To
Ofgem & ACM

From
BritNed

Date
22 July 2021

Subject
10 Year Review Exemption – Financial Report

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1. Introduction

The European Commission, when it approved the exemption, believed that there were assumptions made in the original exemption request that displayed a high degree of uncertainty. It believed that the economics of the project could turn out to be profoundly different to what was stated in the original request, specifically the risk that the capacity was suboptimal and could lead to higher than expected profits. A review of the assumptions was mandated to reassess the exemption once the costs of building and operating the interconnector and the benefits of selling capacity were much better known. Ten years was chosen as it would still be early enough to remedy a possible capacity inadequacy.

In line with the exemption, this report contains:

1. The financial statements to show actual costs (whether incurred or committed) and the time at which they were incurred, and the revenues received and the time at which they were received up to the 10 year date
2. A revised forecast of the costs expected to be incurred and when they are expected to be incurred and the revenues expected to be received and when they are expected to be received during the 15 years immediately following the 10 year date;
3. A revised forecast of the internal rate of return which is derived from the information set out in paragraphs (a) and (b);
4. A comparison of all the data used in the calculation required by c) together with the equivalent data to that required by (a) and (b) provided as part of BritNed's application for the exemption order; and

2. Financial statements

Requirement 1:
The Financial statements to show actual costs (whether incurred or committed) and the time at which they were incurred.

The BritNed Annual Report and Financial Statements are available for FY 2011 to 2020. BritNed started operation from 01/04/11 so to ensure a full 10 year of financials staments are included the Q1 2021 financial statements were presented and approved by the BritNed Board in June 2021. Q1 2021 performance has been built into the forecast presented for FY 2021.

The Financial Statements can be found in appendix 1 - Financial statements comparison to original business case and appendix 2 - BritNed Financial Model.

This financial report provides a further breakdown of actual capital costs, revenue and operating costs and other administrative expense incurred to date.

2.1 Capital Costs

Total Capex spend from 2007 to 2011 was [redacted]. This represents the following assets:

Table 2.1 – Fixed Assets as at 31/12/2011

Fixed Assets as at 31/12/2011	[redacted]
Tangible Fixed Assets	
Convertor Station Buildings	
UK	
NL	
Convertor Station Civil Work and Equipment	
UK	
NL	
Interconnector Cable	
Intangible Fixed Assets	
Total Fixed Assets	

2.2 Revenue

Revenues over the period to date of operation are as follows:

Table 2.2 – Revenue breakdown from 2011 to 2020

Revenue € million	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Explicit	[redacted]									
Implicit (net)										
charges										
Net Auction Revenue										
Frequency Response										
BIFA										
Capacity Market										
Other Ancillary Services										
Other Income										
Other Income - exceptional										
Total Other Revenue										
Total Revenue										

2.3 Operating Costs and Other Administrative Expense

Operating costs and other administrative expense over the period from 2011 to 2020 is as follows:

Table 2.3 – operating costs and other administrative expense from 2011 to 2020

€ million	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Depreciation	[redacted]									
Amortisation										
Personnel										
Rent and rates										
Foreign exchange (gains)/losses										
Insurance										
Depreciation - Right of Use Assets										
Other costs										
Total Administrative expenses										

Costs have remained broadly flat except for an increase from 2011 to 2012 due to 2012 being the first full period of operation.

3. A revised forecast of expected costs and revenues

Requirement 2:
A revised forecast of the costs expected to be incurred and when they are expected to be incurred and the revenues expected to be received and when they are expected to be received during the 15 years immediately following the 10 year date.

This section explains the assumptions used for 15 year forecast from 2021 to 2036. Full year 2036 has been included in this report for completeness however, the financial model in appendix 2 includes the forecast out to 31st March 2036 which is the end of the 25 year period.

3.1 Macro Economic Assumptions

All forecast inputs and workings are expressed in EURO.

