

RURAL ECONOMY AND CONNECTIVITY COMMITTEE

INQUIRY INTO CONSTRUCTION AND PROCUREMENT OF FERRY VESSELS IN SCOTLAND

SUBMISSION FROM DR ALF BAIRD

Summary

Publicly procured ferries in Scotland are typically up to three times more expensive than comparable private and public/private ferry procurement globally. Norway has introduced over 100 new ferries in the past decade alone and has another 40 ferries on order. Here, Transport Scotland together with its ferry agencies CMAL and CalMac seem incapable of even replacing 1 ferry annually.

The latest state specified ferries such as the CMAL newbuilds at Ferguson's are appallingly bad in global KPI's of Capex, Opex and residual values for resale at any age. While new ships globally fetch a premium if sold new, these CalMac vessels would not fetch 50% of their cost due to low earning capability and inordinately high operating cost.

Key questions in this inquiry are therefore: 1. why are ferries procured by the Scottish public sector so expensive, and: 2. why are so few ferries being replaced in Scotland?

This is primarily a result of cocooning of ferry specification and procurement inside 3 levels of bureaucracy: Transport Scotland (as funders); CMAL (as Asset holders), and; Calmac (as operators). Within these 3 levels of bureaucracy, the senior staff are predominantly (not all), people who either don't know much about the global ferry industry or don't care. This is not a criticism, just an observation.

Add to this, outdated infrastructures and a less-than-helpful attitude by the RMT Union, results in Scotland holding the unenviable reputation of having the world's highest ferry subsidy per head of population and one of the most outdated and inefficient state ferry fleets. There is no sign of improvement unless there is a paradigm shift in thinking by the Scottish Government.

Immediate challenge

Finishing the two CMAL ferries at FMEL as designed could end up more expensive than envisaged and these ferries may still not reach the required operating standard even once completed and could be refused by the operator. A simpler, revised and streamlined re-design of both vessels would be better, allowing the boats to be finished at lower cost (e.g. £50-60m), whilst also making it easier for both vessels to achieve the required deadweight and speed. Alternatively, the two existing ferries could be scrapped or sold as they are, and the yard could instead proceed directly to building 4 x standard proven ferry designs for an investment of £110m.

These two poorly specified CMAL vessels are hardly a positive reference for any shipyard. This suggests FMEL will continue to struggle to secure any further orders even after, or if, these boats are completed. This means the yard will most likely close.

In order to survive, FMEL therefore needs to quickly start to produce standard, proven low-cost ferry designs. This can only be done in collaboration with established global ferry design specialists offering vessels which are cost effective to buy and operate.

This is also the only realistic way Scotland will be able to replace its current outdated ferry fleet in an affordable way and within the required 10-15 years, as opposed to well over 30 years and at far higher cost based on the current flawed procurement approach.

The Paradigm Shift

Assuming the Scottish Government wishes to continue procuring and building ferries, then the overall management approach to public ferry procurement needs to be changed with an emphasis on two key aspects: 1. Design, and; 2. Shipyard.

1. Design

Standard design production in medium speed ropax ferries up to and around 100 metres length is mainly split between global specialist designers in Norway and Australia.

Norway has focused on short run, predominantly smooth and partially smooth fjord waters, with mostly private operators and capital subsidies for new green technologies and little or reducing subsidies for operating.

Australia has focused on remote island services worldwide and rough water solutions, with mainly private operators and no subsidies, with designs often replacing outdated high subsidy state-owned ferries. Their latest designs are hybrid propulsion.

The Australian design company, Sea Transport Solutions (STS), is run by a Scot, who did all the early tank-testing in Glasgow, and designed the highly successful MV *Pentalina* running across the Pentland Firth since 2008.

STS offered FMEL a license to production build its standard proven lower cost ferries, which was rejected by Jim McColl primarily because Transport Scotland and its ferry agencies continue to specify their own unique and far more costly ferry 'designs'.

2. Shipyard

I believe that FMEL can successfully build standardised proven cost-efficient ferries such as the STS designs, as licenced shipyards are doing in other parts of the world.

With repeat productions of standard proven designs, even with varying propulsion alternatives, costs can be contained and reduced, with resultant ferries built at

competitive prices, and far more rapidly. Under this approach most of the 31-ship CalMac fleet could be replaced within 10 years at a competitive cost.

This is the only way to:

1. Adequately and timeously replace and modernise the Scottish ferry fleet, and:
2. Maintain and expand commercial ferry shipbuilding in Scotland.

