot multi-lateral section, the company estimated a flow rate of 0.4 mmcf/d from a full 1,000 m lateral. This result also allowed the company to book 27.9 bcf 2P reserves.

The Tritteling well with four horizontal laterals over a total of 3,500 m not only demonstrated the company's capability to drill horizontal wells in the seams, but also established the development and completion concept for the field. While the Tritteling well experienced a downhole blockage and could not be flowed, a pad with four development wells, with four horizontal laterals each could, in theory according to LFDE, produce 4.0 mmcf/d, based on the estimated flow rate derived from the Folschviller well.

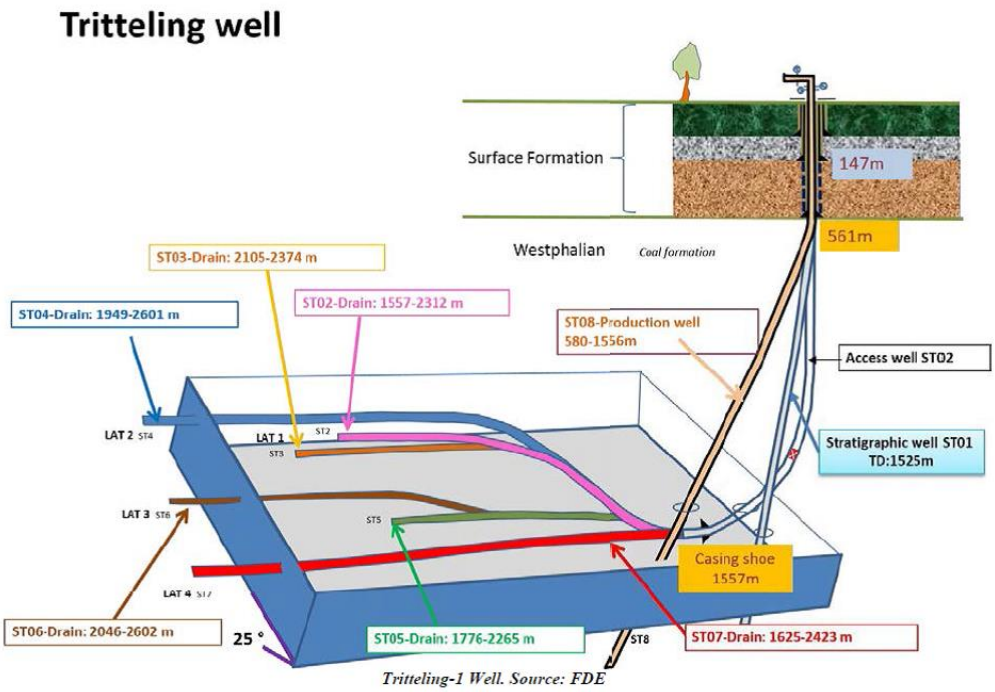
A word on completion design

Coal Base Methane production requires a phase of dewatering through dedicated tubing, where water is pumped until the well starts and gas is flowing naturally. The use of multilateral horizontal drilling in CBM is widespread in North America and Australia. Even juniors such as Green Dragon Gas employ horizontal drilling on the Chinese CBM assets.

The multi-lateral completion with pumps in CBM is therefore not particularly new. What is a little more unique is the fact that the wells will have multiple well heads. If Tritteling-1 well implemented a one well head architecture (limitation related to the drilling permit application), the next wells will be built as a pair: one sub-vertical well in which the pump will be installed and a multilateral that will intersect it. The use of two separated wells for each producer allows a greater flexibility during the drilling and operating phases, which will

reduce the technical and financial risks of the project. An activation system (progressive cavity pump, an electrical submersible pump or a jet pump) will be installed.

Figure 21. Completion technique



Addressing environmental concerns

Developing unconventionals has been very difficult in Europe, particularly for shale with protests in the UK and specific fracking restrictions in various countries in Continental Europe. The fracking ban implemented a few years ago in France will inevitably raise questions about the environment (water basin contamination, fracking and visual pollution) and community concerns for LFDE CBM development.

CBM at LFDE is not Shale and benefits from particular features that should allow LFDE to take the project forward.

