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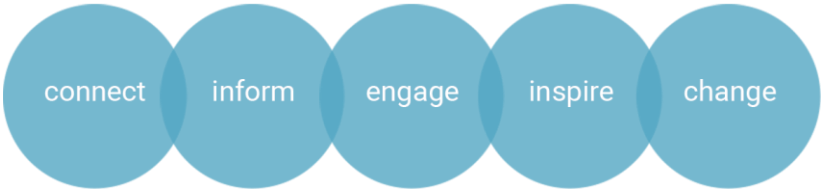

National Grid

Investor Teach-In - Other Activities & JVs

29th September 2016

NATIONAL GRID

Aarti Singhal, Director - Investor Relations

Andrew Bonfield, Chief Financial Officer

Phil Edwards, Head of National Grid Real Estate

Alison Dowsett, Berkeley Group

Simon Culkin, Head of UK LNG, National Grid

Maxine Long, Head of Domestic Metering

Kerri Matthews, Head of Smart Metering

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Nigel Williams, Construction Director, NSL

John Flynn, SVP, US Business Development

QUESTIONS FROM

Mark Freshney, Credit Suisse

Fraser McLaren, Bank of America / Merrill Lynch

Mr Murphy, Bank of America / Merrill Lynch

Iain Turner, Exane BNP Paribas

Jenny Ping, Citigroup

James Brown, Deutsche Bank

Dominic Nash, Macquarie

Rui Dias, UBS

Gus Hochschild, BEIS

Deepa Venkateswaran, Bernstein

Edmund Reid, Lazarus

Ashley Thomas, Societe Generale

Introduction

Aarti Singhal, Director - Investor Relations
Good morning, I'm Aarti Singhal, the Director of Investor Relations for National Grid. Welcome to our Teach-In.

As always safety comes first, there are no planned fire alarm tests this morning, so if you hear an alarm please make your way through the fire exits, which are by the tea and coffee area. Also make note of the cautionary statement, which is in your packs.

This morning we've got ten presenters and we've grouped them mainly in twos and threes. So please keep your questions to the end of each group.

Finally, a quick reminder to turn your phones or other devices off, before I introduce to you our CFO, Andrew Bonfield, Andrew, over to you.

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Opening Remarks

Andrew Bonfield, Chief Financial Officer
Thank you Aarti and good morning everybody. National Grid has a strong portfolio of businesses and we deliver value for shareholders by maintaining and attractive combination of growth and yield. Our other activities and joint ventures are an important contributor to this portfolio approach. They comprise adjacent businesses that are a natural extension to our core activities of transmission and distribution in electricity and gas. And they play to our core skills of engineers, asset management and project delivery.

They are also businesses where we have either developed world class expertise, such as interconnectors and LNG, or where we have a unique opportunity to drive value from legacy assets, such as in the case of metering and property.

While these businesses may appear to be diverse, they fit naturally with our model of owning and operating long term assets that have a low risk profile and stable cash flows.

This morning the leadership teams from these businesses will give you more insight into the drivers of their performance and a sense of the attractive growth opportunities they are pursuing.

In addition we've invited John Flynn who heads our US business development activities to update you on US Transmission opportunities and to discuss some of the new growth areas that arise from exciting changes in our industry.

Over the last three years, Other Activities has delivered an average annual EBITDA of around half a billion pounds per annum. A level of EBITDA that would be comparable to companies at the lower echelon of the FTSE 100.

As we have highlighted before, the performance last year was particularly strong, reflecting the strength of the French interconnector revenues, significant sales in our Property business and some favourable one off asset disposals.

BritNed, our other joint venture Interconnector also performed well, although its results are reflected in the JV line.

We have guided you to expect performance to more normal levels this financial year.

As we look to the future we expect these high quality businesses to continue to provide a solid platform of earnings and cash flow, complemented by some attractive growth prospects for this financial year.

Our priorities for these activities are clear. First and foremost is safe, reliable and cost efficient operations for customers. Second, as you'll see from today's presentations our teams are focused on continually driving value from these assets.

But in addition to these projects we have a broad portfolio of high quality development opportunities. On growth our near term focus is on delivering the new Interconnector projects, they are large projects and National Grid takes pride in its strong engineering capability and construction management expertise.

We also have a huge opportunity in building new Transmission capability in the US. However, it isn't just about big complex engineering. We are excited about our St William JV with Berkeley Group. As the team will discuss we are also looking at ways to increase the value of Grain LNG and potentially expand it. And in Metering we are running a pilot programme for smart meters.

We have opportunities spread across each business area. However, we will only pursue those that meet our strict investment criteria. We are not targeting a given level of capital spend, but will only allocate capital to those opportunities that drive the most shareholder value.

As we will hopefully demonstrate to you today we have excellent teams in each of the businesses. They are experience leaders with the right skills and commercial acumen required to deliver the opportunities presented to them.

These businesses have grown considerably over time and this is due to the energy and the quality of our teams and their deep understanding and strong relationships with all stakeholders from customers to contractors.

Unfortunately, as you may be aware we are relatively busy at the moment in National Grid, there are other things that are reported in the media that we are working on, so unfortunately I won't be able to stay with you for the whole time. But I do hope today will actually help you get a better understanding of all the opportunities we have had in Other Activities and this has been an area where we have actually tried to set up this seminar for a while. And I really hope you do get some really great benefit from the day.

First up we do have Property. As you'll hear shortly we're unlocking value from developing our industrial legacy sites, in parts through our JV with Berkeley Group. And I'm delighted to welcome Alison Dowsett from Berkeley who is the Managing Director of the St William JV with us today. But first let me introduce you to Phil Edwards, Head of National Grid Property. Thank you and I hope you find today's sessions informative.

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Property

Phil Edwards, Head of National Grid Property
Thank you Andrew and good morning. In this session I'm going to talk about the National Grid Property business and provide an overview of the portfolio, our strategy and St William, our joint venture with Berkeley Group.

I'm a Chartered Surveyor and Chartered Management Accountant and I joined the company 20 years ago as a graduate, just when it was setting up the Property business to deal with the challenge of probably the largest portfolio of surplus urban land in the UK.

Later on during this presentation, as Andrew has mentioned, I'll introduce you to Alison Dowsett. Alison is the Managing Director of St William and will give you some further insight into our newly formed joint venture and talk about some of our achievements and successes to date.

Today, National Grid's surplus property portfolio consists of around 350 sites, totalling 2,000 acres located throughout the UK. The portfolio is predominantly made up of former gasworks and it's very diverse in nature, with sites of varying sizes, some with high potential value for development and others less so.

Our strategy is straightforward, we identify and then realise add value opportunities across the portfolio, whilst at the same time we manage the risks and constraints presented by what is redundant and contaminated land.

As I have mentioned the portfolio is spread throughout the UK. Though perhaps most significantly we own over 30 sites, 340 acres of land in Greater London and the Southeast of England. All of these sites have potential for new housing and they are the focus of our St William joint venture.

The Property business has been managing the legacy portfolio for 20 years and over this time has consistently made a positive financial contribution to Group profits. Last year the Property business generated £56m of operating profit. This included significant property sales at Tottenham and Ebbsfleet, a number of lower value site sales throughout the UK, a collection of rent from interim lettings and there are opportunities moving forward to both sustain and maintain this level.

Now some history to help you understand why this business exists. The National Grid's Gas business actually dates back to the 19th century. At this time the gas industry was very much a manufacturing process, with gas derived from heating coal. Every town and city of the UK featured a gasworks; indeed the industrial heartlands of the countries and those areas with high populations often featured several gasworks. They range from small to some even over 100 acres in size.

Now a typical town gasworks would consist of two principal parts, the manufacturing or process area which made the gas and the gasholders which stored the gas. Those are those large metal cylinders which I'm sure you're all familiar with. Back then typically the gasworks, this industrial process, would have been located in the industrial quarter of a town or city.

The discovery of natural gas in the 1960s changed the industry and marked the end of the gas manufacturing process and as a result significant parts of the old gasworks become redundant. However, most of these sites were still dominated by those large gasholder structures and to some extent this limited the sites redevelopment potential.

By the early 1990s, National Grid Gas realised that those years of gas manufacturing activity had left behind a contaminated land legacy. And the ownership of a large redundant estate brought with it both significant risk and liability. In response National Grid made the strategic decision to sell the surplus estate to its Property business. This would provide two distinct benefits to National Grid Gas, the reduction of risk and land management costs, together with the transfer of liabilities, whilst promoting a clear focus on the day to day operational gas business. All surplus National Grid property at the time was sold to the Property business, who were then tasked with managing the contaminated land legacy and other property risks, while seeking to identify value opportunities across the portfolio.

Leading up to the 2013 RIIO settlement it was agreed that gasholders were no longer required as part of the UK storage capacity, making the holder portfolio both redundant and surplus. National Grid Gas again took the decision to sell the holder portfolio to its Property business, transferring all the risks and liabilities of site ownership.

Now as I said earlier one of the main responsibilities of the Property business is land clean up or if you prefer the more technical term land remediation. This process has evolved significantly over the

last 20 years and during this time we've become an industry leader, both shaping government policy and driving innovation.

Over those 20 years National Grid Property has cleaned up the equivalent of 1,000 football pitches, driven by both value opportunities and the need to address environmental risks. Wherever possible we recover value by selling this land for redevelopment. We've sold land to the organisations shown here and many, many others. Our land has been developed for residential, commercial and retail purposes. In fact I struggle to identify a use one of our sites hasn't been turned into.

In other cases we've donated sites to communities to be used as local parks. But in all cases we've taken land that was otherwise sitting idle or under used and deployed it for positive uses.

Now we've worked with the Berkeley Group on many projects over the years. Most recently in 2013 when we completed the sale of Southall, a 90 acre site in West London.

Over that time we've developed a strong working relationship with an organisation we feel are market leaders in property development and regeneration.

It was in November 2014 that we first announced our joint venture with the Berkeley Group. There were many benefits to this partnership. Firstly, the opportunity to really leverage value from a scarce resource, residential development land, and access downstream profits. The JV also provides access to a market environment with strong core fundamentals; we simply need to build more houses to meet demand.

It presents the chance to work with the Berkeley Group, a financially strong market leading company with a successful track record of corporate JV experience, with the likes of Thames Water and the Prudential. When selecting a partner it was these characteristics which we felt set them apart from their industry peers.

The JV will make excellent use of now a legacy asset, every St William development will open up idle or under-utilised sites that have been closed to the public for decades. And finally the JV has scale. We have over 30 sites that could potentially form part of the business. In total these 30 or so sites could deliver 17,500 new homes, including 5,500 affordable homes, as well as new public open space, schools and create over 10,000 jobs. So far seven sites are in the JV and currently we're in negotiations on a further 11.

So how does the JV work? Put simply National Grid supplies the land into the joint venture and manages site remediation, holder demolition and operational plant relocation activities. The Berkeley Group contributes the day to day development expertise, from initially securing planning consent, all the way through to onsite construction, marketing and sales.

The JV is funded 50% by equity, with up to 50% bank finance. Our equity share is effectively the value of the land, which in term is matched with Berkeley cash. So to be clear from the National Grid standpoint the cash requirement from the JV will be no greater than its land receipts. Or put another way, no new money from National Grid is required by the joint venture.

The JV Board is made up with equal representation from both National Grid and Berkeley, reflecting the true 50/50 nature of the relationship.

At this point I'd now like to pass over to Alison.

Alison Dowsett, Berkeley Group
Thank you Phil. Good morning, I'm Alison Dowsett, I work for the Berkeley Group and I'm the Managing Director of St William. I've been with Berkeley for just over 12 years and for most of that time have worked for St James, which was originally formed as a joint venture with Thames Water.

I'm very pleased and proud to be part of St William to be talking to you today about our joint venture with National Grid.

The Berkeley Group is a publically owned FTSE 250 company with over 40 years of experience. We build nearly 4,000 homes a year, employing over 12,000 people in our business and on our construction sites.

I'd like to begin by telling you a bit about Berkeley; about what makes us different and how we think. Firstly, we build safely, our primary responsibility is to the people that work on our sites and the public who live and walk beside them.

We are passionate about the quality and detail of each development and how to create places where people really want to live, work and play. We work collaboratively with councils and communities, because in reality it's working in partnership that unlocks delivery.

We also work sustainably to make a lasting contribution to the landscape and the communities we create. Our business is about place making and not just house building. We continually innovate to ensure that all Berkeley home are useful, beautiful and suited to the ever changing needs of society.

We pride ourselves on our customer service, our net promoter score is not just the best in our sector, but higher than John Lewis and Apple.

Our strategy is based on adding value; Berkeley is not a volume business. We invest more to make more and everything we set out to do is long term.

So what makes St William so exciting? It is its scale and breadth and as you can see from the map on the screen of our potential sites. As Phil said we're proactively working on 18 sites, with the intention to increase this to over 30.

The portfolio provides a wide range of opportunities including high value sites at Battersea and Fulham that we're going to talk to you about in more detail in a moment, larger regeneration schemes like Beckton in East London that could deliver a new urban quarter overlooking the River Thames, providing homes for thousands of Londoners. Smaller regional sites in Borehamwood and Watford and urban infill sites like the 44 unit scheme with National Grid Electricity Transmission in Highbury.

All of these will contribute to ease the housing crisis in London and the Southeast by bringing forward redundant brownfield land to provide homes, jobs and communities.