Ferry Procurement

Public sector ferry procurement is collectively determined by, and the responsibility of, Transport Scotland, CMAL and CalMac as a vessel 'project working group'. CalMac sets out the operational requirements which determines a new vessel's outline specification; Transport Scotland ensures the vessel meets the operator's requirements and arranges funding, and; CMAL is responsible for delivery of the 'project' (i.e. the vessel). Whilst there is some stakeholder 'consultation' relating to this process, it remains that these three state entities and their officials are collectively responsible for the specification, design, procurement, delivery and operation of new ferries.

It is important to appreciate, in this inquiry, how and why state procurement of ferries differs markedly from procurement of ferries by commercial ferry entities. State procurement of ferries in Scotland, it may be argued, is initially driven and determined by what the members of the two main maritime trade unions (RMT and Nautilus) holding key managerial and operational positions within CalMac decide vis-à-vis any outline ship specification. This means that initial ferry specification and hence ferry design within CalMac tends to be rather less commercially driven than is the case elsewhere. This reflects the fact that the ferries CalMac specify are very different to those specified by commercial ferry operators in terms of: far greater crew requirement and accommodation than is necessary; far greater passenger accommodation than is necessary; higher than necessary vessel deadweight; higher than necessary vessel displacement; and hence higher than necessary engine power requirement and higher emissions. This in turn gives rise to vessel specifications and designs developed by the three state entities which are rather unique over-specified ferries, therefore more expensive and problematic to build, and which generally involve: far higher capital costs than is necessary; far higher operating costs than necessary; far higher engine emissions than necessary; far higher port infrastructure costs than necessary; taking longer to build than necessary, and; often encountering build problems in the process. Consequently, these are ferries requiring inordinately higher levels of public subsidy than is the case with commercial ferry sector procurement.

Scotland has less than 100 ferries overall. In Norway, there are well over 300 ferries. This suggests Scotland is rather under provided for, in terms of the number of ferries, which fits with user complaints on the need for more frequent services and more capacity which in turn requires more vessels. Most ferry services in Norway are run by private operators. Subsidised routes are tendered by public authorities, and private operators winning tenders then procure the ferries necessary. This process

has seen well over 150 new ferries introduced in Norway since 2000, virtually all supplied and financed by private operators. In 2019 alone some 15 new ferries were delivered to Norwegian operators. There are currently more than 40 ferries on order for Norwegian services, with options for at least 5 more; thus, as many as a further 45 new ferries will be delivered between 2020 and 2023 (see Annex). Norwegian ferry operators build standardised, proven designs of ferries which keeps procurement and operating cost down. Most of the tonnage now being introduced is hybrid powered (diesel and battery) or pure battery, hence the focus is on low and even zero emissions. Hydrogen is believed to be ‘around the corner’ in a few years. LNG is viewed as less attractive for short-run domestic routes (yet LNG has been specified for the two CMAL boats?). Standardised simple proven designs tend to have a lower power requirement which fits more easily into battery operation. Clearly, Norway is streets if not a world ahead of Scotland in terms of its successful and seamless ferry procurement and tendering processes with some 200 new low and zero emission vessels being ‘procured’ between 2000-2023. Norway has therefore benefitted enormously from promoting and accessing superior industry design expertise and innovation and finance when it comes to setting ferry specifications and procuring new tonnage.

There are clearly major differences between commercial procurement and state procurement of ferries. This can also be demonstrated to some extent in Scotland. The ferry procurement examples presented in the table below illustrate ferry newbuild cost differentials between Transport Scotland and its state funded ferry ‘agencies’ CMAL and CalMac, compared with two successful commercial non-subsidised ferry operators in Scotland, Western Ferries and Pentland Ferries. The table considers prices paid for both small and major ferry sizes over the past two decades. This illustrates major differences in vessel newbuild costs, even before the current problems with CMAL/CalMac specified ships building at FMEL. It should also be noted that new ferry deliveries for private operators tend to take 2 years or less whereas for CMAL/CalMac this is often double that, even 4 years or more (e.g. building of ‘Finlaggan’ was started in 2007 with the ship not entering service until 2011); longer ship delivery time is therefore not a new phenomenon for CalMac’s non-standard over-specified and hence expensive ships. The data in the table indicates that, in Scotland, the cost of commercial sector ferry procurement is only about one third that of state procurement, for both small and larger ferries, as reflected in ship capital cost per car space. Such an outcome was already well known prior to the current procurement ‘difficulties’, it has simply become much worse with hulls 801/02. The weak initial specification of (all) CalMac ferries is the underlying reason behind excessive cost and build time differences.