The model assumes that half of the companies cashflow and assets are taxed under UK legislation and half under Netherlands legislation. Tax rates are assumed as follows:

Table 3.1 – Tax forecast assumptions UK and Netherlands from 2021 onwards:

Tax rates	2021	2022	2023	2024 and beyond
UK	19%	19%	23.50%	25%
NL	25%	25%	25%	25%

3.2 Revenue forecast

Table 3.2 – revenue forecast 2011 to 2036

Revenue € nominal	2021	2022	2023	2024	2025	2026	2027	2028
Auction Revenue	[redacted]							
Capacity Market								
Other Income								
Total Revenue								

Revenue € nominal	2029	2030	2031	2032	2033	2034	2035	2036
Auction Revenue	[redacted]							
Capacity Market								
Other Income								
Total Revenue								

3.2 1 Auction Revenue

BritNed engaged Baringa to provide a forecast of revenues over the period from 2021 to 2036 to cover the remaining period of the exemption. Baringa's analysis includes three scenarios as follows:

High case

The High Commodities case considers a scenario with higher oil, gas and coal prices, and demand, with the knock on effect of higher long-term carbon prices relative to the Baringa Reference case. These factors combined lead to higher wholesale electricity prices, despite very high penetration from renewable power generation technologies. The Q4 2020 High Commodities case assumes a transitory shock with respect to the impact of Covid-19 on European power markets

Reference case

The Baringa Reference Case represents Baringa's central view on the evolution of the European power markets. Under this scenario, European governments continue to pursue a balanced energy policy, attempting to meet the sometimes competing demands of security of supply, affordability and environmental sustainability. The Q4 2020 Reference Case assumes a transitory shock with respect to the impact of Covid-19 on European power markets on factors such as commodity and carbon prices, electricity demand, and delays to new-build capacity

Low Case

The Low Commodities case considers a scenario with lower commodity prices and lower demand relative to the Baringa Reference Case. Lower commodity prices decrease the running costs of the marginal plant and the system's marginal price. These two factors place downward pressure on wholesale power prices and spreads relative to the Baringa Reference Case. The Q4 2020 Low Commodities case assumes a transitory shock with respect to the impact of Covid-19 on European power markets.

All three scenarios assume interconnector availability of [redacted] from 2022.
The assumptions and outputs from the revenue study were presented to Ofgem and ACM on 10th June 2021. This pack is attached below.

Baringa_BritNed_Revenue_Study_Results_Q4

The study was done in 2020 real prices so this has been inflated in the model. Inflation has been assumed at 2.5% from 2022 onwards.

For 2021 and 2022, the revenues included in the financial model have been updated to take account of any capacity secured to date and the latest forward prices.

3.2.2 Capacity Market Revenue Assumptions

Capacity market revenues are based on auctions cleared to delivery year 2024/25 (October to September). Beyond that forecasts have been provided by Baringa using the following assumptions from delivery year 2025/26 onwards for derating factor and GB capacity market clearing prices (£/kW/annum (derated, real 2020)):

Table 3.2 – Capacity Market assumptions from 2020/21 onwards

	Actual				
Delivery Year	**2020/21**	**2021/22**	**2022/23**	**2023/24**	**2024/25**
Clearing price	[redacted]				
Derating Factor					

	Forecast						
Delivery Year	**2025/26**	**2026/27**	**2027/28**	**2028/29**	**2029/30**	**2030/31**	**2031/32**
Clearing price	[redacted]						
Derating Factor							

For all three scenarios described before, capacity market revenue remains the same.

3.2.3 Other Income Assumptions

There is also potential to generate revenue by providing other ancillary services between the two markets, such as reactive power and voltage control, system protection and energy imbalance services. BritNed has the potential to generate some income from ancillary services. From February 2018, the frequency response trial with NGESO ended and not extended. To replace this income stream additional capacity of [redacted] a day is offered into the day ahead market which is included within auction revenues.

Due to a number of restrictions at this time, it is unclear what ancillary services BritNed can easily participate in for the future, however a range has been included with a low case of [redacted] per annum, base case of [redacted] per annum and a high case of [redacted] per annum.