- **The coal seams in Lorraine and Nord Pas de Calais are of such good quality** that no fracking is required to achieve commercial flow rates.
- **The drilling fluids used by LFDE are water based and do NOT include chemicals.** This implies that no chemicals will contaminate the water table. This is particularly important as the wells are shallow.
- **The water produced during the dewatering phase is fresh** and as a result can be used by farmers or neighbouring industries. In fact, the water produced by the existing wells is already used by farmers.
- **LFDE's development concept is based on pad development with minimal surface intrusion and surface foot print.** The development model has already been approved by the French Regulator.
- **In addition, Lorraine is already a heavily industrialised area where incremental visual pollution will be limited.**

Since Julien Moulin took the reins of the firm, LFDE has initiated an extensive communication process with communities and politicians. As a result, LFDE has received support from various parties. Some NGOs have been involved since the early days of the project. All the permits have also been confirmed by the Central Government.

NPDC and Belgium CBM & CMM - much more than meets the eye

LFDE holds a 100% interest in two production concessions (Desirée et Poissonière) and two exploration permits in NPdC, covering an overall acreage of 1,911 sq km and estimated to hold 1.9 tcf 2C contingent CBM resources. The two production concessions are valid until 2042, while renewal of the two exploration permits is in process. CMM at NPdC is now considered in certain cases as green energy and as a result benefits from preferential prices guaranteed for fifteen years, reduced VAT and potentially from carbon tax credits. This suggests a more defensive profile to movement of gas prices, much better visibility on cash flows and also superior economics.

While most coal mines around the world flood rapidly after the cessation of mining activities, in NPdC the abandoned workings remain largely unflooded, thus forming a large inter-connected network of galleries and coal extraction zones. These act as a gathering system for gas released from the coal. LFDE monetises this gas (i.e. CMM), with an average production of 2.6 bcf (51% methane) over the last five years. Cumulative CMM activities production from 1990 to 2015 amounted to about 67 bcf. 225 bcf of 2P CMM reserves (113 bcf of pure methane) remains to be produced. Over the last fiscal year ending 30/06/2015 (pre-acquisition by LFDE), the production was limited to c. 1.3 bcf as it was impacted by a very large maintenance programme, which was realised every 15 years and conducted on Gazonor's (the previous licence owner) main production site. This shut down several of the high pressure reciprocating compressors on the production facilities located in Avion from June to September 2014.

CMM activities benefiting from unique preferential prices

The company expects to increase the production volume to the historic average through the operations optimisation and bringing new sites to production. Currently, the gas produced is injected into the national grid and sold to Total SA. The cash flow from the CMM project is expected to more than cover the G&A of the enlarged group. EBITDA on only 1.3 bcf of production in the year ending June 2015 was EUR1.4 mm.

Figure 22. NPdC resources

	Acreage	Reserves (bcf)			Contingent Resources (bcf)		
	sq km	1P	2P	3P	1C	2C	3C
Desiree	68	51	225	709	114	161	223
Poissoniere	698				971	1,431	2,066
Sud Midi	929 (416)				86	246	503
Valenciennois	216				5	31	84
Total	***1,911***	***51***	***225***	***709***	***1,176***	***1,869***	***2,877***

Source: LFDE

The optimisation of the existing facilities involves bringing several other sites owned by the group on-line and providing additional volumes of gas to gas buyers. This optimisation also involves the development of a gas to power activity by installing gas engines and co-generators on production sites to produce electricity and possibly heat.

The company plans to install several electricity production facilities on the existing sites in Avion, Divion, Lens and Desirée with a total capacity of 9 MW and continues to evaluate opportunities for such production on other locations in the basin. Half of the existing

production at Avion will continue to be injected into the grid. However, the balance will be sold as electricity from mid-2017.

Importantly, all the incremental gas (initially from Divion, Desirée and Lens) will also be sold as electricity. LFDE's CMM gas production has also been established as an electricity feed-in tariff. CMM is considered by the French State as green energy (recoverable energy source) and benefits from preferential, guaranteed tariffs (for fifteen years). While Avion CMM gas has historically been sold at c. US$6.5/mcf (Jan-Dec 2015), electricity will be sold at up to over three times that price depending on the installed capacity of the production sites. Based on installed capacity, guaranteed electricity prices are EUR68/MW for Avion, EUR76.6/MW for Divion, EUR76.6/MW for Désirée and EUR68/MW for Lens.