Public and Private Sector Ferry Procurement Comparison					
Operator	Ferry	Delivered	Car Capacity	Cost New	Cost Car/Space
Small Ferries					
Western Ferries	<i>Sd of Scarba</i>	2001	40	£2.5m	£62,500
CMAL/CalMac	<i>Loch Portain</i>	2003	31	£5m	£161,290
Western Ferries	<i>Sd of Seil</i>	2013	40	£4m	£100,000
CMAL/CalMac	<i>Hallaig</i>	2013	23	£11m	£478,260

Major Ferries					
Pentland Ferries	<i>Pentalina</i>	2009	75	£7m	£93,333
CMAL/CalMac	<i>Finlaggan</i>	2011	85	£25m	£294,117
Pentland Ferries	<i>Alfred</i>	2019	98	£15m	£153,061
CMAL/CalMac	<i>Glen Sannox</i>	2019*	127	£50m	£393,700
CMAL/CalMac	<i>Glen Sannox</i>	2022#	127	£105m	£826,771
*original delivery date/price; # new estimated delivery date/price					

In addition, the difference between public and commercial ferry *operating* cost is likewise of a similar magnitude; over the 25-30 year lifetime of a ship, this implies the operating cost of privately procured ferries will be (at most) half or less that of a ferry procured by the state. This explains, in the case of state ferry procurement, the need for high and increasing levels of subsidy, which is necessary to support what are institutionalised ferry operating inefficiencies reflecting poor initial ship specifications and design. Ferry subsidies in Scotland are probably the highest in Europe yet still offer no incentive for ongoing fleet replacement (unlike in Norway and elsewhere); hence Scotland has an ageing and outmoded ferry fleet with higher emissions and higher subsidy than necessary primarily due to poor initial ferry specifications set by state entities.

Challenges and Opportunities in Ferry Procurement

On the specific questions the Committee seeks to address my comments are as follows.

1. What are your views on the conclusions and recommendations of the programme review board with respect to delivering the most effective delivery programme for the completion of the two vessels, MV Glen Sannox (vessel 801) and vessel 802?

In answer to MSP's questions in the initial RECC evidence session on 22nd January 2020 (at 11:54), the Ferguson 'turnaround' director Tim Hair responded: "*I don't know enough about the Scottish ferry services to be able to comment*". Mr Hair then said (at 12:15): "*I'm designing a ferry to meet the contracted specification by its user*". It should be of some concern that Government officials have appointed someone who admits to knowing little if anything about the ferry industry, or the 'state' of Scottish state-run ferry services, to design a ferry never mind 'turnaround' and operate a ferry manufacturing business. The Ferguson programme review board chair likewise has no experience of the ferry industry. In addition, senior officials in CMAL, Transport Scotland and CalMac who have presided over the current predicament remain in place and, indeed, are now undertaking further imminent ferry procurement in respect of a new vessel for Islay. It would appear, therefore, that the same people who have caused this problem, in addition to a new Ferguson's board with limited (if any) ferry industry expertise or knowledge, are expected to make 'conclusions and recommendations' that will solve matters. This seems unrealistic.

The review board's estimated added cost of £110m required to complete the two CMAL ferries brings their total cost to some £210m, equivalent to an average of £105m per ferry. Pentland Ferries similar capacity (98-cars) ferry cost just £15m. This implies that a commercial operator could have built **14** such ferries for £210m, enough to replace the entire CalMac 'major' ship fleet, and more. This represents the 'opportunity cost' of inferior state ferry specification and procurement decisions, with many island communities now waiting longer on new ferries. Even completing the two CMAL ferries represents an enormous added waste of public money and with an expectation that costs will rise even further. Moreover, the two ferries when completed may still not be acceptable to the owner/operator (with doubts that they will meet required speed, deadweight etc.). Reflecting the acknowledged lack of global ferry industry experience of the review board, it is understandable that there are other strategic options here which they have not considered in their recommendations, for instance: (1) The two ferries could be redesigned offering a more appropriate industry standard (i.e. reduced) passenger:car ratio of say 5:1, plus reduced crew accommodation (i.e. less decks) which would also assist speed and deadweight, and this could be done (according to leading naval architect Sea Transport Solutions) at a cost of between £50-60m; (2) A further option would be to dispose of or scrap the two partially constructed ferries and use the £110m added investment instead for FMEL to build 4 x 100-car standard proven ferries similar to Pentland Ferries new vessel. It should be noted that new standard, proven, and hence lower powered ferries offer a better fit for battery-hybrid operation which, environmentally, would be far superior to the LNG operation specified for the current two ships at FMEL. The choice is therefore to complete as proposed by the 'turnaround director' the two unproven over-specified higher power LNG boats which will operate on fossil fuels for 25-30 years or to build four standard, proven, lower-power boats (each with similar vehicle capacity and speed as 801/02) and incorporating lower emission battery-hybrid solutions. A further compromise option here would be to complete the two LNG boats to a much reduced (i.e. more appropriate industry standard) re-designed specification AND build two lower cost standard proven design of ferries (i.e. 4 boats in all), which can similarly be achieved for £110m.