There will be a wide range of product and price range across the schemes, including homes for first time buyers, the trade down market, and luxury apartments, as well as affordable housing, including social rent and shared ownership.

What the majority of these sites have in common is that they are technically demanding and complex. Berkeley has the technical skills and unrivalled development expertise to optimise the development solution and add significant value.

St William is set to become one of the ten largest house builders in the UK by turnover within the next ten years.

I'd just like to touch on the property market. We believe that the long term outlook for the residential market remains strong, underpinned by robust underlying demand and constrained supply. In the

Berkeley Group full year results announcement in June we reported that reservations were around 20% lower in the first five calendar months compared to the same period last year, as customers adjusted to the higher property taxes and the uncertainty around the EU referendum.

Supported by a record forward sales position Berkeley launched little new product into the market in this period. After a hiatus either side of the referendum the market in August, traditionally a quiet month, has returned to the relative levels of the first five months of the year.

Importantly throughout 2016 site visitor numbers and enquiries have been at similar levels to last year, demonstrating the strength of underlying demand. And although customers are taking longer to commit pricing has remained resilient.

The depth and breadth of the St William portfolio, together with the increased speed of bringing forward National Grid's surplus land through the joint venture means that St William are ideally placed to provide a significant number of new homes into an undersupplied market.

So moving on to our site at Fulham, the former Fulham gasworks is the most high profile St William site in an established residential area on the Fulham/Chelsea border. It extends to over 17 acres and presents an excellent opportunity for a high quality masterplan which will create a new mixed use community in the heart of a prime area of London. Some of the key features are the retention of listed buildings, structures and war memorials to add heritage, authenticity and a focal point to the masterplan. The opportunity to connect into surrounding amenities including the River Thames and the Kings Road and good transport links with Imperial Wharf Station and Fulham Broadway tube station within a few minutes walk.

St William submitted planning application to the London borough of Hammersmith and Fulham in June 2016 for a residentially mixed use scheme - sorry a residentially lead mixed use scheme, including 1,375 homes and 140,000 square feet of commercial floor space. The application includes 23 new buildings, including a 27 storey tower. The project will create over a hectare of new public space in the form of a village square and a public park in the centre of the scheme. The park will include the Grade II listed gasholder which is the oldest in the world as a central feature.

So pending approval of the application and following the National Grid infrastructure works we expect to be onsite in 2018. This will allows us to deliver the first homes in the early 2020s and complete the site around ten years later.

The next site I'd like to talk to you about is Prince of Wales Drive in Battersea. This five acre site is on the south side of the river and at the western gateway of the Nine Elms regeneration area and just a short walk from Battersea Park.

The site already had excellent transport links which will further improve in 2020 following the completion of the new zone 1 tube station at Battersea Power Station, just five minutes walk away. The site will also benefit from the improved infrastructure and amenities being delivered at Battersea Power Station. This is the first St William site to start construction and launched for sale.

Planning consent was achieved in September 2015 for 839 homes, of which 638 are for private sale and 201 are affordable. These are all within 12 buildings, ranging in heights from 2 to 26 storeys. The development branded as Prince of Wales Drive was designed by world renowned architects Squire and Partners.

In common with all St William sites we have taken a landscape led design approach to ensure that we deliver quality open space. The National Grid sites give us the chance to open areas that have been closed to the public for many years and reconnect them with their surrounding communities. As a result we've chosen to include a landscape focus as one of our core values and quality open space will therefore be a recurring theme on all St William developments.

There will also be other uses at Prince of Wales Drive, including public piazza, offices, a gym, a crèche, a food store, and a café. The gym has been designed into a second level of basement inside one of the old gasholder walls.

Following completion of the National Grid work St William took position in August of this year and construction has begun. We fitted out a marketing suite using space in a nearby Berkeley scheme at Chelsea Bridge Wharf; this includes a show apartment and an interactive model. And we are taking reservations, so please do come down and have a look.

The site was formally launched for sale just two weeks ago and to date there has been strong interest and a number of reservations taken. The first homes will be delivered for occupation in 2019.

So Fulham and Battersea are the two premier opportunities in the portfolio, but we do have sites of all shapes and sizes. The third scheme that I'm going to present today is in Rickmansworth in Hertfordshire and still within the M25. This will be the next St William site to go into production, starting onsite in spring 2017.

The site is relatively small and surrounded by residential properties, which naturally give rise to a lot of concern about any new development. Both the St William and National Grid teams worked extremely hard to mitigate the objections to enable planning permission to be granted locally. For example the retained gas equipment has been located below ground to eliminate noise and visual intrusion.

The scheme will provide 48 two and three bedroom apartments which have been designed to appeal to the trade down market. These are just three examples to give you an idea of what we do.

Thank you and I'll now hand you back to Phil to conclude.

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Phil Edwards, Head of National Grid Property
Thank you Alison. Now turning to matters financial. The process to add a site to the joint venture has a series of steps. Firstly, National Grid and the Berkeley Group having agreed in principle that St William was to develop a particular site negotiate the commercial terms for the site's purchase. This will include price, which is the market value of the site with planning consent and any other acquisition conditions.

It's important to understand there is no obligation upon National Grid to offer the site to St William, or indeed agree commercial terms. Similarly St William is not compelled to acquire any site that it is offered. The key principle is that for a site to be successfully acquired by St William the parties must negotiate and agreed mutually acceptable price and terms.

So let me now illustrate with an example of how a site enters the JV and how profits are recognised. Let us assume the parties agree a price of £50m for a site. National Grid will begin work to remediate the site, to address the legacy of previous industrial use. This process typically takes somewhere between four and twelve months, depending on the specific characteristics of a site. We will progress with gasholder demolition which could we expect take somewhere between six and nine months, again depending on their number and their complexity. And where necessary we'll instigate operational gas plant relocation, which depending on the complexity of the project can take somewhere between six and twelve months. At the same time St William will work to secure planning permission.

Once National Grid and St William have both carried out these contractual obligations the sale is completed and the property is legally transferred into the joint venture.

At this point National Grid Property business recognises half the uplift in land value as operating profit. So using our example where the market value of the land was £50m and the land had an historic cost of say £10m, we would recognise £20m or half the £40m difference. Remember these properties have been on our Group books for a very long time, so the historic cost we're referring to is very low and therefore the uplift is almost equivalent to the market value.

Next the site is developed, this can take anywhere between a year or two for a small site like Rickmansworth that Alison has described, or up to 10 or 15 years for a larger site where there will be numerous phases, such as Fulham perhaps. Sales of the units will begin during the development phase and we would gradually recognise income in two ways. Firstly we would need to recognise the other 50% of land profit. We do this by assigning a proportion of the remaining land profit to each unit sold. As sales progress we recognise the land profit as EBIT through the Property business.

Secondly, we recognise our share of the joint venture development profit - sorry secondly we recognise our share of joint venture development profit, through the profit after tax through our JVs line.

At the same time we will continue working with the rest of the portfolio as we always have done, addressing constraints, driving short term income from lettings and conducting both low and high value sales.

As I said earlier last year the Property business produced £56m of operating profit. This year we expect the value of property sales to be similar year on year and this will include 50% of land profits from the sale of Battersea to St William, but with no downstream profits contributed from the JV just yet. In financial year '19 we expect to see an increase of this level due to the legal transfer of our largest site, Fulham, to St William.

Beyond that operating profits from our traditional Property activities, combined with our operating profit and post tax profits from St William collectively have the potential to contribute around twice current levels.

As already mentioned there are seven sites currently in the St William joint venture and one of these sites, Battersea, has now formally transferred and is in the construction phase, with the first units to be completed in 2019. As you can see we'll be legally transferring the remaining sites over the next two years, with some of the smaller developments actually completing around 2019 and 2020.

Moving forward we will continue to add additional sites into the joint venture, as well as assessing opportunities in the broader portfolio.

So in summary the property business has a diverse and significant portfolio of sites of varying sizes and values throughout the UK. Our St William joint venture in particularly presents an exceptional value add opportunity for the portfolio, with the potential to deliver over 17,500 much needed new homes in London and the Southeast over the next 10 or 15 years. Thank you.

I'd now like to open up the session for Q&A.

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Property - Questions and Answers

Deepa Venkateswaran, Bernstein
Thank you. I had two questions, could you just give us an idea - what is the book value of property that you have transferred to St Williams and what's the rest? And what's the market value of these properties today?

And the second question is in FY'19 when you have the Fulham property, what's your - you know the 100% of the profit, you've not particularly talked about what level it would be, so it is the 2X or it is substantially more?

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Phil Edwards, Head of National Grid Property
So in answer to your first question the book value of the profits - so the historical Group book value is very low because we've owned these assets for a long, long time. The value in the Property business accounts is the transfer value between internal companies, so that's around half a billion pounds, £500m that was alluded to in earlier presentations.

In terms of the value assets are transferring from National Grid to ST William, that's commercially kind of sensitive, so we're not disclosing that today?

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Deepa Venkateswaran, Bernstein
And do you have an idea what's the market value of your property portfolio overall?

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Phil Edwards, Head of National Grid Property
Well we've said that half a billion pound figure, so that's the number we're sticking to at the moment in terms of the value of the portfolio.

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Mark Freshney, Credit Suisse
Good morning, just to confirm that half billion portfolio is just the pipeline that you're working on with Berkeley homes; it doesn't include the stuff away from London and the Southeast?

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Phil Edwards, Head of National Grid Property
The half billion pound figure was the - just to go back that was the kind of fair value, the transfer value of assets from various National Grid businesses into National Grid Property, that's everything. So that number is slightly historic, but that's the number that we're referring to.

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Mark Freshney, Credit Suisse
Okay, and just two further questions. Firstly on when you actually receive the cash flow in, which you know you don't have much cash outflow up front for the site preparation, but then the cash actually is very much backend loaded, so can you give us some colour on the cash flow profile?

And just secondly, I understand with these gasholders that it's the - you know the swimming pool underneath if you like, which is where the nasty contaminants are, have those all been cleaned up under Gas Distribution ownership, or is that something you still have to contend with, because I understand that's the really expensive bit?

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Phil Edwards, Head of National Grid Property
Okay, taking your first question about the cash flow, you're right about the cash flow, the cash flow is back ended and I'm not in a position to disclose how that kicks in, but it's fair to say it kicks in after we've paid out any debt first. So it comes towards the end of the development programme.

Secondly, in relation to gasholders, typically actually gasholders are not where most contamination lies in gasworks is actually in the gasworks site, that's where most of the contamination was. So whilst it is a constraint for us to address we've got a lot of experience of doing it, it's a challenge we're more than comfortable solving, it's not over - we can overcome it, it's not excessively expensive, but it is a cost we have to incur and manage.

Dominic Nash, Macquarie
Hi there, the £500m number can you confirm is that gross or is that net of the environmental liability number, is that in the Property division as well as that being kept in another division?

Phil Edwards, Head of National Grid Property
I will refer back to IR on that one, just to confirm rather than me mislead.

Dominic Nash, Macquarie
Okay, and then secondly on the Progress with St William chart on page 27, is that a chart - a pre-Brexit chart, that sort of a tentative schedule, or is that liable to - have you had any conversation …

Phil Edwards, Head of National Grid Property
Sorry can we just flip back to slide 27?

Dominic Nash, Macquarie
It's that one there when things are going to complete and transfer, when did you construct that chart and have there been any conversations recently about sort of holding off until you get more clarity on Brexit?

Phil Edwards, Head of National Grid Property
That chart is how we see things today, so it's a current reflection on our expectations of when those sites will complete and when those projects will complete.

Fraser McLaren, Bank of America / Merrill Lynch
Good morning. You've got a whole range of sites in your portfolio; I just wanted to check that none are eligible for any form of regulatory clawback please?

Phil Edwards, Head of National Grid Property
I'm not really the best person to answer questions relating to Ofgem. All I can say in relation to that is Ofgem understand the rationale behind transferring property out of the regulated business into the Property business. It removes that risk, it removes that distraction and those properties have been transferred in a very transparent way, we've got externally third party valuations to shift them across.

And indeed other DNs are doing exactly the same thing. So I can give you that factual answer, that's the process, they understand why we've done it and they understand and support that. Beyond that I can't really say. Again, I would reference that one back to my colleagues in IR.

Andrew Murphy, Bank of America / Merrill Lynch
Morning, I just wondered what you can say about the conversations you may or may not have had with the Mayor's office and whether the 5,000 of 17,000 units being social is likely to see that figure increase and whether that changes your thought process and the value of course in terms of the whole project?

Phil Edwards, Head of National Grid Property
We have had a number of discussions, both historically and currently with the Mayor's office, I think first and foremost they've been delighted that we're doing something with the legacy of brownfield land across London and beyond. It all generates new houses and I think there's a kind of coming together of agendas about delivering more houses in London and the Southeast.

When it comes down to how many affordable houses are delivered by specific sites, that really does depend on the characteristics of that site, its viability, its challenges, what else it's having to provide in terms of Section 106 contributions, SIL and other things. So like all things it's a bit of a negotiation to deliver a viable development, but above all it's about delivering new houses for London and the Southeast.

Iain Turner, Exane BNP Paribas
Thanks. I guess one of the options you would have with the development site would be to clear it to get outline planning permission and then just to auction it, which given the way that the property market sometimes runs might be a way of maximising value. Why do you think your approach is a better way of doing it than just tendering the sale?

