Written submission from Joe Reade by e mail, 2 July 2022

This correspondence was originally submitted to the Deputy Convener, Sharon Dowey MSP. Mr Reade has confirmed that he wishes to also share the submission with the Public Audit Committee.

Dear Sharon,

I was interested to listen to the evidence session of 30th June, and in particular the response to your question regarding the difference in cost between a Norwegian ferry and the new Islay ferries, both to be built alongside one-another in Turkey. I think your question was prompted by a post on our website, that subsequently was picked up by the media and Twitter - mullandionaferrycommittee.org/2022/04/03/two-ferries-two-buyers-same-shipyard-but-two-very-different-prices/

I feel that Kevin Hobbs' response was incomplete and in one particular respect inaccurate, so I'd like to take the opportunity to clarify this particular topic.

Firstly, Mr Hobbs is correct that the price comparison is around £33m versus £46m. At the time of publishing our piece, we were working with the information available and reflected that by stating a price range for the Norwegian vessel. However, it remains true that the Norwegian vessel is much less expensive than the Islay vessels, and that comparison of the two is worthwhile and enlightening.

However it is not correct as Mr Hobbs appeared to suggest, that the price disparity was entirely due to the different sea conditions the vessels will encounter. He said "The technical specification for vessels that are crossing the Minch for example are completely different to vessels that are built for fjords". The Norwegian vessels we cited are not being built for use in sheltered fjords. They will be operating open-water, very exposed 15 mile crossings to the Lofoten Islands above the arctic circle. It is entirely incorrect to take from Mr Hobbs' evidence that sea conditions are the only cause of the disparity. There are many other reasons for the difference, some of which CMAL have themselves cited in a rebuttal piece on their website. He is correct in saying that the comparison is between apples and pears – but to a great extent that is precisely the issue here – Norway specified sweet pears, CMAL/CalMac/TS specify bitter apples.

Firstly, there are significant reasons for increased costs in the Norwegian comparators:

- The Norwegian vessels are battery-electric hybrid. They therefore have two energy sources – diesel generators and a very large battery bank. They will be making the longest ferry crossing on pure electric propulsion yet achieved anywhere in the world, with an enormous 5Mwh onboard battery bank. The battery system alone will cost around £3.5 million.
- The Norwegian vessels have a higher capacity than the Islay vessels – 120 cars as opposed to 107, and 400 passengers as opposed to 350.

What is of particular pertinence to your enquiry however is to understand the structural and organisational differences between the Scottish and Norwegian ferry systems that result in lower cost, better-value ferries:

- Norwegian public ferry services are operated by a multiplicity of competing private companies, who not only operate the services but are also responsible for procuring their own vessels. These companies compete for public ferry service contracts (route-by-route, not for entire networks), and are chosen on the strength of their bids on aspects such as
    - Emissions – do the operators meet the government requirement for zero-emission operation
    - Reliability – which service proposal and ships offer the greatest service reliability
    - Frequency – which service proposal offers the greatest frequency or other timetable improvements over-and-above the minimum requirement
    - Capacity – which service proposal best meets the demand needs of the route
    - Timetable – which service proposal offers the best timetable options, in terms of length of operating day and so on
    - Value for money – in the context of all of the above, which proposal gives best value-for money to the public purse (Fares are fixed by government, so effectively they find the operator who can operate the service for the lowest level of subsidy)
- The Norwegian ferry system has been optimised over decades around principles aimed at cost-effective and efficient operation:
    - Route optimisation. Routes generally take the shortest-sea-crossing, thereby meeting capacity by increasing frequency of service instead of vessel size, as is the tendency in the Hebrides (Much shorter potential routes exist for Islay for example that may require capital spending, but would offer a far more frequent service requiring much smaller vessels)
    - Bi-directional ferries. This design reduces the time taken to manoeuvre in port, speeding up turnaround times. This helps to improve frequency, and reduces pressure to maintain frequency with high service speeds (The Islay vessels have an operating speed of around 16 knots, and a turnaround time of around 35 minutes. The Norwegian vessels have an operating speed of 13 knots, and a turnaround time of just 10-15 minutes.)
    - Lock-on linkspans. The vessel is secured to the quay by the vehicle linkspan, rather then by ropes. More recently automatic mooring systems have also been introduced. This speeds up mooring time, reduces the need for on-board rope winches and eliminates the need for shore staff to catch ropes.
    - Foot passenger access via car-deck ramps. Rather than having separate (and expensive) passenger access systems, foot passengers use the vehicle ramp (which is wider, with a segregated passenger lane). This reduces vessel and shore facilities cost, and also reduces staffing need.
    - Common standards. Vessels are easily moved between routes, because of the simple and standardised vessel/port interface.