3.3 Operating cost forecast

Operating costs over the next 15 years are forecast to be as follows:

Table 3.3 – operating costs and depreciation forecast from 2021 to 2036

€ million nominal	2021	2022	2023	2024	2025	2026	2027	2028
Staff Costs	[redacted]							
Operations and Maintenance								
Rent & Rates								
Insurance								
Other Costs								
Depreciation								
Depreciation - decommissioning provision								
Depreciation - Right of Use								
Total Administrative expense								

€ million nominal	2029	2030	2031	2032	2033	2034	2035	2036
Staff Costs	[redacted]							
Operations and Maintenance								
Rent & Rates								
Insurance								
Other Costs								
Depreciation								
Depreciation - decommissioning provision								
Depreciation - Right of Use								
Total Administrative expense								

Operating costs are assumed to increase in line with inflation at 2% with the exception of insurance premiums.

In 2021 BritNed's insurance premiums increased by [redacted] from 2020 premiums. This is related to both a hardening insurance market and a cable fault which occurred in December 2020 which resulted in an outage of almost two months and an insurance claim has been made for the costs of repair against the Offshore Property Damage policy.

In March 2021, BritNed experienced a second cable fault which resulted in an outage for 89.5 days. A second claim will be made for the costs of repair against the Offshore Property damage policy and in addition due to the outage being longer than the first, a claim will be made against the Business Interruption policy. Indications from Marsh, the insurance broker is that BritNed will see a significant increase in premiums in 2022 with them forecasting that to be an increase of [redacted] to total insurance costs of [redacted] with premiums expected to remain high going forward. BritNed will continue to review what steps can be taken to reduce insurance premiums in the future.

3.4 Depreciation

All assets are assumed to have a useful economic life greater than 25 years.

In 2020, BritNed booked a provision on the balance sheet to recognise the costs of decommissioning of the cable and convertors stations at the end of their useful economic life. This has been depreciated on the P&L from 2021.

3.5 Capital spend forecast

Replacement spend of [redacted] has been provided over the remaining 15 years forecast which includes refurbishment of the HVDC convertor station system. Siemens HVDC convertor stations are designed for an overall lifetime of 30-40 years. However, as the environment of the HVDC is changing e.g. reduced short circuit levels in the grid or regulatory changes with regards to either grid connections or cyber security. Hence, there should be a refurbishment of the system to ideally fit into the changed environments.

4. A revised forecast of the internal rate of return

Requirement 3:
A revised forecast of the internal rate of return which is derived from the information set out in paragraphs (a) and (b);

The BritNed financial model includes a forecast P&L and cashflow statement for the joint venture. This discounts post tax nominal cash back to 1st April 2007 (the investment committee date).

Based on the three revenue scenarios described in section2, the forecast returns over 25 years are as follows:

Table 4.1 – financial model post tax nominal internal rate of return (IRR) for the three scenarios:

Post tax nominal IRR	%
BritNed exemption cap	[redacted]
High case	
Reference case	
Low case	

The financial model to calculate the post tax nominal IRR for the reference case scenario is included in appendix 2 of this report.

5. *A comparison of all the data for the exemption*

Requirement 4:
A comparison of all the data used in the calculation required by c) together with the equivalent data to that required by (a) and (b) provided as part of BritNed's application for the exemption order.

Appendix 1 shows a comparison of the updated financial statements compared to the financial statements submitted in appendix 6 as part of the original exemption request submitted on 12 June 2006.