Phil Edwards, Head of National Grid Property
Well that's the approach we've kind of pursued for many, many years and it's an approach that we still pursue with the rest of the regional UK portfolio. What St William provides us the opportunity with is accessing downstream profits in a way we couldn't do ourselves. So what you then end up doing is negotiation with good advisors, with the Berkeley Group that entry price into the joint venture.

So that ends up being a hard negotiation I think Alison would probably concur, that's the principal point of tension in our relationship, what value do you attribute to the sites going into the joint venture. Now that's at development value, you're assuming the site has got planning consent, it's free of constraints and it's developable. So we think we're getting the right price of the site going into the joint venture, but with that added uplift of accessing that downstream profit which is so attractive to us.

Jenny Ping, Citigroup
Just on that point of downstream profits can you give us a feel in terms of margins, or margins per site, or per acre on how much - you know you've given us the illustration in terms of the profitability and the timing, but in terms of the amount you'll be recognising in the JV can you give us a sense of how we should be looking at that?

Phil Edwards, Head of National Grid Property
I think I've disclosed as much as I'm able today on how we see it ramping up into a couple of years time. So on that level I'm probably limited. I guess what will happen is the contribution from St William will rise going into the future as you would expect into the 2020s as we start producing more and more units. I think I said in the presentation that we expect current level to roughly double going into the 2020s and that's probably as far as I can go today.

Orlando Finzi, M&G
Maybe I missed it, but just in terms of how the JV is funded, I think you indicated also that cash outflows don't occur until debt is paid down, is that on a site basis, or on a JV basis? And maybe just with that in terms of if there is borrowing within the JV how much leverage it takes and on a development when do you start paying down debt, is that normally when it's completed, or once units start being sold?

Phil Edwards, Head of National Grid Property
We manage the joint venture very much at a corporate level so rather than a project by project basis. All the projects are in the same pot together and the JV sort of raises debt at a St William corporate level if you wish and then pays down that debt on that level. That's answering your first question.

Did you ask our sort of equity in the joint venture is our land as I said, that's matched by Berkeley cash? We've agreed at the outset that we will gear the joint venture up to 50% if we feel we need to. Now we're not at that level at the moment, though we have now got our first facility in place to help fund the development of Battersea and beyond.

Orlando Finzi, M&G
And just to check on that, does it mean in terms of cash distributions from the JV that won't occur until the growth phase has started maturing for St William?

Phil Edwards, Head of National Grid Property
The cash distribution back is back loaded correct because we would have paid out - the principle being pay down the debt before we start giving dividends back to shareholders.

James Brown, Deutsche Bank
I just had a question on how the market value assessment was made originally. Is that a kind of market value for land that doesn't have any planning permission, or do they take some kind of probability weighted approach where they think about what it might potentially be worth to you?

Phil Edwards, Head of National Grid Property
Are you referring to the entry price of the asset into the joint venture?

James Brown, Deutsche Bank
No I'm referring to the original transfer price into National Grid Property?

Phil Edwards, Head of National Grid Property
So that was done at the market value of the property at the time, so those sites typically would not have had planning consent at that moment, but you know there would be a prospect of planning consent so that would be factored into those valuations.

James Brown, Deutsche Bank
Okay, thanks.

Phil Edwards, Head of National Grid Property
Okay, if there are no further questions we'll call an end to it there and I'd now like to pass onto my colleagues from Grain LNG and from Metering.

Aarti Singhal, Director of Investor Relations
Just before you begin Simon, a couple of questions were about the £500m. I just want to add that that was a historic figure as Phil mentioned earlier. What I hope we've done with the presentation today is given you enough building blocks, more detail about the sites, about the future profitability so that you have everything you need to be able to come up with your own assumption on valuation, I just wanted to point out that the 500 was a historic number, absent the hopefully additional information that you've had today. So with that over to you Simon.

Grain LNG

Simon Culkin, Head of UK LNG, National Grid
Thanks Aarti. Good morning everyone, my name is Simon Culkin, as Head of National Grid's UK LNG business I'm responsible for the operations at our liquefied natural gas facility on the Isle of Grain. I've overseen ten years of market change and expansion at the terminal.

Grain has been developed through £1bn of investment over three phases since we first commissioned in 2005, with each phase adding additional capacity. This slide demonstrates to you the scale of the operation, my team now runs the largest terminal in Europe and the eighth largest in the world.

We offer one million cubic metres of storage space that enables us to provide 20BCM, 20 billion cubic metres of delivery capacity into one of Europe's most liquid hubs. This equates to enough gas to provide 20% of the total UK gas demand.

LNG itself is stores at minus 160 degrees C, an extremely low temperature that reduces the gas volume by 600 times.

The primary function of the terminal and the principal way we make our return is to provide regasification services, sometimes simply called regas, which means receiving LNG ships, holding the LNG in our tanks and when requested by our customers turning it back to a gas and pushing it into the national transmission system.

We receive gas from all over the world and Grain is unique in being equipped to treat and blend LNG from a range of sources.

You can see our customers on this slide, all have signed long term take or pay contracts with National Grid which profit Grain a certainty of stable revenues irrespective of terminal utilisation. Our performance against these contracts as been consistent, delivering around 130 of EBITDA per annum for each of the last three years.

Our customers are central to our continued success; they require efficient and effective operations from a facility that's already ready for them to sell gas into the National Balancing Point, the NBP, at less than an hours notice. This is unique business within the National Grid portfolio and it's in a unique location on the Southeast cost of the UK. And being just 20 miles from us here in London it is close to the UK's biggest demand centre.

Its size brings inherent flexibility, flexibility that our customers use to hedge against worldwide markets or use to trade directly into the UK.

The ongoing success of our operation is underpinned by a passion for safety, this is not an afterthought for an LNG business, we focus proudly on our site's world class safety record, and even with an injury frequency rate of zero we drive to continue to improve on behalf of our customers, our colleagues and the communities that we serve.

In these next slides some of the information you will have seen before and perhaps some of the information you will not. Hopefully though there may be some thought provoking questions based on how we see the LNG and the gas market developing and what this means for Grain LNG as a business going forward.

Grain is a fascinating business to lead and one of the reasons I enjoy my job is its exposure to international markets. Events that happen in Russia, China, America all affect our short term deliveries and our opportunities for growth. LNG has turned into a global commodity, traded all over the world and traders exploit that markets and react to world events, making very quick changes in demand.

Subsequent increases in supply though take longer to develop, but more of that in a moment.

If you take yourself back to the spring of 2011, the tragic tsunami that hit Japan and subsequent nuclear incident at Fukushima caused a shock in the global LNG market that is still felt today. Very quickly, post Fukushima due to the nuclear shutdowns the LNG market expected to be supporting Japan with the increased quantities of energy. However, Japanese industry just didn't restart at the expected levels leading to a global surplus of LNG. This left traders to find new destinations for this oversupply and the summer of 2011 turned into Grains busiest period in terms of utilisation.

The reason I bring up this event is important for two reasons, firstly it demonstrates the UK and our Isle of Grain facility is a great destination of this surplus or spare gas. And secondly and more importantly the tsunami in Japan was a catalyst to support gas at a price that led to a wealth of new LNG projects being developed with an almost gold rush mentality in Australia and America, all seeking to monetise gas for sale into Asia.

This is not unusual, it's just economics. The potential increase of LNG production is shown in the bottom left hand graph. While not all projects will come online a number of these future additional projects will take American shale gas, convert it into LNG to be put on ships in the Atlantic basin from the supplier.

So the question is where is this spare LNG going to do, that answer could be Europe. While Grain LNG has secure long term income from its existing infrastructure, this oversupply of LNG offers a future opportunity for additional regas capacity at the terminal to meet the market's needs. The market does need an easy home for this spare LNG and we could provide it.

Looking ahead within Europe, COP 21 and other legislation is driving the phase out of coal, which means the demand for gas is expected to grow. There are also future potential applications in terms of marine fuel and HGV transportation which I'll touch on later.

In summary Europe is directly referencing LNG as a clean and strategic fuel of choice which offers essential security of supply. But I'll ask the question again, what is all this LNG going to go? I've already mentioned Europe and whilst there is spare regas capacity across Europe there are just two leading hubs which will really attract this spare supply, these are the Dutch TTF and the UK's National Balancing Point, the NBP. Other countries and markets across Europe are both difficult to enter and importantly less connected to other large demand centres.

Each July National Grid's system operator publishes the future energy scenarios that set out our four credible futures, created through engagement with industry stakeholders, including this one - slow progression. Slow progression principally meaning that the development of renewable energy sources will be slower than expected. This scenario predicts the UK will need to source 90% of its gas from imports by 2036, due to the continuing decline in North Sea production.

In this and the no progression scenario it is suggested that gas will play a key role in meeting the UK's carbon reduction targets.

If the supply is available and if the demand for imported gas is there, LNG will find its way to Europe and importantly to the UK. As mentioned at the beginning of this presentation at Grain LNG we are well positioned to deliver that additional capacity when the market needs it from a variety of global sources. With our available infrastructure we are uniquely equipped to blend and treat a wide variety of LNGs to meet the UK's tight specification.

At Grain we continue to seek avenues for growth. We have demonstrated a desire to find new markets, customers and products as well as driving efficiency for our operations. An example of a new product is our reload facility. This is where we take LNG from a storage tank and reload it back onto a ship. We developed this service in conjunction with our customers and have seen the facility carry out four reloads this financial year, improving the ability of our customers to respond to changes in the LNG market.

Also in recent years we've been talking to the transport sector about the advantages of LNG, it's a clean fuel with less NOx and CO_2 and importantly virtually no particulates. It's ideally suited to heavy goods vehicles as they're just too big for batteries. LNG powered engines can pass an emissions test without adjustment and in real world conditions. We're seeing manufacturers such as Volvo and Mercedes releasing new LNG powered engines, and in fact China has now over 250,000 LNG powered HGVs.

Responding to market demand last year we opened a road tanker loading facility to fuel tankers, providing onward supply to HGV fuelling stations and off grid users. We see this market sector as an important growth area for LNG in the coming years and have been very pleased with the uptake at Grain.

We believe our next growth areas is through the application of LNG as a marine fuel, this market has potential for larger volumes than road transport, but basically responds to the same green drivers such as European and world emissions guidance that is driving a reduction in CO_2. These changes will force ship owners to either install expensive scrubber units or purchase new ships with LNG or another fuel powering its engines. We have recently seen Carnival order its 7th new build cruise liner powered by LNG. So the real opportunity for Grain here is in developing a break bulk service for smaller vessels to facilitate onward distribution.

Other industry players such as Shell and Engie have been active in starting this market and we are working to find an anchor customer to cover the required investment for this service.

As I said earlier with the LNG market at a point of potential oversupply we do see capacity expansion as a credible requirement for the UK. We already have the infrastructure that can be integrated into any future plant and depending on what the market signals a Phase IV at Grain could deliver up to 40% increase in the site's capacity. But this depends on the market and we continue to discuss this opportunity with existing and potential industry players.

So to wrap up, it's a stable, solid business and the current infrastructure is underpinned by secure, long term, take or pay contracts. As I said the LNG market has the potential to expand with new supply looking to enter Europe and we look to growth with a desire to implement disciplined customer led growth opportunities.

So thank you, that's all from me. Metering is another interesting and important part of our portfolio of Other Activities. So please let me introduce to you Maxine Long to begin the session.

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Metering

Maxine Long, Head of Domestic Metering
Good morning, as Simon said I'm Maxine and I lead the Domestic Gas Metering business. I've been with the organisation since the start of last year and prior to joining I've held a number of large leadership roles responsible for driving operational efficiency and improving customer experiences. And that's in both regulated and non-regulated businesses.

So you have some context I'm going to start with a general overview of our Gas Metering business and then move on to the specific trends and outlooks for each of our divisions.

The Metering business has performed solidly over the last three years, delivering around £240m EBITDA per annum. Our sharp focus on efficiency and measured levels of investment has also lead to consistently strong business cash flow generation.

The business has two divisions who contribute to this performance, Domestic Gas Metering whose end consumers are individuals or households and Industrial and Commercial Gas Metering whose end consumers range from high use manufacturing plants, multi-site retailers, small to medium sized enterprises right through to micro businesses such as your local chip shop.

Both divisions provide bundled MAP and MAM services, meaning they are mutually inclusive. As a MAP, a Meter Asset Provider we finance the purchase of meters and ancillary assets that enable a safe and effective installation. As a MAM, Meter Asset Manager we provide meter work services for these assets, such as the installation and maintenance. However, we discharge this activity through National Grid Gas Distribution in the retained distribution network and to commercially appointed service partners in all other regions. We derive our revenue by charging for the provision of these services.

So who are our customers and how do our markets operate? Our customers are largely gas suppliers, ranging from the big six household names such as British Gas, right through the relatively new market entrants such as Bulb Energy.

In the domestic and micro business market Ofgem perceive us to be dominant. What this means is that where customers choose to sign up the regulatory contracts those meters are subject to tariff caps. Those tariff caps are set by Ofgem. All other meter rentals are subject to commercial terms, which in some cases include upfront charging.

The services we provide are charged through annual rentals and gas suppliers pass these on via the bill to their customers. Across our diverse portfolio these costs average 2% of end consumers' total bill.

So hopefully that has helped to provide some context, I'll now move and give you a flavour of the trends we're seeing in each of the Metering divisions and some insight into the future outlooks.

So starting with Domestic Metering, as you know the government remains committed to rolling out gas and electricity smart meters to domestic and small industrial and commercial end consumers by the end of 2020. This will lead to the erosion of the Domestic division over time. How quickly will depend on the success or otherwise of the smart meter rollout. The primary obligation for rollout is on the domestic energy suppliers. And so far rollout has been much slower than expected.

