

Memo

Financial analysis for the Fehmarnbelt project: assumptions and results, February 2016

Work on updating the financial analysis of the Fehmarnbelt project is complete following extensive dialogue with the consortia on the major tunnel contracts and rigorous external quality assurances of the economics and traffic figures. The new financial analysis demonstrates that the economics of the project are sound. The estimated repayment period for the project has been reduced from 39 years to 36 years.

The new financial analysis for the Fehmarnbelt project is based on a comprehensive review of the key parts of the economics. It includes external quality assurances of the contracts, the risk, the German process and project reserves conducted by accounting and consulting firm, Ernst & Young, EY, as well as an external quality assurance of the traffic figures by consultants COWI for Denmark's Ministry of Transport and Building.

The construction budget and reserves have improved

Specifically, the analysis shows that it is possible to reduce the construction budget by **DKK 2½ billion** while simultaneously strengthening the reserves within the construction budget by over **DKK 3½ billion** to a robust **DKK 7.3 billion**. Furthermore, extra funds have been allocated for continued work on the Fehmarnbelt project in the event of delays in the German approval process.

Overall, the construction finances are boosted by over **DKK 6 billion** in the assumption that they are used in part for a reduction in the construction budget and for a significant strengthening of reserves. This means that the project is able to withstand future challenges and financial risks resulting from the German approval process and the construction phase.

The repayment period is reduced

It is a requirement that the Fehmarnbelt link is paid for entirely by its users and not Danish tax payers. It means that the loans to finance the construction of the Fehmarnbelt link are to be repaid by revenues from future traffic on the link and by funding from the EU. The Danish government is assisting the project by making State guarantees available for the loans. This is the so-called State Guarantee Model, which was also used to finance the fixed links across Storebælt and Øresund.

The new financial analysis shows that the loans for the construction of the Fehmarnbelt link can be repaid in under 40 years through user payment and EU support alone. In the financial analysis from February last year, the repayment period was calculated at 39 years. The new financial analysis calculates the repayment period to be **36 years**. The reduction of **three years** is a fundamental indication that the project's finances have become more resilient. The project is now better cushioned against future challenges. For precautionary reasons, the assumption of a relatively high real rate of 3 per cent is maintained in the new calculations, while assumptions on support from the EU have been reduced.

The reduction in the repayment period is due to a range of factors presented in the financial analysis. The main explanatory factor is the lower construction cost.

New and better prices quoted on the major tunnel contracts

In December 2014, Femern A/S received the initial bids on the major tunnel contracts from the bidding consortia. These were significantly higher than anticipated and gave rise to an extended constructive dialogue with the contractors in the first half of 2015. As a basis for these negotiations, the assumed construction period for tunnel construction was extended from 6½ to 8½ years. This came about as a result of reports from Germany on time delays in the plans for the German landworks. The longer construction period has in itself contributed to the construction process of the tunnel being organised in a different and less expensive way.

The dialogue with the contractors resulted in Femern A/S receiving final and binding bids on the major tunnel contracts in September 2015. These represent some 75-80 per cent of the construction budget. The project's new construction budget in the financial analysis is based on these bids from September 2015, which are significantly lower than those of December 2014. The other smaller items in the construction budget have also been reviewed critically. Overall, three quarters of the increased prices of December 2014 have been eliminated.

The final and binding bids from the contractors on such a large portion of the construction budget (75-80 per cent of the construction sum) contribute, in themselves, to the project's economic soundness. Femern A/S is currently engaged in the final technical evaluation of the detailed bids.

Scope for funding the Danish landworks

The financial robustness of the Fehmarnbelt project means that there is still a solid basis for profit from the tunnel to finance the assumed DKK 9½ billion upgrading of the railway between Ringsted and Rødby without the need for Danish tax money. The financing of the constructions costs for the Ringsted-Rødby railway and its ongoing maintenance will therefore primarily take place through revenue from the Fehmarnbelt tunnel.

The German approval process

The 2016 financial analysis has looked to take account of uncertainty in the German approval process. It therefore used two different time scenarios: one with construction starting in early 2018 and one with it starting in early 2020. In both scenarios, the construction period is set at 8½ years. In addition, the analysis incorporates financial sensitivity calculations of the situation, should there be a further delay in the German process.

The priced bids from September 2015 for the major tunnel contracts expire in mid-May 2016. Femern A/S was therefore, in October 2015, given the task of clarifying the possibilities of maintaining and extending these bids in a financially sound manner until final German approval is made available. Femern A/S has worked intensively with the contractors on this in recent months, and the result will be presented shortly.

Construction budget and reserves (2015 prices)			
	Construction Act, February 2015	Financial analysis, February 2016 Construction starts early 2018 and opens mid 2026	Financial analysis, February 2016 Construction starts early 2020 and opens mid 2028
Coast-to-coast link - Basic budget - Reserves	DKK 51.4 billion. DKK 3.7 billion.	DKK 44.9 billion. DKK 7.3 billion.	DKK 45.3 billion. DKK 7.3 billion.
Overall construction budget, Coast-to-coast link	DKK 55.1 billion.	DKK 52.2 billion.	DKK 52.6 billion.
Danish landworks - Basic budget - Reserves	DKK 7.3 billion. DKK 2.2 billion.	DKK 7.3 billion. DKK 2.2 billion.	DKK 7.3 billion. DKK 2.2 billion.
Overall construction budget, Danish landworks	DKK 9.5 billion.	DKK 9.5 billion.	DKK 9.5 billion.
Repayment period	39 years	36 years	36 years

Financial analysis of the Fehmarnbelt link including the Danish landworks, February 2016 can be found on <http://femern.com/da/Documentation> (available in Danish)