5.1 Internal Rate of Return

The exemption request in 2006 from BritNed to Ofgem refers to appendix 6, which included a post-tax nominal IRR of [redacted]
The updated financial model included in appendix 2 of this document includes a reference case post tax nominal IRR of [redacted] which is [redacted] below the CAP set of [redacted]

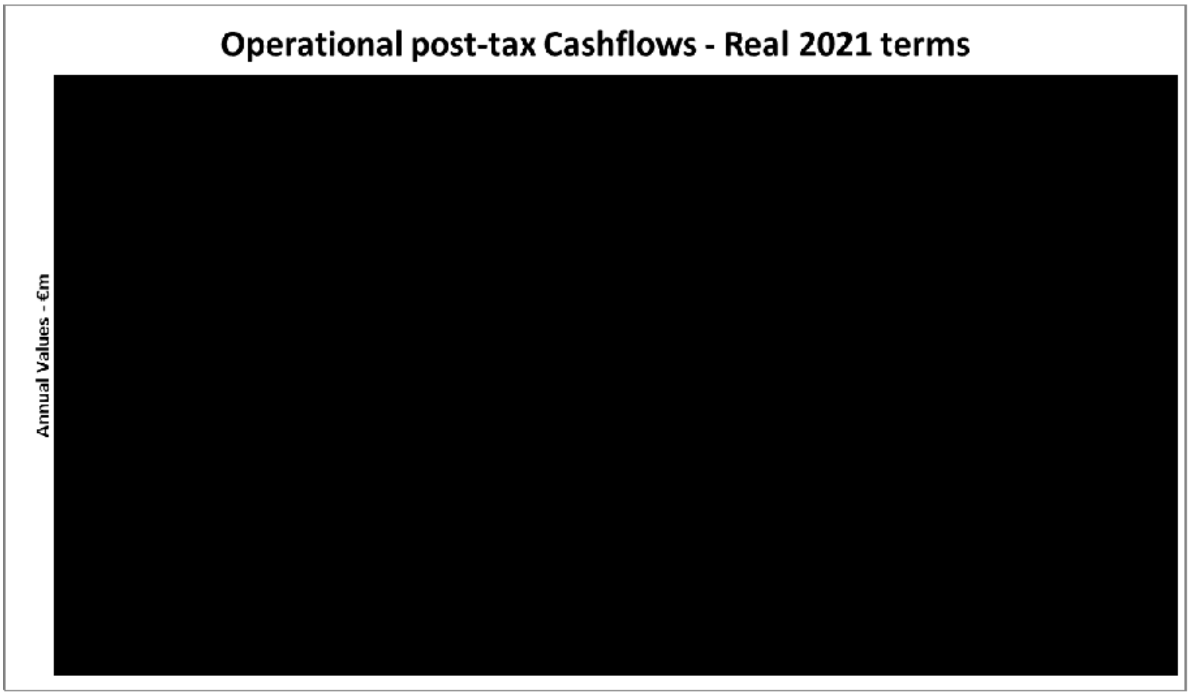
5.2 Operational Cashflows

Table 5.1 – investment including tax benefits

Investment € nominal	Actuals to 2020	Forecast	Total	NPV 01/07/11 *
Devex	[redacted]			
Intangible Capex				
Tangible Capex and Repex				
Total Spend				
Associated Tax Benefit				
Total Cashflow				

The table above shows total investment made over 25 years. Using a net present value to first year of operation using [redacted] post-tax nominal return this gives total cashflow [redacted] over 25 years. [redacted] would have converted into a real annuity of [redacted] (in 2011 terms) or [redacted] (in 2021 terms) at 2011 for the start of the 25 year regime period.

Graph 5.1 Operational post – tax cashflows



The graph above shows the operational cash flows over 25 years. This illustrates how the cashflows are performed relative to the annuity. The first few years of operation were slow however, performance improved from 2014 to 2018 but actual performance in 2019 and 2020 slightly worsened. Due to the headroom created over first 10 years of operation the annuity is increased to [redacted] for the remaining 15 years forecast.

From 2022 to 2024 cashflow generation is forecast to decrease as revenues reduce however, from 2025 onwards cashflows increase again however, for all years of the forecast remains below the annuity of [redacted].

Over 25 year regime there is a surplus of [redacted] to total annuity value.

I. Appendix 1 –

Updated Financial Statements with comparison to original exemption request

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Appendix 2 –

BritNed Financial Model

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