In the last two and a half years our portfolio has only reduced from 13.9 million assets to 12.8 million. Ofgem and DECC as was, retain the target to achieve a 95 to 100% smart rollout success rate, which would leave a maximum of one million legacy assets in the market. It is however plausible to suggest that the success rate is likely to be lower and that we could see a higher number of assets left in our legacy portfolio at the end of 2020.

It is also worth noting that under our regulatory arrangement we are the UK's national meter manager. This means that where we are not the incumbent service provider gas suppliers are able to ask us to purchase their legacy disparate assets. Once aggregated, not only would these help provide density for our existing portfolio, they'd also help to offset the rate of decline.

We have a strong heritage in Metering; our capability, our performance and the strength of our relationships mean that we continue to deliver for our customers. This is demonstrated by our industry leading satisfaction scores, routinely above 80% and our recommendation scores, routinely greater than plus 50 in an industry where negative scores are typical.

So this reputation ultimately gives us the platform to evolve the business into that of an aggregate service provider, offering a range of specialist services that are scarce in the market and with tariff caps and regulation falling away in 2020 this business would move to a full commercial arrangement able to explore all opportunities.

So now moving on to the Industrial and Commercial division, this business currently has 560,000 meters in its portfolio, of which approximately 284,000 are domestic sized meters installed in micro businesses. These small meters are subject to all the same requirements as meters in the domestic business. The remainder of this portfolio is diverse and subject to commercial terms, with some annual rentals being in excess of £40,000 per annum.

The non-domestic gas metering market was open to competition in 2004 and the impact of this has been a reduction in the portfolio. Primarily in the smaller, simpler and more commoditised commercial space, where our engineering and technical expertise is less valued.

Year on year our customers satisfaction scores have improved, with 80% achieved in our last survey, with the majority of our customers suggesting they would strongly recommend our business to others. It is this and our strong reputation for safety that is helping us arrest the portfolio decline and in some cases even win back business; especially where service and quality delivery is a differentiator for gas suppliers.

We are also helped by our comprehensive coverage of the non-domestic gas supplier markets, so as end consumers switch from the big six gas suppliers to commercial specialists we are able to retain their business.

Furthermore Industrial and Commercial end consumers are proactive when it comes to their consumption data, with multi-site, high volume consumers employing their own energy optimisation managers. So the offer of a retrofit solution to enable the provision of metering data in respect of larger I&C meter assets not only helps the stickiness of our portfolio, as end consumers build historical data in our systems, it also creates a new revenue stream for this business moving forward.

So to summarise the future outlook. Both National Grid Metering divisions understand and are responding to the demands in their markets. With mass smart meter rollout not yet underway future opportunities for legacy meters are being assessed for scale within the domestic division. In the meantime all waste and non-value adding cost is being removed from the business to improve efficiency, deliver a strong EBITDA and ensure continued strong cash generation for the Group.

In the Industrial and Commercial division the drive for smarter metering on larger assets is being met by a retrofit solution, which is compatible with the existing portfolio. This means that this portfolio will continue to meet customer demand well beyond 2020.

So having provided you with an update on National Grid Metering, which has also highlighted the impact of Smart Metering, I will now hand over to Kerri Matthews who will give you an update on National Grid's activity in relation to this. Thank you.

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Kerri Matthews, Head of Smart Metering
Thanks Maxine. Hello, I'm Kerri Matthews and I'm leading a team in Solihull to determine National Grid's future involvement in the Smart Metering rollout. In terms of my experience I've been in the utility industry for over 20 years, working in both National Grid and its predecessors in a wide range of commercial and customer centric roles.

As Maxine mentioned earlier, although the Smart Metering programme has experienced some delays the government remain committed to the rollout of smart meters to all domestic and small industrial and commercial users by the end of 2020.

The obligation to offer and install the Smart Metering lies in the licence conditioning of in excess of 100 energy suppliers. Most of these energy suppliers have taken the decision to discharge that obligation by contracting with third party meter financiers, logistics partners, and installation companies. This then allows them to focus on their core retail proposition.

There are a large number of organisations operating in this fully competitive market, some more mature than others. However contracting opportunities are still available and there are a number of areas that National Grid can leverage to become a credible partner.

The first of which is brand, we're recognised as a very safe and trusted pair of hands. Our heritage, we've been involved in metering for a very long time and know more than most in the UK. Capability, we have a proven track record of both financing and effectively managing a variety of meter assets. And finally customer, our metering businesses have industry leading customer satisfaction scores and recommendation scores of over 80% and plus 50 respectively.

We have been actively engaging with a number of energy suppliers over the last 12 months to understand their needs and to consider how the National Grid's smart proposition may help them meet their supplier obligations. We've determined that there is a growing interest for our unique national, scalable, end to end dual fuel proposition, of meter asset financing, consumer engagement, installation and future maintenance.

We initially targeted the mid level independent energy suppliers who essentially lack the economies of scale in their supply chain. However, interest is now being shown from some of the larger suppliers as their initial contracts appear not to be delivering as they expected.

So National Grid Smart is beginning a small scale pilot with a mid level independent supplier to fund and install 50,000 assets in order to build both experience and credibility in the marketplace and to help us evaluate future growth opportunities. We're very much in the early stages, but we'll keep the market informed as we progress. Thank you.

Now ladies and gentlemen can I now invite questions on both the Grain and Metering sections.

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Grain LNG & Metering Questions and Answers

Rui Dias, UBS
Morning. Just two questions. A question on the LNG contracts that you have. If you can give us some detail on that, if it's index linked, if you have some negotiations coming, if you have any for example pass through mechanism for actual maintenance and costs?

And then on the Metering side, when you mention revenue opportunities from metering data services what do you mean by that exactly? If you can give us some examples, thank you.

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Simon Culkin, Head of UK LNG, National Grid
So to answer the LNG question without getting myself into any contractual difficulties, we have long term take or pay contracts as I've mentioned with those six customers that sit behind us. There is some RPI protection within the contracts over the 20 years which is good. And we have an awful lot of pass through for LNG as it's delivered through the terminal, so power for instance is passed through back to our customers; some of the gas blending cost is passed through to our customers. Maintenance is not, we take that risk, but most of the other stuff works itself back.

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Maxine Long, Head of Domestic Metering
Okay and in terms of industrial and commercial data revenue streams, so essentially obviously there is a drive for smarter metering within the industrial and commercial markets. So essentially what we are looking at now is the retrofit solution that enables customers to collect data and then kind of keep a record of that within our systems. And essentially obviously that is a chargeable service and that is just kind of being worked up now within the business.

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Gus Hochschild, BEIS
If I may, a question for Simon, a very broad and thematic one if I may. Given the growth of LNG, given the growth of regasification, therefore the traditional storage facilities we have in the UK doesn't that make them largely redundant?

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Simon Culkin, Head of UK LNG, National Grid
That is a very broad thematic question. Conceptually an LNG facility isn't a storage facility, it could be empty as well as it could be full. So you can't really make that direct comparator that an LNG plant provides that. And regulatory wise you'll notice how it doesn't quite fit in the same regulatory format.

As we go forward, as storage reduces let's see, let's see how this starts to be conceived by the market and how that works. I can't give you any more than thematic answers to a thematic question.

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Gus Hochschild, BEIS
No sure, but just given the rise in the trade and so forth?

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Simon Culkin, Head of UK LNG, National Grid
If you look beyond our shores into Europe and other places it's certainly something we're seeing more of aren't we are as floaters - floating regas units get deployed out there, that's certainly adding to a change in the global dynamic of where the gas goes.

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Mark Freshney, Credit Suisse
I have two questions. Firstly on the pilot scheme and Smart Metering there was I recall a smart metering business in National Grid which was sold to Macquarie some years ago. How is what you're doing now different and why would you look to get back into a business so soon after selling out?

And just secondly on the Grain facility you talk about £200m of revenue index link, the 130 EBITDA at Grain, most of that is contracted and a drop through on the take or pays, but how much EBITDA are you currently making from the non-contracted parts, the add ons, and where could it go to? Things like the Grain heat pipe, things like the reload facilities and the road tankers, what is the EBITDA opportunity there?

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Kerri Matthews, Head of Smart Metering
I'll pick up the Smart Metering question. So yes we had a company called OnStream back in the day so we divested that in 2011 so over five years ago now. The market has changed quite a lot since OnStream were operational. We had the data communications company that is now established, the legislation - it's in primary legislation now that this is going to be rolled out which is why it's now in supplier licence obligations. We have a very clear timeline, we know who's accountable and we actually have a meter spec. We didn't have any of that when OnStream were operational, we do now and this is why we think this is a good time to get back in the market.

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Simon Culkin, Head of UK LNG, National Grid
So how much are the other activities earning within the other activities which Grain takes part of? It's reasonably modest, don't get too excited about what reload or road tankers will make on the back of that £130m. The marine sets could offer us a bit more but it's not going to get you guys incredibly excited I would suggest, not prejudging what you think. But we're an asset, an infrastructure owner and we're not involved in the commodity, and it's the commodity guys that are making the big money out of these plays, we just offer these slots, we offer some asset and we get a reasonable return on the investment that we make.

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Mark Freshney, Credit Suisse
Just to follow up, the reload facilities which - or the reload product that you offer, my understanding is that that helps buyers of LNG capture some diversion rights. Is it the case that when you price the reload which is taking the gas off and putting it back on again, when you price that do you take into account differentials, i.e. if there was a major diversion differential would you be able to price up that and capture the economics?

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Simon Culkin, Head of UK LNG, National Grid
Well that's a lovely idea isn't it but no we don't. So we priced ourselves - we have some immediate competition around us so the Fluxys terminal at Zeebrugge and the Gate terminal at Rotterdam are also offering these services. We've priced ourselves at a similar rate today. That's not to say we wouldn't do something different later, but with the market the way it is we are putting our toes in the

water and trying this stuff out and pricing a very obvious, easy way to our customers. Let's see as we go forward, if this becomes the main way that we're doing business maybe we'll look at that differently. It's not within our existing GTCs, we could actually negotiate that if we wanted to.

Deepa Venkateswaran, Bernstein
I have two questions. So on the Metering would you be able to split your £240m EBITDA into I&C and domestic just to give an idea of what would happen once the smart meter rollout is completed?

And secondly, for Metering if you are thinking of an expansion what kind of hurdle rates would you look at? Obviously if it's backed by a contract, just the range of hurdle rates? Thank you.

Maxine Long, Head of Domestic Metering
Okay so in terms of I guess the split of the financials across the Domestic and the Industrial and Commercial business, I mean essentially we look at the business as a whole so we don't break those figures out or report those figures separately, but I think given the size of the Domestic portfolio which is reasonable to assume that obviously that is weighted towards the Domestic business.

Kerri Matthews, Head of Smart Metering
And in terms of new business opportunities in the Metering space we are running a pilot for a reason, to understand the costs and everything around that so we haven't got that figure to hand at the moment.

Dominic Nash, Macquarie
Two questions please. Firstly again on I&C metres. Could you just let us know what your market share is on the 560,000 and the 284,000 of which are Domestic scale? And have you got any contracts with the retailers to get those replaced? So you've given us the glide path for Domestic but could you also give us what the glide path would be for I&C because I don't think from memory you've got any contracts with any retailers in that area?

And secondly on Grain when is the next contract up for renegotiation with the shippers? And if it was renegotiated today do you think you would get a similar tariff as you negotiated all those years ago?

Maxine Long, Head of Domestic Metering
Okay so it's kind of starting with I&C then. So I guess fundamentally in terms of the 284,000 Domestic size meters, those would be subject to the - I guess fundamentally the same kind of glide path of Domestic. And until obviously mass smart kind of rollout gets underway that's obviously very, very difficult to predict, but obviously we continue to monitor that situation, obviously are prepared to respond to that in a number of ways.

In terms of market share, so that again is split between obviously the small meters and the larger assets. I think what I'll do is obviously refer back to IR for us to kind of respond and give you a precise breakdown in terms of market share across the two elements.

Simon Culkin, Head of UK LNG, National Grid
So for Grain the first of our contracts is due to expire mid to late 2020s. There are lots of options available to us as we approach that period, we can re-life the assets, we can consider selling another long term contract or maybe short term spot, let's see what we get to and what the market looks like. But remember I came back to those slides in the middle there that looked at this sort of glut of LNG and that lasts for a period of time if this comes right. So market projections could be that we're in a good space at the end of that contract that we go to renegotiate so let's wait and see.

Deepa Venkateswaran, Bernstein
Sorry just a follow up to my previous question, I wanted the hurdle rate for LNG expansion, not smart meters.

Simon Culkin, Head of UK LNG, National Grid
I didn't hear that question, sorry.

Deepa Venkateswaran, Bernstein
So my question was what is the hurdle rate that you're thinking of if you want to do an expansion of your LNG facility?

Simon Culkin, Head of UK LNG, National Grid
I'm not able to reveal the hurdle rate that we'd work to for the site, that's something we'd go back to IR, if they wanted to let you know that they'd let you know.

Aarti Singhal, Director - Investor Relations
Deepa just in terms of returns for this and other businesses that you hear about today, the plan is to target returns that reflect the level of regulatory protection and the level of contracted - how much of the income is contracted. So you should expect to see slightly higher returns to what we get for our base business to reflect that lower level of regulatory protection in these businesses. But we're not giving a specific range or a number. Thank you.