The co-generation (electricity and heat) projects generated from CMM will also benefit from reduced VAT, from 20% to 5.5%. The overall estimated capex to install power generation at Avion, Divion, Lens and Desirée is estimated at c. EUR9 mm (c. US$10 mm) including almost EUR2.7 mm (US$3.0 mm) at Avion for 3 MWh capacity, EUR1.6 mm at Divion for 1.5 MWh capacity, EUR 1.5 mm at Désirée for 1.5 MWh capacity and EUR3.5 mm at Lens for 3.0 MWh capacity. The expected steady-state break-even of the Avion project with the combined electricity / gas sales is below EUR2.5/mcf (US$2.8/mcf). The company envisages it will progressively add sites and grow the overall electricity generation capacity. We forecast overall capacity to grow to 15 MWh by mid-2018 and to 21 MWh from 21 MWh. It costs about EUR1.0 mm per additional MWh of capacity.

It is important to note LFDE's CMM reserves contain about 35-50% methane. This means that for every bcf of production dedicated to gas injection in the grid, over half a bcf does not generate any value. Conversely, LFDE gensets will work on only 25% methane, suggesting all the gas production (including non-methane) will generate value when used to generate electricity. This low level of methane concentration required for electricity generation could trigger an increase of CMM 2P reserves. An updated reserves report is anticipated to be published in September/October 2017.

At 30 MWh, we forecast over 20 mmcf/d production (8.3 bcf/y). At that level, the 2P reserve life is over 30 years. This is far too long and suggests opportunities to boost production by adding producing sites. 25 sites where the pressure and gas quality are controlled by BRGM (French Mining Authorities) are possible sites for gas to power production.

In addition, the possibility to get CO2 certificates is currently under consideration in other areas to financially compensate the CO2 emissions avoided by LFDE's CMM production. 700 mn tonnes of CO2 emissions are saved each year assuming a normalised production of 600 GWh gas/year. At the current price of EUR5/tonne, this represents a potential additional revenue of EUR3.5 mm per year.

In Belgium, LFDE holds two concessions (Anderlue and Peronne) with a total surface of 39.5 km2 with CMM. While the company does not benefit from preferential prices like in France, LFDE will develop first the Anderlue site with a 3 MWh genset where environment and construction permits are already in place. We however note that the agreed tariffs are an EU-wide initiative that just needs to be applied in each individual country (it has been applied in Germany for over 14 years). CMM at Anderlue and Perrone contains 70-75% CH4, which is much better than in NPdC (35-50%). Production could start by end 2017 with a total capex of EUR1 mm per MWh. Overall, the company could generate a total of 6.5 MWh over both sites over the next 36 months.

Key risks

In our view, there are three main areas of risk associated with an investment in LFDE:

Technical risk

The geology of the CBM in Lorraine and NPdC is well-known. However, while the company has demonstrated that the targeted completion design can be implemented and that an individual lateral should in theory be able to deliver the required production rate, no wells have as yet flowed at the overall targeted rate (1 mmcf/d). We view this as a key area of risk as IP rate and overall recovery factor will eventually drive cost and be key drivers in the profitability of the project.

Environment

Any unconventional hydrocarbon project carries environmental risk. This includes central government changing the rules (as happened with fracking in France a few years ago), local communities opposing the project resulting in local authorities not awarding the required permits (as is currently happening in the UK) or activists' demonstrations.

LFDE projects in Lorraine appear to be currently well-supported by various groups.

Commodity

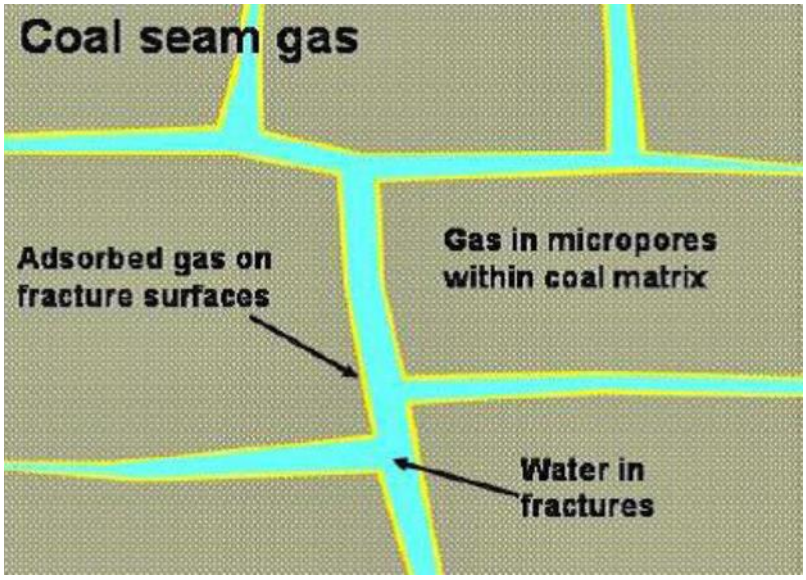
We are not overly worried by the commodity pricing risk associated with the projects, given that NPV10 would be positive for gas prices as low as US$4.5/mcf. We would anticipate that Norway and Russia would protect prices if they were to get close to these levels.