2. What has been the impact of the repeated delays to completion of the contract to construct two hybrid ferries on the specific routes and island communities awaiting delivery and entry into service of these two vessels?

The already high average age of the Scottish public sector ferry fleet continues to increase even faster due to this further delay and is now around 25 years. Many islands already suffer from insufficient ferry capacity and inadequate frequency of service, e.g. Mull, Arran, Tiree, Islay, Barra etc. (and in the Northern Isles internal services where a further 20 new ferries are urgently required). Older ferries tend to have more limited vehicle capacity, are prone to breakdown and have higher maintenance costs and higher emissions. Fleet replacement plans under current procurement arrangements means that fewer boats will be replaced and average age will continue to increase. A related problem concerns the unique high-cost type of ferry specified by the public sector whilst more standardised, proven, efficient and lower cost ship designs are ignored. This explains why Scotland is clearly nowhere near the Norwegian's in terms of fleet replacement. It is my understanding that Ferguson's wanted to build significant numbers of standardised proven low-cost ferry

designs, under license, which is what the designer STS offered Ferguson's; but they were prevented from doing this so long as Transport Scotland, CMAL and CalMac officials specified only more expensive, unique, complex, heavy high-powered ferries which take far longer to build, and also require far more expensive port infrastructure. We also know that longer, heavier, high-windage CMAL ferries have problems berthing in bad weather which results in added reliability issues. It is therefore initial ferry specifications set by Transport Scotland and its agencies which is the root cause of worsening problems for island communities awaiting new ferries.

3. What actions can be taken, in particular with respect to improved contract management processes, to ensure future contracts of this type are delivered a) on time; and b) on budget?

It is uncertain if CMAL has employed an adequately skilled 'owner's representative' permanently stationed within the shipyard to ensure building progress of the ships is constantly checked and monitored. This needs to be established. Aside from this, state ferry procurement including construction of ferries generally takes much longer than commercial ferry operator procurement; in the case of CMAL's ferries this can be twice as long and in this instance it is even more. State ferry specifications and designs are not commercially oriented, they are generally over-specified having little regard to cost. The result is often expensive mini cruise vessels rather than more practical or utilitarian boats. This results in expensive, unique, unproven, inefficient ferries, which are very costly to build and operate and take far longer to construct and deliver. Naval architects employed by CMAL vary for almost all its ships and tend to have limited knowledge of advanced standardised production of small ferries up to and around 100m length. CMAL, CalMac and Transport Scotland never undertake a proper commercial appraisal of all ferry design options available, they simply agree an outline specification and the eventual design must reflect that specification. The tendency to set restrictive and highly inefficient higher risk specifications prevents proper evaluation of lower cost, standardised, ferry production possibilities. Island communities do not need costly mini-cruise vessels to maintain what is essentially a maritime bus service across the sea. Standardised production line designs would stand a much better chance of on time, on budget delivery and that is what we need to aim for. Lower cost ferries would enable more vessels to be ordered for the same money and provide for more rapid delivery. This is the only realistic way to replace the fleet.

4. What key challenges need to be addressed in procuring new vessels to support Scotland's ferry network and how might these be overcome?