Fraser McLaren, Bank of America Merrill Lynch
Good morning. Can I just check what the utilisation rate please is at Grain over the last year or two? And then over the years you've often indicated that you're speaking to shippers about new capacity and many of those discussions have resulted in expansion of the sites. How many of those sort of conversations are you having recently and how much space do you have for expansion at the site?

And then just one on Metering if I may, given the previous Metering sale are there any contractual restrictions on what you can do in relation to offering new products in the market?

Simon Culkin, Head of UK LNG, National Grid
Okay so Fraser I've got - I think I remember two bits of that question, let's see if I answer everything. So we're at 5% today utilisation, it's very low, been very low over the last 12 months. And that might not matter when it comes to selling this commodity or this - not commodity, this service, enhanced

service into the market. As I said in my presentation whilst there's spare regas capacity across Europe there's only a few that are tapped into the markets that really people want to occupy and play in and we're fortunate that Grain is one of them. I've been talking to the market for a while now about this option and this coming forward, I won't pretend I haven't, and for a while it was reasonably quiet. These things change though and the conversations that I've been having to potential market players they're now having to us. So I'm not going to start to say it's a cert, but there's some interesting stuff going on.

Kerri Matthews, Head of Smart Metering
If I can pick up the - if there's any restrictions. When we sold OnStream there was a one year restriction where we weren't allowed to play in the market. But there are no restrictions now; this is a fully competitive and commercial market. We've engaged with Ofgem to tell them what we're doing and they're fully supportive so no.

Edmund Reid, Lazarus
Two questions. The first one is on mass rollout of smart meters. Do you see DCC go live as the catalyst for that mass rollout and when would you expect it to be?

And then the second question is on US liquefaction. Do you think that will mostly come to Europe? I mean so far it seems to be going to South America despite pricing not being particularly attractive. Why do you think that's happening?

Kerri Matthews, Head of Smart Metering
So I'll pick up the first question again about Smart Metering, DCC go live, good question. It's been delayed a few times, that's no secret. Mass rollout they're hoping to finish their release 1.2 and 1.3 by December of this year which then should trigger the mass rollout obligations for the energy suppliers. There are some challenges in testing, there may be a little bit more of a delay but that doesn't stop the industry rolling out smart meters. We can still install some SMETS1 meters, there's an element of interoperability that we need to deal with but they will fundamentally count towards the rollout targets. So it will just change the split between SMETS1 and SMETS2 meters. But we keep a watching brief on it.

Simon Culkin, Head of UK LNG, National Grid
So Ed I'm not one to obsess over where all these cargoes are going but of the 26 cargoes that have left Sabine Pass half of them have gone down to South America, a lot to Chile, Brazil, we've seen stuff come across to Europe into Portugal. It's a bit too early to say I think is the obvious answer. You can speak to Wood Mackenzie and other commentators who all talk about Europe being the sink for all this spare gas. I happen to agree with them but let's see where we get to, you know other things can happen in the Far East and attract that supply. You guys know this more than I do right so. But certainly if you're thinking about a safe port in a storm the UK NBP could be a really good one. So if you've got somewhere you want to send it, send it to Grain.

James Brown, Deutsche Bank
Just had a question effectively around credit quality for those shippers that have signed up long term contracts with you. Obviously a lot of the names that you've shown on your slide are pretty high quality companies but could you just talk around how you've kind of taken into account that risk

around credit quality, either when you kind of signed up the original contracts and kind of how you think about it now?

Simon Culkin, Head of UK LNG, National Grid
Well you can see the names and the nature of the companies. We've got cover for all of those companies through their contractual liabilities. We don't see it as a significant issue, their credit ratings. The contract remains, they're blue chip companies most cases and they pay their bills. There's not much more to add.

James Brown, Deutsche Bank
When you say cover the contract, what do you mean?

Simon Culkin, Head of UK LNG, National Grid
No I can't tell you more about how we've managed that but we are comfortable with what we've got with our customers.

Iain Turner, Exane BNP Paribas
Could I just ask about the timing of any fourth terminal at Grain, when you think that might be? And I remember we had a very interesting trip down there a few years ago and I think there was a suggestion that there was a physical limit in the amount of gas you could actually get off the island and into the network and how that would - whether that would need to be overcome to allow a fourth terminal?

Simon Culkin, Head of UK LNG, National Grid
Yes and that was a bit of Fraser's question, wasn't it? Yes have I got space to expand, yes I have got lots of space to expand. If you remember there was a beautiful bit of countryside all round us that we could occupy, pretty flat, old refinery land, brownfield that we could use there. Timing wise it depends on the market, simply we'll be ready, when the market wants us to build something we can do so. And then onto getting the gas away from the Isle of Grain there's plenty of options to increasing pressure of the main or do some other stuff to get increased deliverability away from the Isle of Grain. So I don't see that as being a hurdle that we can't get over.

Kerri Matthews, Head of Smart Metering
Okay, thank you ladies and gentlemen, I think we are now going to take a coffee break. Thank you very much.

Simon Culkin, Head of UK LNG, National Grid
Thank you.

Interconnectors

Ian Graves, Director European Business Development
Good morning everybody, I hope you enjoyed the coffee break and had a chance to Google St William. So welcome back, my name is Ian Graves and I'm the Director of European Business Development for National Grid. Prior to my current position I was a Director at Costain and before that I worked for Eon in power generation and transmission and distribution roles. I now oversea the various new opportunities that fit into National Grid's UK and European business development agenda.

Today I'm joined by Nick Sides, who is our Head of Operational Interconnector Business and Nigel Williams who is the Construction Director for NSL, the North Sea Link, one of our Interconnector projects.

The plan for the next 45 minutes or so is that I will provide a brief introduction and talk about the rationale for Interconnectors, Nick will then take you through the current business activities, and after that Nigel will show you the progress to date on NSL, both in Blyth and in Norway. Finally I'll talk about that I takes to develop a new interconnector and our opportunities for growth and then we'd be happy to take any questions you may have.

Fundamentally interconnectors connect the electricity transmission systems in two countries to allow power to be imported and exported, taking advantage of any price difference. The chart on the right of this slide shows electricity prices in a number of different countries in Europe which help to explain the business case for these projects.

Now these numbers are the average day ahead price per megawatt hour in euros over the last 12 months. The important thing to note is the relatively high UK price compared to the other countries. Now this is mainly due to commodity prices, the generation mix, including the level of renewables and also government policy.

For example in Denmark and Norway energy prices are reduced due to the higher levels of low cost hydroelectric generation. France benefits from relatively low cost nuclear generation. It is these differences that we seek to exploit for the benefit of British consumers.

Now there are also a number of other benefits through a greater level of interconnection. Aside from simply lowering the average cost, interconnectors provide the opportunity to increase security and diversity of suppliers, including providing greater access to alternative sources of low carbon electricity. They also help to balance intermittency that is increased on our network as a consequence of higher levels of renewable generation. All aspects of the energy trilemma that you've all heard so much about in the past are helped and supported by these assets.

The UK government is therefore supportive of additional levels of interconnection and that's a point I will come back to at the end of today's presentation.

Now before I move on I would like to briefly address the UK's recent vote to leave the European Union. We do not expect the dynamics of the interconnection market to substantially change as a result of this vote, therefore we would expect there to be continued opportunities to benefit from price arbitrage for the foreseeable future.

Now I would like to hand over to Nick Sides who will talk you through our existing business. Thank you.

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Overview of Current Business

Nick Sides, Head of Interconnectors

Thank you Ian and good morning everybody. So I'm head of Interconnectors, I look after IFA and BritNed and also business readiness for our new ones. So IFA is our oldest and largest interconnector, it has a capacity of two gigawatts and it connects the GB and French transmission systems between Sellinge in the UK and Les Mandarins in Calais in France.

IFA was commissioned in 1986 and has been in operation for 30 years this year. It's structured as an unincorporated joint venture between NGIC which is a subsidiary company of National Grid and RTE the French electricity transmission operator.

We also have BritNed which is a one gigawatt link connecting the GB and Dutch transmission systems between the Isle of Grain in the UK and Maasvlakte near Rotterdam in the Netherlands. BritNed was commissioned in 2011, so it's five years old this year, and it's structured as an incorporated joint venture between National Grid and TenneT the Dutch electricity transmission operator.

There are also two non-National Grid interconnectors in the UK, these are Moyle in Northern Ireland owned by Mutual Energy which is 450 megawatts and also East West the Republic of Ireland owned by EirGrid, which is 500 megawatts.

So there are currently a total of 4 gigawatts of interconnectors in the UK, 3 gigawatts of which is owned and operated by National Grid and our partners. We therefore have a significant level of expertise in this area.

If we turn to the financial performance of IFA and BritNed you'll see that performance has been strong, particularly over the last couple of years. In the most recent financial year, EBITDA for IFA increased to £128m, £21m greater than the previous year. This increase was mainly due to the high power price differential between France and the UK which increased the revenues generated from interconnector capacity auctions.

BritNed's increase in profitability over the last three years has also been higher due to higher arbitrage between the GB and Dutch markets and also strong ancillary service sales.

Looking forward as we have previously indicated we expect profitability to reduce in our existing interconnector businesses mainly driven by lower commodity prices. We also expect a small impact from the new French carbon tax, which will increase the price of French power generated from coal. However, given the significant level of nuclear power generation in France the impact in arbitrage is going to be relatively limited.

The IFA sharing mechanism will also impact on operating profit from this financial year onwards. This will be more than offset by NEMO and NSL, where we can expect to begin earning revenues in fiscal years 2020 and 2023 respectively.

You'll also see that we have started to invest in our two new interconnection projects, NSL and NEMO which I'll talk about shortly.

So interconnectors make money by selling three products, our main product is capacity, which customers use to trade electricity between countries. The value of this capacity is directly linked to the difference in energy prices between the UK and the connected country, the arbitrage. And this currently generates about 80 to 90% of revenues.

There are three main variables that impact on capacity revenues. So firstly, the price difference between the two markets, which is affected by commodity prices, government policies, foreign exchange rates and the weather. Secondly, technical availability of the assets. And thirdly the type and mix of products that we sell.

We also sell a number of ancillary services to system operator such as frequency response to National Grid which helps them to manage the frequency in their system. And then more recently interconnectors have been allowed to participate in the GB capacity market, so this is where interconnectors and generators get paid a fee to guarantee capacity during times of system stress.

So just going back to capacity for a minute, European regulations have set out a target model which includes a blend of long term and day ahead products. Our current mix is approximately 80/20. And this is designed to deliver maximum value. We run auctions to sell the capacity in different blocks of duration from annual products to multiday products. And the type and mix of these products is again designed to maximise value.

The actual value we get is mainly determined by the expected arbitrage for the block of capacity we are selling and for National Grid locking in value in advance provides better visibility of earnings. We currently have 35 customers on IFA and 24 customers on BritNed and they're all a mix of energy generators and commodity traders.

On regulation IFA and BritNed are regulated differently but operate in similar regulatory environments. So two important points are the Electricity Act requires business separation which is achieved through separate interconnector licenses and interconnectors are designated as transmission system operators, and therefore have to comply with EU network codes. These are born from the Third Energy Package, which aimed to speed up the creation of the internal energy market across Europe.

In terms of specific regulation IFA is subject to a new regulatory arrangement which we agreed with Ofgem last year to ensure compliance with European Regulations on use of revenues. The arrangement involves annual sharing of net cash flows and the amount of cash shared is phased, so it starts at 10% this year and then increase by 5% each year, up to 50% by 2025.

BritNed is subject to a cap of 1% above the internal rate of return in the original business plan and if this is exceeded, BritNed has two options. It can invest to increase capacity until the original IRR is met, or it could accept that profits above the cap are used to finance the regulatory asset bases in the UK and in the Netherlands.

In addition to IFA and BritNed we have started construction of two new interconnectors. So NEMO is a one gigawatt link between the UK and Belgium with an estimated National Grid investment of €350m. It's structured as an incorporated joint venture between National Grid and Elia the Belgian transmission company and we expect completion around 2019.

NSL is a 1.4 gigawatt link between the UK and Norway with an estimated National Grid investment of €1bn. It's structured as an unincorporated joint venture between National Grid and Statnett the Norwegian transmission company and we expect completion around 2021.

You'll see that the NEMO investment is lower than that of NSL; the main reason for this is the greater distances and technical challenges involved in connecting to the Norwegian grid. The lower energy prices in Norway make the investment economic and of course we're also protected by the cap and floor mechanism.

So NEMO and NSL have both been awarded cap and floor regulatory arrangements by Ofgem. Application of the cap and floor regime for NEMO is being developed by ourselves, our joint partner Elia and the Belgian regulator CREG. This framework will form the basis for the current range of new interconnector projects that have regulatory approval and the NSL regime will therefore be very similar to NEMO.

The principle of the regulation is based on revenue being returned to Belgium and UK consumers if they exceed a cap and then recovered by consumers if revenues fall below a floor. Cap and floor revenue levels are calculated using allowed returns set by Ofgem, plus depreciation, opex and tax

allowances. These allowances were set based on estimates, but will be updated once the construction phase has been completed.

Incentives are also available, based on a targeted level of interconnector availability. The cap and floor revenue levels are fixed in real terms for 25 years, so they will increase with inflation this year and revenues are assessed against the cumulative cap and floor levels every five years.