Appendix 1: What is coal bed methane?

CMM (Coal Mine Methane) is gas that escaped as the coal was mined or during/following mining as subsidence occurred and a large void was created, which acts as an underground gas reservoir. CMM is the mixture of the methane with the atmosphere present in the void, which explains why this gas has a lower calorific value than natural gas.

CBM (Coal Bed Methane) refers to methane gas absorbed into the solid matrix of the coal. This gas is well-known in the mining industry where it is considered a dangerous nuisance. Contrary to conventional reservoirs where hydrocarbons are stored within the pores of the formation, the methane is in a near-liquid state, lining the inside of pores within the coal or absorbed onto coal surfaces. Unlike much of the natural gas from conventional reservoirs, coal bed methane contains very little of the heavier hydrocarbons such as propane or butane, and no natural gas condensate. It often contains up to a few percent of carbon dioxide.

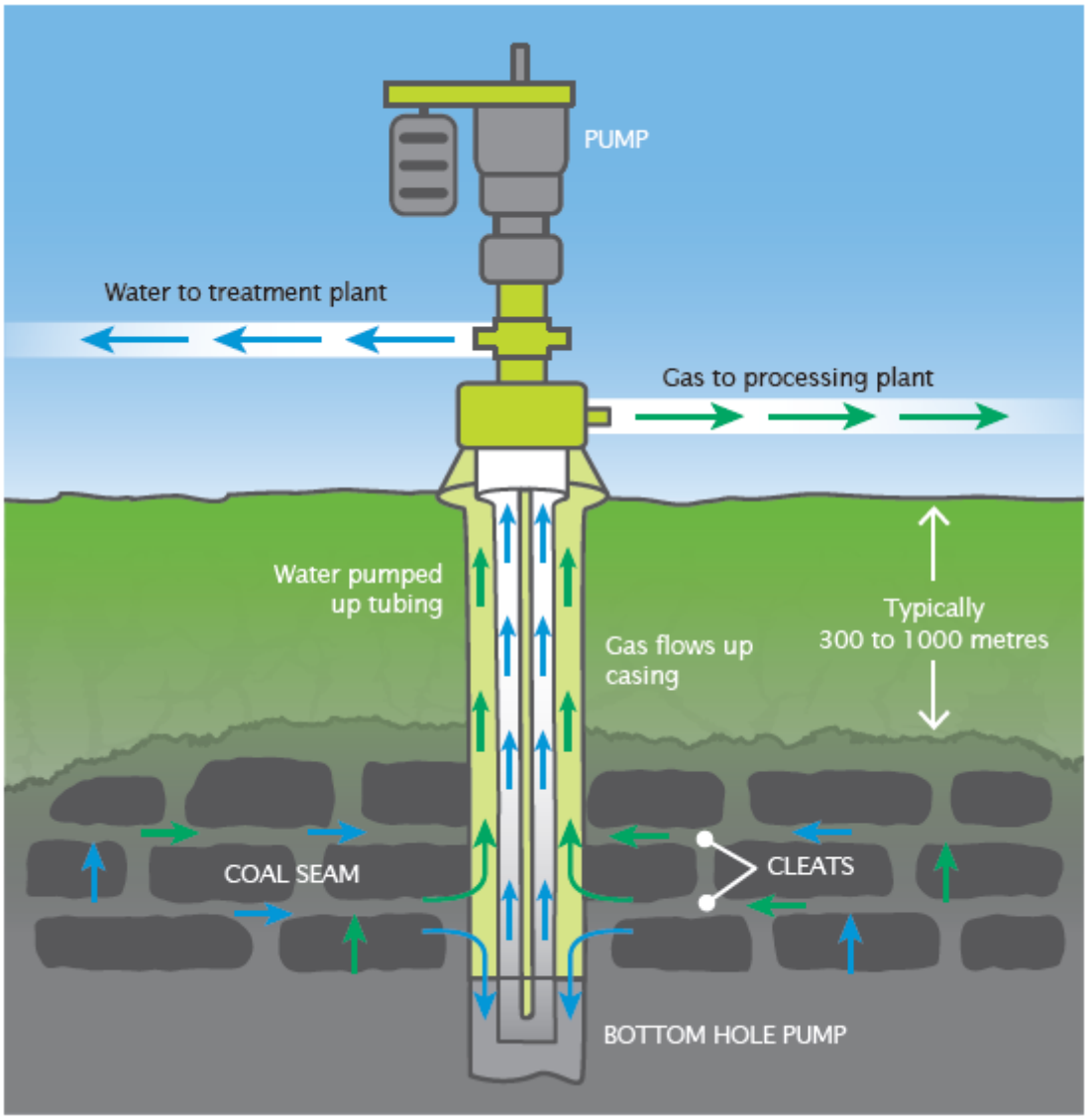
Figure 23. Schematic of gas within a coal seam