The role and competence of officials presently making decisions on ferry procurement on behalf of the state (i.e. Transport Scotland, CMAL, CalMac) needs to be addressed as a matter of urgency. The present procurement arrangement fails due to the weak and restrictive initial ship specification process. Public sector officials responsible for procuring poorly specified, badly designed, unnecessarily complex and costly ferries at FMEL, and this relates to previous vessels as well, continue in post with an expectation they will somehow rectify their own mistakes themselves, or as in this case simply blame FMEL. These same officials are also currently planning further imminent costly public procurement of ferries, including in respect of Islay routes. There is no commercial logic to this. The officials responsible

for setting ferry specifications have been found wanting. In addition, CMAL and Transport Scotland have recently been acquiring major ferries without any procurement process at all, senior officials simply agreeing prices with ship owners (e.g. in respect of the 5 NorthLink ferries plus CalMac's MV *Loch Seaforth*). Consequently, there is no transparency in respect of these significant acquisitions, nor any analysis of environmental impacts, far less analysis of cost and suitability of alternative vessel options which might have been considered. It is therefore the officials within the public agencies, the restrictive ship specification process pursued, and what appears to be a 'bunker mentality' culture behind state ferry procurement within Transport Scotland and its agencies that needs to be fundamentally changed. Changes in personnel and processes will be necessary in order to bring about a more commercial and industry aware orientation to ferry procurement, and to deliver far better value for taxpayer funds as well as improving ferry services more generally to the benefit of the communities concerned. Consequently, there should be an immediate moratorium on any further procurement of ferries by Transport Scotland and its ferry agencies pending the RECC inquiry and/or further detailed evaluation of the prevailing ferry procurement policy approach.

5. How might the experience of the procurement and fulfilment of the current hybrid ferries contract inform the development of an updated Ferries Plan?

The two CMAL ferries are not 'hybrid' ferries as such, they are 'dual fuel'. That aside, Transport Scotland's 'Ferries Plan' has never and will never achieve even its rather unambitious stated objectives based on prevailing longstanding state procurement practice, which is clearly an ongoing failure. Prevailing state ferry procurement 'policies', achieve even less than one new vessel delivered annually which means it will take more than 30 years to replace the 31-ship CalMac fleet. This lack of sufficient numbers of new vessels represents an enormous cost to island communities, financially, socio-economically, and environmentally. The solution is to procure standardised proven ferry designs which reflect a lower cost commercial orientation aimed at serving the needs of users (as Pentland Ferries and Western Ferries, and Norwegian operators amply demonstrate). This would enable the fleet to be replaced within say 10 years, and at lower overall capital and operating expense. Scotland needs to be replacing up to 5 ferries EVERY year to meet the needs of users, yet Transport Scotland struggles to deliver even one new boat a year. This inept failure cannot be allowed to continue. The solution is to bring in the right global ferry design, build and operating expertise to deliver a standardised fleet replacement programme. The globally successful designer/builder Sea Transport Solutions (STS) has twice proposed to Scottish Ministers that it can replace the 31-ship CalMac fleet within a period of 10 years, based on its efficient proven standardised designs and tank tested hull/bow forms, and at much lower cost (<https://www.seatransport.com/>). There is the added prospect that all these vessels could be built under license at FMEL. Currently STS and its design and build team is replacing ferries around the world including supplying 30 new ferries for the Philippines, hence such a strategy is clearly achievable, as we can see in Norway also. But this requires Transport Scotland and its ferry agencies to fundamentally change their approach and to take advantage of the best proven global expertise available.

6. What are the likely implications of the Scottish Government's decision to take Ferguson Marine Engineering Ltd. into public ownership for the fulfilment of the current contract and the award of future contracts for the construction of new ferries?

The global market reality is that the significant well publicised CMAL/FMEL problems means that ferry operators are unlikely to order any further ferries at FMEL. After the two CMAL ships are completed FMEL would therefore most likely close. This is unless the state starts to procure and produce standardised proven low-cost ferries at FMEL similar to those employed by private ferry operators and designed by proven specialist global designers. This would require Transport Scotland and FMEL to collaborate with one of the main established ferry designers active in the global ferry marketplace, such as Sea Transport Solutions (STS). The few remaining successful ferry shipyards globally depend on similar collaboration with the best global ferry designers; FMEL does not yet have this competence and neither does Transport Scotland or its ferry agencies. FMEL and the Scottish Government therefore need to bring in the best global design competence if shipbuilding is to survive at FMEL. FMEL is currently building some of the least efficient and most expensive to buy and operate ferries possible, which is a wholly unattractive proposition, far less any reference to the wider ferry industry. The leadership and strategy in FMEL therefore need to fundamentally change with a focus on bringing into the business and its leadership the best global ferry design, build, R&D, and industry marketing expertise and competence. Paradoxically the current crisis represents an opportunity, but maximising it depends on a change in approach to ferry procurement and construction, and especially in setting the specification of ferries based on bringing in the best global expertise in ferry design, construction and operation.

