

= Jæren Commuter Rail =

The Jæren Commuter Rail ( Norwegian : NSB Lokaltog Jæren , previously Jærbanen ) is a commuter train service operated along the westernmost part of the Sørland Line in Jæren , Norway . It is operated by the Norwegian State Railways ( NSB ) with nine Class 72 electric multiple units . The service acts as a commuter rail connecting Stavanger to its suburbs , including Sandnes , and to towns further south , in Klepp , Time , Hå and Egersund . Although passenger services have operated along the lines since 1878 , the commuter train service was inaugurated in 1992 with a significant increase of service , using existing rolling stock . The system has an annual ridership of 2 @. @ 5 million passengers to date .

The service runs from Stavanger Station to Egersund Station , a distance of 75 kilometers ( 47 mi ) . It has four hourly services from Stavanger to Sandnes Station , of which two continue to Nærbø Station and one to Egersund . The section from Stavanger to Sandnes is double track , while the rest is single track . The infrastructure is owned by the Norwegian National Rail Administration and the line is also used by intercity and freight trains . Several proposed upgrades to the system have been made system , such as a branch along the Ålgård Line , a branch to Stavanger Airport , Sola and reestablishing double track from Sandnes to Egersund .

= = Route = =

The commuter rail service runs along the full length of the Jæren Line , the old name of the section of the Sørland Line from Stavanger to Egersund . The line is standard gauge , electrified at 15 kV 16 2 ? 3 Hz AC and owned by the Norwegian National Rail Administration . The line starts as double track at Stavanger Station , which is located in the central business district of Stavanger and is the terminal station of the Sørland Line . The station is manned , serves intercity trains and is 10 minutes from the city 's ferry terminal . Paradis Station is 1 @. @ 4 kilometers ( 0 @. @ 87 mi ) from Stavanger and serves the residential areas of Storhaug and Våland . Around the station there will be established new office real estate . The station is within walking distance of Stavanger University Hospital and Godalen Upper Secondary School , and is adjacent to the offices of the County Governor .

Mariero Station is 4 @. @ 1 kilometers ( 2 @. @ 5 mi ) from Stavanger and serves a mixed residential and commercial area , including Hetland Upper Secondary School . Jåttåvågen Station serves a new neighborhood and is within a minutes walk of Viking Stadion , the home ground of Tippeligaen side Viking FK , Jåttå Upper Secondary School and the future offices of Aker Solutions . Gausel Station is located from 9 kilometers ( 5 @. @ 6 mi ) from Stavanger and serves a mixed commercial and residential area . In addition to being next to the offices of NOKAS , the station is the main interchange with buses towards Forus , which contains the offices of companies such as Statoil , Telenor and BP , and Stavanger Airport , Sola .

Sandnes Sentrum Station ( " Sandnes Center " ) is the first station located within Sandnes , and is located on a viaduct above the city center . Located 14 @. @ 8 kilometers ( 9 @. @ 2 mi ) from Stavanger , it is also served by intercity trains and staffed . The station is the southern end of the double track . Sandnes Station is 15 @. @ 4 kilometers ( 9 @. @ 6 mi ) from Stavanger and is located slightly south of city center of Sandnes . Some of the commuter trains terminate at Sandnes . Ganddal Station is 18 @. @ 5 kilometers ( 11 @. @ 5 mi ) from Stavanger and serves the mixed residential and industrial area of Ganddal . The Ålgård Line branches off at the station .

Øksnevadporten Station is the first in Klepp and is located 22 @. @ 4 kilometers ( 13 @. @ 9 mi ) from Stavanger . Klepp Station is located 24 @. @ 8 kilometres ( 15 @. @ 4 mi ) from Stavanger and serves the municipal center of Klepp . Bryne Station is the only station in Time and located at Bryne , 29 @. @ 8 kilometers ( 18 @. @ 5 mi ) from Stavanger . The station is staffed and also serves intercity trains .