Source: Geoscience Australia

The recovery of CBM generally requires a specific approach and, as is the case in Lorraine, water is often present in the natural fracture system of the coal (called a cleat system) and the water pressure in the coal seam must be reduced to an appropriate level in order to free the gas. The gas rises at atmospheric pressure to the top of the well where it is collected and fed at low pressure to the treatment plant and then into a high pressure transmission pipeline. In most cases, the Coal Bed Methane is naturally of pipeline quality and requires minimal treatment. Seams that have plenty of natural fractures are less costly to develop as sources of Coal Bed Methane vs those that have less permeability and need to be artificially fractured.

Figure 24. Schematic diagram of coal bed methane extraction process



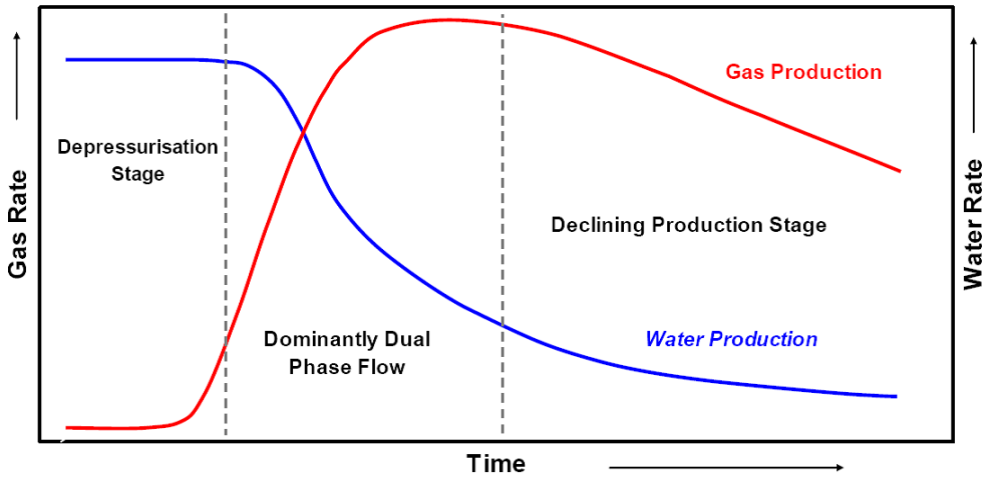
Source: Australian Government

By contrast, in dry coals such as those of Nord Pas de Calais the volume of water present in the coal seam is limited and therefore the required dewatering activities are reduced.

Coal seams likely to be tapped for Coal Bed Methane in Australia are mostly located 250–1000 metres below the ground surface. Most Coal Bed Methane production to date in Australia, particularly in Queensland, has not entailed fracking of the coal seams (contrary to the history of gas production in the United States).

Volumes of produced groundwater are typically large in the early stages of Coal Bed Methane production, and the volumes of gas released are small. However, later in the life of a well this ratio reverses and methane production increases.

Figure 25. Typical changes in the rates of water & gas production from a CBM well



Source: Australian Government

The enormous amount of groundwater pumped from CBM wells may have to be treated, if the wells have been fractured or if the drilling fluids contain chemicals (none of this is the case at LFDE), particularly if the water is saline. Once treated for quality, it can be a resource for sale for irrigation purposes. It can also be directed to industrial or urban use.