For NEMO and NSL the nominal return on equity is capped, but we are able to earn up into the mid teens on a nominal basis. And this compares favourably with the regulatory returns on equity that we've been earning in the UK and the US businesses.

So for National Grid these are attractive regulatory deals with returns that appropriately reflect the level of regulatory protection. Interconnectors are long term investments and annual profits are difficult to predict, particularly four or more years out.

But we do expect average profits for NEMO and NSL to be broadly in line with IFA and BritNed before the exceptionally high profits of the last two years.

I'll now hand over to Nigel Williams who will talk more about the NSL project. Thank you.

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Case Study on NSL

Nigel Williams, Construction Director, NSL
Lovely thanks Nick and good morning everyone. So I'm here to talk to you about building the longest interconnector in the world and for me it's just a wonderful project and I'm really proud to be part of it. We've been in construction for 12 months now at the Norwegian end and we've recently started making the cable, so the project is really well in progress. There's some heavy civil work going on in Norway including blasting through granite and building avalanche walls.

The picture here shows the prep site works in Norway ready to construct the converter station. We have a strong safety focus and I'm pleased to say that in the first year we've had zero lots time injuries, which is pretty good considering the nature of the work we're doing.

Let me show you a video of the project that will hopefully convey the scale of what we're doing and the works.

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Video Played

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Nigel Williams, Construction Director, NSL
Okay, I hope you enjoyed that. So as you've heard then North Sea Links capacity is 1.4 gigawatts, which can approximately feed cities the size of Newcastle, three Newcastles actually on a cold peak winter's day, three Newcastles. At 720 kilometres it will be the longest interconnector in the world and consists of two cables laid separately side by side connecting Blyth in the UK into Kvilldal in Norway. The link will allow bidirectional powerful. However the make-up of the Norwegian power network is 98% hydro, with lots of spare hydro capacity and given that the power prices are very much lower in Norway than in the UK it is expected that the UK will predominantly import power.

The project addresses the three elements of the energy trilemma. Firstly, it will enhance the security of supply to both the UK and Norway, adding capacity from external sources. Secondly, it will enhance competition in the UK and utilise low cost energy from Norway to lower UK power prices.

And thirdly it will enable utilisation of sustainable green energy from Norway's hydro capacity and allow any excess UK wind to be exported into Norway.

Meeting the 2021 commissioning date is strongly dependent upon manufacturer and laying of the cable. These are critical path activities. We need to manufacturer over 1400 kilometres of cable and we have contracted world leading companies, Prysmian and Nexans who will both manufacture and install portion of the cable. The cable is a standard mass impregnated type which has been in use now for over 100 years.

A typical marine HVDC cable consists of a copper conductor which carries the power. This is built up in strands, enough to circumvent the world three times. This is covered by an insulation material to maintain the 525 KV insulation between the core and the outer sheath. Outside this we have protection layers to protect against water and corrosion and then finally strength layers, basically steel armouring for tensile strength.

The Prysmian cables are now in production in Naples and this factory line will be busy manufacturing for us 24/7, 365 days a year for the next three and a half years. Both the Prysmian and Nexans factories are on the quayside. Each turntable on the cable laying vessel can accommodate 130 kilometres of cable, which weighs 7,000 tonnes. The cable is spooled directly from the factory onto each turntable.

The marine part of the project is the most challenging as we're exposed to the weather and sea conditions of the North Sea and also to seabed conditions. As assets that we wish to remain in good health for over 40 years they have to be well protected under the seabed. For NSL our marine programme will take place over four cable laying seasons from April to October starting in 2018 and completing in 2021.

There are only two specialised cable laying vessels that can accommodate a 7,000 tonne turntable and have stability control for deep ocean cable works, especially as the Norwegian fjords are 600 metres deep. The ships are equipped with the latest dynamic position in system technology and along with pre-lay survey data and cameras on the remote operating vehicles they can lay cable to an accuracy of less than half a metre at these depths.

Once the cable laying vessel arrives at the target location there are two key activities. Firstly laying the 130 kilometre cable onto the seabed and in good conditions they can take about ten days. Secondly is the burial and protection of this cable. A remote operating vehicle with caterpillar wheels sits over the cable and lowers two parallel arms into the seabed. The arms have multiple nozzles, each of which injects high pressure sea water into the sediment in order to fluidise the seabed to make a small trench between one and three metres deep. The ROV moves slowly forward and the cable rests in the trench which is then backfilled. The ROVs can deploy cutters in rocky conditions if need be.

We are aware of 92 third party crossings over seabed pipes and cables, two thirds of these are at the Norwegian end, mainly smaller telecoms and electricity cables. Generally to protect our cables, we will deploy rock placement, which allows a rock bridge to be built over the third party assets.

This marine activity is a do it once and do it well type thing, sea repairs are very time consuming and very costly.

Kvilldal presents a dramatic geographic landscape with deep fjords, steep hills and mountain lakes. The fjords have very narrow pinch points which are challenging for cable laying. Our converter site is some four kilometres from the fjord and the cable route there is very challenging. Extensive civil works have been in progress for 12 months now to create a flat site ready for the ABB contractors.

We have also started to protect the site from snow and rock fall and are midway through building three avalanche walls, each up to 15 metres high. The cable route needs a tunnel which is 2.3 kilometres long and this now over 50% complete.

The cable then has to be laid across a 250 metre keep mountain lake, which will require us to build a sizeable cable barge and jetty for cable laying. Both Statnett and Nexans have lots of experience in this terrain.

In contrast Blyth is as good as it gets, it's flat, it's close to the sea and the converter is a brownfield site which strong connections to the power grid.

So in summary National Grid has another five years to run, the project is well in progress and we have all the capabilities we need to deliver a successful outcome. So I hope you've got more of a feel for it now and the go live is on track at the end of 2021. Thank you.

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Development Opportunities

Ian Graves, Director, European Business Development
Thank you Nigel. So as you've seen we've already had some success in developing new interconnector projects with NSL and NEMO. And currently the only two interconnector projects that are under construction in the United Kingdom are these projects.

We're also actively looking for new projects and the process for taking an interconnector scheme from the early stage of development through to successful implementation and operation is extremely complex. We've developed significant experience in this space over the last 30 years of designing, building and operating interconnectors.

We start by identifying a project that is economically attractive, this requires expert knowledge or regulatory regimes in both the UK and Europe, so that we can develop and attractive proposal that benefits investors and customers alike.

Part of this process is negotiating suitably regulatory frameworks and mechanisms that balance the incentive with the risk. As you may imagine a strong relationship with regulators like Ofgem is very important. To date our interconnectors have been built in partnership with a company that operates the electrical transmission network in the connected country. So we've developed a wide range of networked contacts in those companies and markets over many decades. This allows us to execute these projects successfully once a suitable proposal has been identified.

As you've seen from Nigel's presentation these are large and complex projects, but when it comes to safe, on time delivery this is something that National Grid has a great deal of experience in and we're proud to say we do on a regular basis.

The final step is to set up a process and systems and build customers relationships in each country that allow us to operate the asset efficiently. This is where Nick and his team step in. The work starts as the project development is underway, so that we are ready to operate the business as soon as the interconnector is commissioned.

Now we are also exploring the opportunity of a number of other schemes and I'm going describe two of those to you now. We're at an advanced stage with both IFA 2 and Viking. IFA 2 is a one gigawatt connection - second link to France. The current plan is for National Grid and RTE to approve the final investment later this year. If this is successful we would expect to begin construction in 2017, with an expected commissioning date of 2020.

IFA2 will increase our connection to France, allowing further access to significant levels of cheap nuclear generation and also allow for the exchange of renewables.

Viking is a 1.4 gigawatt link to Denmark with final investment decision planned for 2018 and commissioning expected in 2022. Interconnection with Demark allows the UK market direct access to Scandinavian hydropower, as well as exchange of renewables with Denmark. Both IFA 2 and Viking will operate using the same cap and floor mechanisms that have been designed for NSL and NEMO.

So finally to return to the point that I made in my introduction. There are many benefits to UK consumers for there being a greater level of interconnection between the United Kingdom and Europe. There are also of course benefits to the wider European markets as well. We expect that there are significant levels of further growth opportunities for our interconnector business.

Now our own internal view which was published in the Future Energy Scenarios Report indicates a total of 23.3 gigawatts expected by 2040. Other industry bodies such as the European Network of Transmission System Operators for Electricity expect up to 20.3 gigawatts in their latest ten year development plan. And the Red Point Report indicated up 19 gigawatts of interconnection would be desirable.

Now all of these levels are maximum levels of interconnection. So it may be reasonable to expect that between 15 and 20 gigawatts of interconnection over the next few decades could be developed.

So if we take the 4 gigawatts of interconnection that we currently have, with NSL and NEMO under construction total interconnection would rise to about 6 gigawatts, with a further 2.4 gigawatts should we proceed with Viking and IFA 2.

Now we recognise that there are competitors in this market and other people that would wish to develop projects as well. And whilst it's not for me to comment on their probability of success, to date no other projects have started construction. Regardless, with 4 gigawatts currently connected and between 15 to 20 gigawatts of total interconnection predicted there is a significant growth opportunity available to us in this market.

So to summarise we have a large existing interconnector business, a pipeline of new investment opportunities and returns that are higher than our regulated core business. And with that I thank you and my colleagues and I would be happy to take your questions.

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Interconnector Questions and Answers

Jenny Ping, Citigroup
I just would be interested in some of your thoughts about the potential impact to power prices if carbon price floor were to be removed, and what that would do to the power pricing subsequently to the interconnection business?

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Nick Sides, Head of Interconnectors
So the current arrangements show that the carbon price point in the UK will continue until 2020 and we've built some assumptions about phasing it out then in the business cases for our new interconnectors. For the ones that are operating there will be a small impact on the arbitrage, so the arbitrage will narrow as the UK prices reduce. But at the same time we're increasing activity and innovation in ancillary service sales and the capacity market which we would expect to offset some of those losses.

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Dominic Nash, Macquarie
For the interconnectors that you're building or anticipate building that have a cap and floor, I presume that they're obviously then regulated and the regulators have got to give you the - I presume is it Ofgem or would it be DECC who will give you the final go ahead as to whether these interconnectors should get built? And the question I've got is do they do a cost benefit analysis or how do they look at what the advantages and costs associated with building these things are and what should we be looking out for as to whether or not this is going to be something that's going to be 20 gigawatts or four gigawatts?

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Nick Sides, Head of Interconnectors
So I think first of all it's important to say that government are very supportive of interconnection for many reasons including benefits to consumers in the UK, benefits to the UK in terms of hitting carbon targets and also security of energy benefits. So we do get wide support from government and Ofgem. I mean the cap and floor arrangement is available for new interconnectors, so there are certain windows that are open for developers to apply for cap and floor arrangements within those windows and they enable developers to get some regulated protection, but also obviously there's a cap on revenues. So it enables developers to have some certainty about the area where they're operating in terms of revenues.

I mean in terms of the business case, I mean that really is up to each developer to work out and calculate is it a justifiable business case for their business model. There's a clear business case for the UK as a whole I think because you know we're bringing - interconnectors are bringing lower price electricity into the UK that's benefiting the UK as a whole.

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Dominic Nash, Macquarie
So is it Ofgem that provides those windows or is it DECC?

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Nick Sides, Head of Interconnectors
It's Ofgem yeah.

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Dominic Nash, Macquarie
Because if you do the cost benefit it has - you're saying it benefits consumers and it's government supported for the three reasons you said, but is it government policy that's driving the high cost UK power? So do they take that into account when they do the cost benefit for consumers because it does seem a bit odd to want to raise prices with the carbon floor and blah, blah, blah, and then just sidestep it by importing it from somewhere else?

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Ian Graves, Director, European Business Development
I'm not sure we've got time this morning to cover all aspects of government energy policy but I think in summary to respond to the question we're seeing that and BEIS the new department that's responsible for this and Ofgem working very closely to safeguard UK consumers moving forward with the trilemma agenda. In fact both departments jointly hosted a workshop of all the interconnector developers on Tuesday this week and National Grid attended and we were able to speak and engage with the supply chain and some of our competitors as well.

And I think you're right, it's important that the mechanism for each individual project is constructed in such a way that it provides the right incentive whilst at the same time giving some clarity to consumers that we're getting the right deal. And that's of course Ofgem's day job. So Ofgem are very much leading that. I think it's helpful that the British government have come forward and said they see this as an important part of the future and that gives some confidence to the market in both the supply chain and developers such as ourselves. So at the moment we're seeing everybody working together and I'm confident that future policies will be equally supportive of what we might need.

Mark Freshney, Credit Suisse
Two questions. Firstly can you explicitly lay out the cap and floor on returns, what they are on a project level nominal basis? And I guess further to that when you undertake investment decisions do you take into account any impact of the new interconnectors on profitability of the older ones?

And I guess my second question is just on the costs. My understanding is that cables, the supply chain, the slots you can take have always been very tight. ABB have recently sold out to a competitor which has further consolidated the industry. What's happening to costs in the supply chain?

Ian Graves, Director, European Business Development
I think if I take your last two questions first and then hand the first one to Nick to help you with.

So with respect to cable the key element of the sale that ABB conducted recently was that what they sold to their competitor was very much a complementary business. So the submarine cables is what we're predominantly looking for in these types of activities and that was something that the company that bought that cable division didn't have high expertise in and a large capacity for. So we don't feel that the market for submarine cable has dramatically changed following the announcement of that transaction last week, and we look forward to working with all of the supply chain both in Europe and the rest of the world to feed the projects that we're currently trying to construct.