It is for the reasons above that Norwegian ferries are typically much cheaper than the equivalent Scottish vessels. They have been technically and operationally optimised – they are simple and effective, uncomplicated. They are also based on repeated, proven designs – each new ferry will be based upon an existing design, with limited changes. Shipyards build them again and again – they are known, practiced designs, rather than entirely bespoke, blank-sheet-of-paper exercises as is the CMAL/CalMac preference.

The key structural difference however is that the people making those design and procurement decisions have a commercial incentive – they **NEED** to make their vessels cheap to build, productive and efficient, in order to have a competitive proposal at tendering time. In Scotland, no-one in the three-headed ferry establishment has much incentive to find the most efficient, most productive, best-value for money vessels. CalMac/TS can specify LNG seemingly without having to investigate the cost of such a decision, nor whether it delivers the best emissions outcome (it doesn't). CalMac can specify a crew of 27, living aboard and operating for only 14 hours a day, because they gain no commercial advantage by devising a more productive and efficient regime (any competitor at tendering time is obliged to use the same vessel and the crewing regime baked into it).

So the outcome is that Norwegian ferry services are far superior to ours in terms of reliability, frequency, capacity, connectivity, emissions and timetable in great part because they have a competitive ferry tendering process. Government do not tell the operator what ferry to use, which fuel to burn, what speed to run the ferry at or how many crew to employ. Norwegian government sets the fares, and the high-level objective for the service (ie frequency, reliability, emissions, capacity etc). Ferry operators (there are four or five companies) then compete for the right to operate the service. Vessel design and procurement is therefore an entirely commercial process, both much faster and with far better outcomes – The Norwegian vessels we cited are not just much cheaper to build but they have other major advantages:

- Total crewing is just 11, as opposed to 27 for the Islay vessels. This not only makes the service more cost-effective, but the vessel is cheaper to build because there are far fewer crew cabins required. This doesn't mean there are fewer crew in total employed – Norway has many more seafarers than Scotland – but those crew members are used much more productively, operating more ferries and more services pro-rata. (Note that safety requirements - a major driver of crewing levels – are very similar in the two countries. Norway abides by the EU working time directive and international SOLAS marine safety regs – yet their designers meet all those requirements much more productively than we seem to be able to)
- The vessel operates for around 23 hours per day, instead of just 14 for CalMac vessels. Because there are fewer crew required on duty at any one time, it is easier to arrange shift patterns that extend the day and for off-duty crew to rest whilst the vessel is in service. So there is not just a far better service, but the asset is far better utilised.

Some of the issues I have raised above are tangential to your enquiry, but nevertheless are fundamental to the causes of Scotland's very poor ferry service. A more complete response to your question would have been along the lines of "The Norwegian ferry system is far more competitive, and the operators making design

and procurement decisions are guided by commercial imperatives, rather than the proscriptive and commercially-immune set of ‘requirements’ that CMAL have to work to.”
It is the procurement process and its highly artificial and non-commercial nature that led to the 801/2 debacle. Even if those ferries had come in on budget, they would still have been very poor value for money; inefficient, unproductive, and over-complex.

It’s the institutional structures and the tendering system that needs radical reform. Only then will Scotland be able to deliver a more reliable, higher capacity, lower-emission, better connected ferry system.

With best regards

Joe Reade,
Chair, Mull and Iona Ferry Committee

PS – I encourage you to read this: mullandionaferrycommittee.org/islay-presentation-bias-assumption-and-error/
and this: mullandionaferrycommittee.org/cmals-secret-catamaran-and-how-theyve-have-wasted-millions-of-pounds-again/