Appendix 2: Detailed assumptions & fiscal regime

Our Net Asset Value calculations are based on NPV10% (after tax). We have also included the positive impact of historical tax losses.

Our Core NAV is based on an NPV (DCF After Tax – 10%) of (1) 225 bcf 2P CMM reserves in NPdC, (2) 27.9 bcf 2P reserves at Folschviller (100% chance of development) and (3) the pre-development of 25 bcf at Bleue Lorraine (60% chance of development).

We deduct from our Core NAV the company's anticipated net debt position at the end of 2017. The net debt of the company including at the end of December 2017 is estimated at about US$34 mm.

We estimate the value of G&A as a perpetuity based on 2017 G&A. As LFDE absorbs Gazonor, we anticipate G&A for the enlarged group to be substantially reduced. We currently anticipate a run rate of EUR4.8 mm per year.

We have included in our ReNAV the scaling-up of the pre-development to 30 pads to develop over 280 bcf at South Longeville. For NPV purposes, we have assumed a two-year lag between the start-up of the pre-development and the full development. We have associated to the full development of South Longeville a 60% chance of development. Given that the Bleue Lorraine and Bleue Lorraine Sud permits have been fully granted, we have also ascribed value to the contingent resources not targeted by the pre-development and the South Longeville full development phase. We have associated to these resources a 25% chance of development and a time lag. We have assumed half of the contingent resources at Bleue Lorraine Sud post licence renewal (half of the area has to be relinquished).

Pending permit extension or confirmation of permits being granted or further details on the drilling programme, we have taken the cautious view of not attributing any value to Bleue Lorraine Nord and La Grande Garde. Given the early stage of the CBM assets in NPdC, we have only attributed value to the resources on the 25-year concessions. We have cautiously assumed the same value as Lorraine pre-development with a two-year lag. We have associated to these resources a risk factor of only 10%. We have not given any value to the Paris basin assets at this stage.

As mentioned previously, there is potential to unlock significant further value on existing blocks, as the resources numbers and computations do not take into account the following elements: (i) coal seams that are located below 1,000 m, (ii) coal seams that are between 1 m and 3 m thick, (iii) resource certification was carried out only on 29.4% of the company's portfolio in Lorraine, and (iv) the company's base case is to produce only one coal seam when up to eight have been identified in the CPR all over the region.

Other assumptions include:

Operational

Production up-time net of use of fuel gas: 90%

The gas methane quality in Lorraine is at pipeline specifications. As a consequence, the capex for surface processing is very small. It requires a connecting flow line and the addition of some compressing facilities at each well head.

Commodity

Our gas price assumptions reflect our forecast of gas price in France stabilising at US$6.80/mcf in 2020. LFDE indicated that gas prices in the Lorraine/North of France were

close to US7.0/mcf at the end of 2016. Our gas price forecast, therefore assumes gas prices broadly flat compared to YE16 levels.

Fiscal

Tax: 34.43-37.96% corporate tax (see below).

Tax losses EUR27 mm.

Fiscal terms in France

Cost

The difference between capex per well and opex/mcf between the pre-development and full development phases reflects economies of learning and of scale. It also reflects the fact that an average well during the full development phase recovers more volume than an average well during the pre-development phase.

The cost assumptions reflect the company guidance. Of note, opex/mcf of gas produced is based upon EUR0.6/mcf for compression and EUR0.2/mcf for variable during the full development phase. Compression cost is estimated at EUR0.7/mcf during the pre-development phase.

The group estimates the component costs for the scale of operation envisioned for Lorraine to be approximately EUR0.46/mcf in cases where pressures at delivery are below 12 bar. There exists some uncertainty over the discharge pressures the group may encounter at various sites. For the pre-development plan, the group makes allowance for these uncertainties with a surcharge of 50% over its constant conditions estimate. The horsepower requirement to raise pressure from ~12 bar to ~60 bar is about the same as that required to go from 1 bar to 12 bar so the compression cost would approximately double for discharge in high pressure pipeline.