In terms of the investment cases and the analysis that we carry out internally we absolutely do model the existing network, the activity of our competitors and what we might like to do ourselves, and all of that is taken into consideration when we're having investment discussions internally. So we have quite a rigorous process for that and we're updating that model all the time as circumstances change. As you may expect the details of that model are something that we probably wouldn't want to talk about today but I can reassure you that that does take place. And Nick the point on cap and floor?

Nick Sides, Head of Interconnectors
Yeah so I think it's important to say that the cap and floor regime is actually a policy and the way it's applied to each individual interconnector is different and subject to consultation, collaboration between partners and either end of the link. So I'm not in a position to give you the detail of the actual cap and floor returns for each of the new interconnectors that we develop in the future. They're being developed at the moment as part of the process with Ofgem and with partners.

Mark Freshney, Credit Suisse
Would it be fair to assume 2% to 15% [? No microphone] returns on capital on average across the industry?

Nick Sides, Head of Interconnectors
I think it would be better to pick the detail of that question up later with our IR team.

James Brown, Deutsche Bank
Just a bit of kind of follow up in terms of assumptions you have to make when making investments. I presume that the future trajectory of the carbon tax in the UK after 2020 could be one of the key assumptions in making some of your investment decisions. What do you assume for that and have you had any kind of discussions with government about what might happen to the tax after 2020 because it seems like there's a bit of uncertainty over that potentially with some kind of guidance given in the not so distant future?

Ian Graves, Director, European Business Development
We have a complex model that looks at not only that but access to other market mechanisms, activity in the country to which we're connecting and some of the local policy decisions that they might take as well. So there's multiple levels to the model which all affect things. And one attribute is not necessarily more important than others and of course they change over time as well. So it's an extremely complex model.

But I think the key thing is that we're in constant dialogue with government and regulatory stakeholders in both our country and in other countries where we're looking to develop so that they understand the implications of policy changes that they may wish to make and how it might affect our market. And that was something that was raised at the workshop on Tuesday, not just by National Grid but by other people that are developing as well to say that if you give us uncertainty then it makes this decision making more awkward, particularly for those projects that are perhaps at the early stages of development without the market and regulatory expertise that we have.

Deepa Venkateswaran, Bernstein
I have one question and one clarification. So you mentioned that many of your competitors haven't yet started building anything although they also can avail of this cap and floor, so what might explain their reluctance to hold back whereas you've proceeded?

And the second question is on the IFA sharing mechanism. Is it fair to then assume that IFA profits would gradually reduce by 10% this year and then by 50% by 2025 versus a normalised level of IFA profitability?

Nick Sides, Head of Interconnectors
I'll take the IFA one first then. So yes, so the IFA sharing mechanism is based on cash flows and the sharing mechanism is 10% this year, so it starts this year, this is the first year of application, and 10% of net cash flows are shared with consumers this year. That sharing then increases by 5% each year up to a maximum 50% by 2025 and it stays at 50% then going forward. So yes that will have an impact on revenues going forward.

Ian Graves, Director, European Business Development
And in terms of our competitors many of them have exciting and interesting projects. It's fair to say that not all of them are cap and floor regulated, some are operating in a market model space but I can't comment on why they've not started construction yet. I think they're all making positive progress on what they're doing so far and we wish them all the best.

Question
Two questions about ancillary services. So firstly will the existing and the new interconnectors be able to participate more actively in ancillary services? I'm thinking particularly around Black Start capability which is becoming more important.

And then secondly with regard to ancillary services, in terms of arm's length arrangements how do you manage that given you are essentially negotiating with yourself as a company?

Ian Graves, Director, European Business Development
In the spirit of so far we'll do it reverse order. So I can absolutely assure you as a relatively new member of the National Grid team that the ring-fenced and business separation obligations are taken extremely seriously to the degree that I'm probably at a disadvantage compared with some of my competitors when we're doing things because we're so anxious not to have any mistakes or any impropriety that we probably take it to the extremes of what would be sensible. So and we find the system operator just as challenging to negotiate with as anybody else.

From an opportunities point of view I think we're excited about all of those products that you mentioned aren't we?

Nick Sides, Head of Interconnectors
Yeah so we're already providing ancillary services from our existing interconnect IFA and BritNed. It's somewhat limited by functionality of the assets, particularly on IFA because IFA is 30 years old so it's not got all the functionality to deliver the full range of ancillary services. And we're building that functionality into the new ones at the design stage. But yeah and we have to compete, you know, with all other suppliers of ancillary services in a competitive market.

Ashley Thomas, Societe Generale
Just two questions on the capped market. Obviously your Esso colleagues each year will de-rate your connectors. From your point of view how do you sort of view that availability assumption particularly relative to other forms of generation?

And the second question, could you give us a feel for whether you've tendered either IFA2 or NSL in the 2020/'21 capped market?

Nick Sides, Head of Interconnectors
We have won contracts; IFA and BritNed have won contracts for participation in the 2015 capacity mechanism for a delivery year of '19/'20. Won those contracts last year. The de-rating factors were agreed between National Grid and DECC, that's the way the process works based on a methodology which we're not - it's fair to say we've challenged some of the methodology. So the de-rating factor for IFA is 52%, for BritNed it's 69%, it's based on a number of things, asset availability, resilience of the transmission system in the connected country, flows, and that gets fed into quite a complex calculation and a de-rating factor comes out.

We're continually working with BEIS the new department and Ofgem and National Grid to make sure those de-rating factors are accurate going forward because they do change. So as our links become more reliable and more available, as flows change, they need regularly updating and we're in

dialogue all the time with that. In fact the de-rating factors for the next delivery year which we're currently going through the process of participating in, the de-rating factors have been uplifted because of the dialogue that we've had.

So I can confirm that for IFA2, for BritNed and for NEMO, because NEMO will be ready, we are going through the process of registering to participate in the 2021 delivery year and that's happening right now. For other interconnectors beyond that they won't be ready for that delivery year so decisions will be made next year.

Ian Graves, Director, European Business Development
The importance is that you have to be certain that you're able to deliver, so the advisory boards of each of the projects is very careful and very prudent about whether or not we're going to be commissioning and going to be good to go. So we take a project by project based decision on that sort of thing.

Fraser McLaren, Bank of America Merrill Lynch
You've experienced some issues in the past with suppliers letting you down on the delivery of cables. What arrangements are in place should there be a delay in the delivery of these cables, who pays? It sounds like the suppliers are already working pretty much flat out.

And you mentioned at the beginning that you didn't expect there to be any impacts on the business from Brexit yet I spotted at the end of the video a little EU logo. To what extent is the EU involved in the Norway link please?

Nigel Williams, Construction Director, NSL
Thanks for the question I was feeling left out just then.

Laughter

In terms of cables you're quite right the market is quite constrained for the mass impregnated type of cable. And we've got two suppliers, Prysmian and Nexans. That provides a little bit of cover in terms of interchange of capacity. When we run the procurement event we interrogated their factory capabilities and we made sure there was an allowance in there for downtime. So there's contingency built into the plan. You're right, it's a risk but I think it's under control and I think we have an ability to put new factory lines on in the Prysmian factory, or interchange and put some capacity from one supplier to the other.

Ian Graves, Director, European Business Development
And from the point of view of the European logo on the slides, we've been very fortunate to secure European funding for the development of our projects to date and indeed Viking received I think just over €40m of funding, and we were awarded that after the Brexit vote. So it goes to show that, as Theresa May would say if she were here, it's very much business as usual at the moment and we are still enjoying the support of the European Union for the projects that we're doing and that will continue. And then once the Brexit process and we get more clarity about what that will mean for all aspects of our activities I'm sure we'll plan accordingly.

Nigel Williams, Construction Director, NSL
I'm getting the wink to say we've timed out, so we're going to hand over to John Flynn from the US Business Development.

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US Business Development

John Flynn, SVP, US Strategy and Business Development
Thank you gentlemen, good morning all. My name is John Flynn and I am Senior Vice President of US Strategy and Business Development, I've been with National Grid for about two and a half years. And prior to joining National Grid I held senior level commercial and financial roles with Eversource, Progress Energy and American Electric Power.

I really appreciate the opportunity to be here today to give you some insight into the exciting growth opportunities that we have in the US through business development. We have a comprehensive strategy in the US across the entire spectrum of industry sectors. Today we're going to focus on two of those specific sectors, the first being Electric and Gas Transmission and the second being emerging opportunities in Distributed Generation and Storage, both of those sectors of which have strong catalysts for growth in the US.

Clearly National Grid in both the UK and in the US possesses a strong competitive skill set in the planning, construction and operation of both electric and gas transmission. That is, at the end of the day, who we have been and will continue to be for a number of years. We believe that skill set positions us very well for success both within and outside of our US service territory.

While the bulk of our near term opportunities for growth in the US are within those two sectors, we are also focused on ensuring that we position National Grid for emerging opportunities in the distributed energy sector.

In 2015 the Brattle Group published a detailed analysis that projected investment of between $120bn and $160bn in electric transmission through 2030 in the United States, with a significant portion of that transmission being competitively sourced.

Primary drivers of that growth are - number one, aggressive greenhouse gas reductions which are driving the need to import renewables, integrate and interconnect new renewables and continue the shutdown of older goal and oil fired generating plants.

The second is the continued need to build out and reinforce the regional backbone AC grid in the United States. Not surprisingly most of the near term opportunities that we are pursuing are in regions of the country that are most aggressively pursuing those greenhouse gas reduction goals. Those include New England, New York, or more broadly the Northeast and California and the Western United States.

The transmission projects that we are developing in the US typically fit one of two regulatory recovery models. One, projects that will be sourced under what's called FERC Order 1000 of which I'm sure many of you are familiar and recovered through formula rates, and we'll discuss those in a little bit more detail in a bit. And the second is contracted projects that will be recovered through long term power contracts with customers. All of these projects, as well as the projects that we are pursuing in the other sectors, are, as Andrew said, subject to rigorous investment criteria that factor in the relative risk of the project.

As many of you are well aware FERC regulation remains extremely attractive as FERC continues to incentivise the construction of backbone transmission as a vehicle to enable competitive energy markets. Not only are FERC allowed returns attractive, but the formula rate structure itself, which

eliminates regulatory lag and provides full recovery of annual revenue requirements with a true up mechanism, provides for extremely strong cash flow metrics.

In 2015 our FERC business was roughly $2.5bn in rate base, averaged an 11.4% return on equity. We strongly believe we have the opportunity to double that rate base in the near to medium term.

As I mentioned the other method for recovering the cost of large scale transmission projects, which will most likely be the model for HVDC projects, like our Vermont Greenline project is long term contracts with customers. These contracts, which will be approved by FERC, provide us with the opportunity to earn returns comparable to the 11.4% I just referenced.

We've talked broadly about broadly about the catalyst for growth in the transmission sector. Now I'd like to narrow the focus a little bit and talk about what is driving the growth, that growth in both electric and gas transmission sectors in our service territories in the Northeast.

Like other areas of the country the Northeast has an aggressive agenda to reduce greenhouse gas emissions. As older fossil fuel plants in New England and New York are retired, policymakers are increasingly calling up development of significant amounts of utility scale renewable generation, much of which will be imported from outside of the region.

In New England the import of renewables is the catalyst behind both our Vermont and Greenline projects, a trend that we believe will continue well into the next decade. In addition to important terrestrial renewables, Massachusetts is leading the region in efforts to develop significant blocks of offshore wind, which we'll discuss in a few moments.

In New England there is also a singularly unique convergence of electric and gas supply. Gas import capability into the region is severely constrained, at the same time that the electric generation portfolio shifts dramatically towards gas fired plants. To give you a sense of the impact that this is having on the region in the winter of 2013/2014 affectionately referred to as a polar vortex winter, affectionately if you weren't living in New England at the time, electricity customers in New England paid in excess of $3bn more for electricity than they would have had there been adequate gas supply into the region.

In New York the importation of renewables to address greenhouse gas reductions is also a catalyst for transmission investment, as is the need to eliminate north/south congestion that will allow energy to flow from Upstate New York, where most of the generation is located, to Downstate New York through the population centres of New York City and Long Island.

Given the compelling catalyst for growth, combined with our incumbent presence in the region it's probably no surprise that we have a significant pipeline of opportunities in the Northeast.

I'd like to spend the next few minutes calling out three specific projects and discussing each of them in a bit more detail. The first is our Vermont Greenline project which as I said is focused on importing hydro and wind into the New England market. The second is our recently completed Sea2shore project interconnecting offshore wind off of Rhode Island into the New England Grid. And Lastly our Access Northeast project which is intended to relieve the gas bottlenecks that I referred to and ease the acute issues of electric and gas supply convergence.

Vermont Greenline is a uniquely designed project, both in terms of its size and its resource mix. At 400 megawatts, slightly smaller than some of the competitor projects, it is uniquely sized to meet a variety of RFP structures. And by combining hydropower from Hydro Quebec with wind from Northeast New York, the project will deliver what's called a firm energy product into the New England region, which is both operationally and economically attractive.

As we discussed previously the project will be fully contracted on a long term basis and will provide us with the opportunity to earn returns comparable to those in our FERC business.