7. What impact is the United Kingdom's departure from the European Union likely to have on the future award of new ferry construction contracts, in particular as regards ongoing compliance with applicable rules on state aid and competitive tendering?

What is arguably more important an issue for FMEL is the urgent need to acquire proven global ferry design expertise and leadership and to start to build lower cost standardised proven designs of ferries as soon as possible. This will be essential to enable the yard to better compete in domestic as well as international ferry markets and to survive in the longer term. This would strengthen the yard's capability to serve the domestic ferry market in Scotland where there is urgent demand currently for 50 new ferries, perhaps more, within the next 10-15 years. This scale of fleet replacement is only possible over such a timescale through repeat production of superior specified, better designed, highly efficient lower cost ferries. This is precisely the opposite of what Transport Scotland and its ferry agencies are currently doing, hence the need for a fundamental change in the ferry procurement approach and those leading it.

ANNEX

Norwegian ferries on order, Jan 2020

<u>Company</u>	<u>Type</u>	<u>Yard</u>	<u>Yard N°</u>	<u>Design</u>	<u>Name</u>
Bastø Fosen	Double-ender	Sefine	NB4 2	139 FD	BASTØ FOSEN TBN
Boreal	Double-ender	SEDEF		MM 75 FE EL	TBN
Boreal	Double-ender	SEDEF		MM 105 FE EL	TBN
Boreal	Double-ender	SEDEF			TBN
Boreal Sjø AS	Double-ender	Vard Brevik	903	MM70FE EL	UTNEFJORD
Brevik Fergeselskap	Pax only small	Holland Shipyard			
Fjord1	Double-ender	Sefine	34	MM82FE -EL	TBN
Fjord1	Double-ender	Sefine	35	MM82FE -EL	TBN
Fjord1	Double-ender	Tersan	1079	MM111F E EL	TBN
Fjord1	Double-ender	Cemre	68	Havyard 934	TUSTNA
Fjord1	Double-ender	Cemre	69	Havyard 934	GRIP
Fjord1	Double-ender	Havyard	141	Havyard 932	FEDJEBJØRN
Fjord1	Double-ender	Cemre/Havyard	142	Havyard 932	BØMLAFJORD
Fjord1	Double-ender	Havyard	143	Havyard 932	SMØLA
Fjord1	Double-ender	Havyard	144	Havyard 932	MØRINGEN
Fjord1	Double-ender	Havyard	145	Havyard 932	STANGVIKJORD
Fjord1	Double-ender	Tersan	1097	MM 104 FE EL	TBN
Fjord Line	HSC Ro-Pax	Austal			TBN
Havila Kystlink A/S	Coastal pax/freight	Tersan	1093		HAVILLA CAPELLA
Havila Kystlink A/S	Coastal pax/freight	Tersan	1094		HAVILA CASTOR
Havila Kystlink A/S	Coastal pax/freight	Barreras Tersan			HAVILA POLARIS
Havila Kystlink A/S	Coastal pax/freight	Barreras Tersan			HAVILA POLLUX

Norled	Double-ender	Remontowa		LMG 120-DEH	TBN
Norled	Double-ender	Remontowa		LMG 120-DEH	TBN
Norled	Double-ender	Remontowa		LMG 120-DEH	TBN
Norled	Double-ender	Remontowa		LMG 120-DEH	TBN
Norled	HSC pax-only	OMA Baatbyggeri	542	OMA-CAT 39M	FJORDPRINSE N
Norled	HSC pax-only	OMA Baatbyggeri	543	OMA-CAT 39M	FJORDJARL
Norled	Double-ender	Sembcorp Marine		LMG Marin	TBN
Norled	Double-ender	Sembcorp Marine		LMG Marin	TBN
Norled	Double-ender	Sembcorp Marine		LMG Marin	TBN
Norled		Westcon	36	LMG 16 DEH	HJELLESTAD
Norled		Westcon	37	LMG 80 DEH2	TBN
Norled		Westcon	38	LMG 80 DEH	TBN
Norled	Double-ender	ADA		LMG 60-DE (H2)	TBN
Norled	Double-ender	ADA		LMG 60-DE (H2)	TBN
Rødne & Sønner	HSC pax-only	Brøderne Aa	302		TBN
The Fjords	Pax only cat	Brøderne Aa	300		LEGACY OF THE FJORDS
Torghatten Trafiks	Double-ender	Sefine	NB3 8		HEILHORN
Vidar Hop Skyssbåter	Pax/car cat	Måløy Verft	23		TBN

Source: Ferries on Order. <https://www.ferryshippingnews.com/>