Figure 26. Assumptions

RESOURCES	Total Pre-development Phase	Development (per pad)	Development (30 pads)
Areas to be developped (sq km)	10.65	6.00	180.00
Number of sections	4.11	2.32	69.50
Targeted Seams Coal Thickness (ft)	16	22	22
Coal SG	1.35	1.35	1.35
Gas Content (scf/t)	300	300	300
Well Spacing (sq km/w)	n.a.	1.50	1.50
Nb of wells	**15**	**4**	**120**
Total Coal Tonnage (mmt)	74.2	56.7	1,701.0
(bcf)	45.0	16.0	480.0
Gas insitu per section (bcf)	10.9	6.9	6.9
Peak Rate per well (mmcf/d)		**1.0**	**1.0**
Nb of lateral per well	3-6	4	4
Decline rate/y*	14.0%	14.0%	14.0%
Recoverabe Volume per well (bcf)	**1.70**	**2.35**	**2.35**
Total Recovered volume (bcf)	**25.70**	**9.40**	**282.00**
Water production/well (bbl/d)	95	95	95
Water Production Delcine Rate/y	5.0%	5.0%	5.0%

COST			
Capex			
Cost per Well (US$ mm)	3.31	3.21	3.21
Cost of Surface Equipment (US$ mm)	Incl above	Incl above	Incl above
Opex			
Opex/bbl Water incl overheads	0.62	0.62	0.62
US$/mcf produced incl overheads	1.11	0.99	0.99
Fixed Cost per Site per month (US$ mm)	0.05	0.04	1.29

Source: GMP FirstEnergy

Appendix 3: Main shareholders

Figure 27. Table of main shareholders

Shareholders	% Stake
Deltec Bank	13.8%
Chaldon Asia Ltd - Chalopin Family	8.0%
EGL UK	8.0%
Ginkgo Holdings - Durr Family	7.6%
Maritime Manufacturers Associates - Hugues Lamotte & Associates	6.9%
Julien Moulin	5.3%
Credit Mutual du Nord	3.7%
Financiere de Rosario - Michaud Family	2.5%
Amundi	2.1%
Pan Holding	1.9%
Financiere Gabriel	1.4%
Stahl Capital - Marshall Family	1.1%
Total	***65.1%***

Source: LFDE

Appendix 4: Key management and board

Julien Moulin - Executive Chairman

Mr. Moulin worked for Barclays, UBS and Axis Capital before co-founding Maoming Investment Manager Ltd, an asset management company specializing in the energy sector and natural resources in Asia. He was also a board member of companies with assets in China, Australia and the US. Julien Moulin has been at the helm of Française de l'Energie since 2009 and was behind the company restructuring and repositioning.

Johannes Niemetz – CFO

Mr. Niemetz was previously responsible for Energy M&A transactions at GE Oil & Gas. More recently, he was director at Strata Partners, an Investment Banking firm based in London where he executed a number of international M&A transactions in the technology and energy sectors.

Antoine Forcinal – COO

Mr. Forcinal has over 10 years of international exposure in the multi-disciplinary dimensions of Oil & Gas E&P. He has worked with Perenco. He has also been involved in unconventional hydrocarbon projects in Canada.

Bernard Michaud – Senior Geologist

Mr. Michaud is an IFP professor and senior geologist with over 30 years' experience. He worked with ConocoPhillips on the Lorraine Basin.

Celine Maisonneuve – Non Executive Director

Mrs. Maisonneuve is Chairwoman of the Vinci foundation.

Alain Liger– Non Executive Director

Mr Liger is the head of the Mining Committee at the French Ministry of Industry and Economy. He is the former head of the Environmental department of Alsace and Lorraine.

Jean Fontourcy – Non Executive Director

Mr. Fontourcy is the former Deputy CEO of Credit Agricole. He is the acting representative of several shareholders of LFDE.

Christophe Charlier – Non Executive Director

Mr. Charlier is a former board member of Rusal and Polyus Gold.

Appendix 5: Company history

La Française de l'Energie (LFDE) was founded in the 1990s, as an ASX-listed company called European Gas Limited (EGL) focused on developing gas and Coal Bed Methane (CBM) projects in Australia. In 2009, the company was near bankruptcy and Julien Moulin, at the time running a fund focused on resources in Asia, took control of EGL and transformed it into a pure French CBM player.

Historical equity issues for EGL include EUR8 mm on a pre-money valuation of EUR130 mm in 2012-2013 and EUR3.5 mm on a pre-money valuation of EUR160 mm in 2013-2014. The firm was IPOed as LFDE on the Euronext in June 2016 at a price of EUR27 per share raising EUR37.5 mm.

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