As I mentioned New England is moving rapidly towards including offshore wind as a component of its generation resource mix. National Grid recently completed a 20 mile undersea cable off of Block Island, which connects Deepwater Wind's 30 megawatt windfarm to the grid in Rhode Island. And while certainly not the scale of the efforts that the last panel talked about, the project clearly demonstrates National Grid's capabilities, and positions us favourably as the region moves more towards offshore wind. Recently passed legislation in Massachusetts calls for an additional 1600 megawatts of offshore wind in the near to medium term and that we believe our demonstrated success in connecting the Rhode Island project provides us with an advantageous position as those projects develop.

As I mentioned there is a singularly unique challenge in New England due to severely constrained gas supply into the region, which negatively affects both electric and gas customers. This constraint not only costs the regions electricity customers billions of unnecessary dollars every winter but it also threatens electric reliability on cold peak days. During the polar vortex winter which I mentioned, the CEO of the New England electric system operator opined that had to lost one of the regions two large nuclear facilities, either Millstone 3 or Seabrook, both about 1200 megawatt facilities in a cold peak winter day we would have had a reliability event in England.

Our Access Northeast project, a joint venture between National Grid, Eversource and Spectra Energy, the actual pipeline developer is specifically designed to relieve these contrasts for the benefit of the region's electricity customers, not just gas customers.

As many of you are probably aware a recent Massachusetts Supreme Court decision dealt a slight setback to the project. Many read that is a death nail for the project, but as Mark Twain famously quipped, *"Reports of my death have been greatly exaggerated."* The Court decision, which I said is no doubt a setback to the project, simply means that the joint venture partners need to find an alternative method to secure contracts for the roughly 30% of the project that Massachusetts Electric customers had previously executed. We are actively engaged in finding a workaround, which may include contracts with the regions gas customers.

So with a large pipeline of opportunities in New England why do we feel that we're competitively positioned for success? The most obvious advantage that National Grid possesses in the Northeast, both New England and New York, is of course our incumbency. The incumbency includes deep working knowledge of the region, a valuable network of relationships with key stakeholders and policymakers as well as hundreds of miles of electric and gas rights of way.

Incumbency of course is not in and of itself enough, however, combined with the competitive skill set around planning, constructing and operation we believe that we are optimally positioned to compete successfully in the region for years to come.

While there are certainly significant development opportunities in the Northeast as I just spoke about, we are keen to expand our development horizons to other parts of the United States. As we look to do so we look of course for regions of the country that have comparable catalysts for growth. I previously mentioned that we see California and more broadly the Western United States as a region that presents significant opportunity.

Given the dynamics of the market, a market with the most aggressive greenhouse gas reduction targets in the country there will inevitably be significant investment opportunities in utility scale renewables, electric transmission and utility scale storage over the coming decade. We also view California as a leading market, which will likely be emulated as other regions begin to more aggressively address a clean energy agenda, thus the lessons learnt by actively participating there will provide a platform for longer term success.

When we discussed the skills and attributes that we think will make us successful in the Northeast we pointed noticeably to incumbency as one of those. Clearly that is something that we don't organically possess in California or in other parts of the country. Successful market entry into regions outside of

our existing footprint will likely be predicated in a strategic partnering strategy, something on which we spend a great deal of time as a development team in the US.

Beyond that need to develop relationships and select good partners with complementary skill sets, we believe that the same technical capabilities around the planning, construction and operation of electricity transmission and other utility infrastructure which we continue to hone will be critical to our ability to successfully complete on a national scale.

We talked a great deal about competing successfully in what we consider to be our core areas or our sweet spot as a company, but as I mentioned it's equally important that we focus on positioning National Grid to be successful in an ever emerging distributed energy future. Inside of our service territory we have over 3 million distribution customers, which provides us with a fantastic platform to begin to deploy capital in regulated, pilot and demonstration projects, which are not only beneficial to customers, but also provide the company with an excellent opportunity to better understand customer behaviour and the impact of distributed technologies on the grid.

As this sector evolves however we recognise that our opportunities in the traditional regulated space to deploy capital in these kinds of technologies will be limited, because regulators are already looking to the market to provide many of these technologies and services.

As a company we have committed to making small, incremental investments, entering into strategic partnerships and taking other informed steps as appropriate to ensure that we continue to learn and shape the future as this sector evolves.

One step that we have already taken is to invest $50m with a fund called Energy Impact Partners. Energy Impact Partners is focused on developing and deploying advanced technology for the benefit of both our core business and our longer term commercial aspirations. Our partners in that fund include companies like Southern Company, Xcel Energy and Oncor, strategically like-minded companies that are committed to helping shape the evolving energy future.

I'd like to take the next few minutes to briefly touch upon three examples of how are taking what I referred to as those small incremental steps. The first is around piloting smart grid technology, the second is around storage, and lastly around solar.

In Massachusetts we currently have a smart grid pilot which offers 15,000 distribution customers the opportunity to combine smart metres, in home management technology and variable use rates that incentivise customers to manage their energy use, customer response has been excellent and the company has gained a number of key insights, which will prove beneficial as we seek to further develop and deploy smart grid technology.

While storage deployment in the US, either at a utility scale or at a distributed level is currently a relatively small market we expect the pace of development to increase significantly, if not exponentially. As you're all well aware renewable resources, whether wind or solar are inherently intermittent, this intermittency presents significant operational challenges for the grid. For the US to reach its greenhouse gas reduction goals storage will been to develop on a coincident curve with renewable generation.

In Massachusetts National Grid is exploring a regulated 500 kilowatt by two hour battery installation. We expect our regulators in other states to embark on similar programmes.

On Long Island, through a joint venture that we have with NextEra Energy we have proposed two 5 megawatt by 8 hour batteries and are currently negotiating with the Long Island power authority on both of those installations.

And lastly we continue to consider a number of solar opportunities, both utility scale and distributed, like our approach to storage our initial steps will include small incremental investments, both within

the regulated and commercial spaces. In Massachusetts we have already deployed 5 megawatts of solar assets, which are included in our regulated rate base, and like storage we recognise that our opportunities to invest in rate base solar will also be limited, but they are nonetheless excellent opportunities for us to begin our journey into the sector.

In the commercial arena through our JV with NextEra we are also proposing a number of solar projects on Long Island, all of which will be backed by long term purchase power contracts, which could total as much as $100m. The solar market in the US continues to accelerate rapidly; in 2015 the US added 7.5 gigs of solar generation. In 2016 we expect that number to be 13 gigawatts of solar installations and by 2020 we expect a sustained level of at least 20 gigawatts per year of solar installations, that includes both utility scale and distributed.

So I hope I've given you a sense of the level and pace of opportunity in the US. We have a number of exciting opportunities and will continue to broaden our pipeline in the current years. There is no question that the market fundamentals and catalysts for growth present significant opportunities for National Grid to continue to grow through development with our core areas, as well as in emerging technology space. With that I'd like to thank you and I'll be glad to take any questions that you have.

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US Business Development Questions and Answers

Mark Freshney, Credit Suisse
On the bulk of the current existing transmission it's regulated under FERC regulation, can you talk about the returns there, because I understand over the last two to three years there have been some downwards adjustments. So can you lay out the landscape on returns?

And just secondly on potentially large transmission projects going to tender, can you talk about that please?

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John Flynn, SVP, US Business Development
Sure, you're all aware that there have been a number of different challenges across the country in the last couple of years to the FERC returns that arose out of the Energy Policy Act of 2005. The intent of the Energy Policy Act in 2005 was of course to incentivise the construction of transmission. And what it did offer was a number of different incentives to do just that.

What we've seen, even as these FERC cases have been decided, is that the returns that FERC offers have remained extraordinarily attractive, some of the incentives that have been available are harder to achieve, but at the end of the day those returns are still, from my perspective, as a premium level. And as I mentioned before, it's not just the returns within the FERC space, it's really the entire regulatory paradigm that provides such an attractive place to deploy capital.

In terms of projects going to competitive tender, at least under Order 1000, FERC Order 1000, I think what we've seen is the regional system operators, who are ultimately responsible for implementing those competitive processes and then ultimately adjudicating them have really struggled with how to get going. And so there have been limited opportunities and we still continue to see limited opportunities, a couple of which we've actually bid for, one in the PJM RTO and one in the Midwest system operator region.

Transmission is still necessary, so what the means is there's been a bit of a bow wave that's built up over the last couple of years and we expect that bow wave to break now that the RTOs have those processes in place and we expect significant development or significant opportunity to deploy capital over the next three to five years.

Jenny Ping, Citigroup
Just a question on the offshore wind connection business, presumably that's a bidding process as per normal auctions?

Secondly have you ever thought about - you know in the UK we've seen a lot of the offshore connections being sold off subsequently to financial buyers, is that something that could be replicated in the US for you?

John Flynn, SVP, US Business Development
I'll take your offshore question first. I'm not sure that the state of Massachusetts is exactly sure how they're going to run the tender for the offshore projects themselves. The good news for me is I don't have to worry about that because I won't be involved.

Exactly how the transmission for that will be built remains to be seen. Clearly we are working with a number of the different offshore providers who we know will be active in that market, we expect our competitors are as well. And so once a tender is put forward we will certainly participate in it.

It's also possible, frankly, that given our presence as a major infrastructure player in New England, along with Eversource that there's some kind of joint approach to constructing that infrastructure with another regional players.

Remind me of your second one sorry?

Jenny Ping, Citigroup
The potential to flip it once you've built it?

John Flynn, SVP, US Business Development
Well, from our perspective obviously we are a long term holder of you know infrastructure, but we do talk quite often with a number of different funds who are interested in either building projects on their own or participating with us in projects with the recognition that they wouldn't be a long term holder. But to date that model hasn't really replicated itself at any level of scale in the US.

Dominic Nash, Macquarie
Can I have a question on the storage development in the US please? I think you're saying that they're currently looking at being a rate base investment. Is it possible to sort of like quantify if the regulator starts to get comfortable with storage as a sort of utility asset, what sort of scale of investment do you think that we could be looking at in your area?

And then the follow on question from that is do you see that sort of cannibalising any other sort of potential growth opportunities out there as well?

John Flynn, SVP, US Business Development
Not to be a kill joy on your first question but I think at the end of the day there really are going to be limited opportunities to deploy in rate base, not surprisingly right. So we've talked to the regulators in New York, and Massachusetts and Rhode Island and what they're really looking for to some degree is

exactly what we're looking for in those first initial steps, is to understand how customers behaviour reacts to that technology and also how that technology affects the grid.

For example in New York State there's a processes underway called the REV Process, Redefining the Energy Vision, that's got a lot of these components to it, it's got storage, and solar, unique rate structures and other kinds of pilot projects that are trying to help the PSC shape the energy future for New York.

I honestly think storage in a regulated sense is going to be limited to those types of opportunities. And that's why I think it's really critical that we are involved both on the regulated side and the commercial side, because I think when we talk about moving to scale it's going to be on the commercial side.

And I think in the US, given the kind of fragmented regulatory structure and quick frankly the diverse regional needs some regions are probably going to focus more on distributed solar opportunities while other parts of the region are going to look to build utility scale storage. For example California, which has been very distributed, very forward leaning for a number of years is not recognising that from a grid operational perspective they need to think much more thoughtfully about whether in fact utility scale would be something that would help them both operationally and financially.

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Fraser McLaren, Bank of America / Merrill Lynch
I just wanted to check if any of these investment opportunities which you've alluded to are already included in the long term growth rate of between 5 and 7% which you've outlined previously please?

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John Flynn, SVP, US Business Development
That's a question I'd have to turn over to Aarti.

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Aarti Singhal, Director of Investor Relations
Yes, they are included, the 5 to 7 which includes these opportunities.

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Fraser McLaren, Bank of America / Merrill Lynch
Thank you.

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Edmund Reid, Lazarus
I was wondering if you can talk through the opportunities in LIPA, so it's on slide 72, but I don't think you mentioned it?

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John Flynn, SVP, US Business Development
Yes, so the joint venture that we have with NextEra which I did reference, initially was crafted to address the repowering of our existing generation units on Long Island. Long Island is a very unique place from a political perspective. New York is unique and Long Island is I guess you would say special. And what's become clear over the last couple of years is that Long Island's willingness at this point, given where the Governor of New York is with trying to kind of recraft his energy vision. Long Island has been unwilling to make large scale long term decisions around repowering existing fossil

units, where we're basically taking existing steam units, either oil and gas and moving those to combined cycle or gas fired peakers.

So along with NextEra we have proposed over the last year or so a number of different alternative energy ideas, like battery storage, we think we have the capability to build maybe as much as 20 megawatts by 8 hours of batteries on Long Island and a couple of different solar facility, one at the old Shoreham nuclear facility, which could be significant in scale, it would actually be the biggest in the Northeast. And so we expect that - that process with Long Island Power Authority to be at a smaller scale for the next year or two. At some point they are going to have to make a major resource decision because import capability to Long Island is also constricted. We just think it's downstream a little bit.

It looks like we're done, thank you so much for your attention. And I will turn it back over to Aarti.

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Conclusion

Aarti Singhal, Director of Investor Relations
Thank you for your questions and a very big thank you to all my colleagues for their presentations. Thank you.

Applause

It's been a pleasure to host you here and I hope that we've managed to give you more insight into these businesses. As Andrew said earlier they are a natural extension to our core operations and bring an attractive combination of yield and growth.

Today's presentations are available online and on the investor relations app. And we will be sending you a short email for some feedback and we'd be really grateful if you could share your thoughts with us.

So we'll see you next time on the 10th of November at the London Stock Exchange for our half year results. In the meantime my team and I are here to help you with any questions. Thank you and have a good afternoon. Thank you.

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