Nærbø Station is the first station in Hå and serves the municipal center of Nærbø . Some commuter trains terminate at Nærbø . Varhaug Station is located 43 @. @ 1 kilometers ( 26 @. @ 8 mi ) from Stavanger , while Vigrestad Station is located 40 @. @ 2 kilometers ( 25 @. @ 0 mi ) from Stavanger

. Brusand Station serves the residential area of Brusand and is located 54 @. @ 2 kilometers ( 33 @. @ 7 mi ) from Stavanger . Oгна Station serves the residential area of Oгна and is located 58 @. @ 4 kilometers ( 36 @. @ 3 mi ) from Stavanger . Sirevåg Station is located 60 @. @ 4 kilometers ( 37 @. @ 5 mi ) from Stavanger and serves the fishing village of Sirevåg .

Hellvik Station is the first station in Eigersund and located 66 @. @ 8 kilometers ( 41 @. @ 5 mi ) from Stavanger . Eigersund Station is the terminal station of the line , and all remaining commuter trains stop there . The station is staffed and also served by intercity trains , and has correspondence with buses . The station located 74 @. @ 7 kilometers ( 46 @. @ 4 mi ) from Stavanger is about 10 minutes north of the city center of Eigersund .

= = Service = =

The operating deficits are covered through subsidies by the Norwegian Ministry of Transport and Communications . The trackage and other infrastructure is owned by the government agency Norwegian National Rail Administration , while the rolling stock is owned and operated by the Norwegian State Railways ( NSB ) . The service between Stavanger and Sandnes operate with a fixed schedule every 15 minutes . Of the trains to Sandnes , half continue onwards to Nærbø , giving a 30 @- @ minute headway . One train per hour operate all the way to Eigersund . On weekends and late evenings , there is a reduced service . Travel time from Stavanger to Sandnes is 19 minutes , from Stavanger to Nærbø is 37 minutes , and from Stavanger to Eigersund is 1 hour and 7 minutes .

= = Rolling stock = =

Class 72 is a series of 36 four @- @ car electric multiple units built by AnsaldoBreda . The units are permanently coupled together using Jacobs bogies . Each unit has a power output of 2 @, @ 550 kilowatts ( 3 @, @ 420 hp ) , allowing a top speed of 160 kilometers per hour ( 99 mph ) . The trains are 85 @. @ 57 meters ( 280 @. @ 7 ft ) long and weigh 156 tonnes ( 154 long tons ; 172 short tons ) , and have seating for 310 passengers and one toilet . The trains have better accessibility than the older units and unlike their predecessors are equipped with an electronic public information system . Nine of the units are used on the Jæren Commuter Rail , while the remaining 25 units are used on the Oslo Commuter Rail .

= = = Retired = = =

Class 69 is a series of 88 two and three @- @ car electric multiple units built by Strømmens Værksted between 1970 and 1993 . A motor car has a power output of 1 @, @ 188 kilowatts ( 1 @, @ 593 hp ) , allowing a speed of 130 kilometers per hour ( 81 mph ) . Each car is 24 @. @ 85 meters ( 81 @. @ 5 ft ) long , with motor cars weighing 64 @. @ 0 to 53 @. @ 9 tonnes ( 63 @. @ 0 to 53 @. @ 0 long tons ; 70 @. @ 5 to 59 @. @ 4 short tons ) and end cars weighing down to 28 @. @ 8 tonnes ( 28 @. @ 3 long tons ; 31 @. @ 7 short tons ) . Typical seating capacity is 96 passengers in the motor cars and 112 passengers in the end cars . The class was delivered in four versions , named A through D. After the initial delivery of fifteen 69As in 1970 and 1971 , twenty 69Bs were delivered in 1974 and 1975 . These were designed to operate on longer sections and were equipped with only one door per car . This turned out to extend stopping time too much , and the C and D versions were delivered with two doors per car . From 1975 to 1977 , NSB took delivery of fourteen 69Cs and from 1983 to 1993 thirty @- @ nine 69Ds . The latter is distinguishable because of its different front . NSB operates both two- and three @- @ car sets , and up to three units can be run in multiple , allowing NSB to operate any train length from two to nine cars . Eighty @- @ two units remain in service ; although they have been retired from the Jæren Commuter Rail , NSB still uses them on the Oslo Commuter Rail , the Bergen Commuter Rail and the Arendal Line .

= = History = =

The Jæren Line opened as a narrow gauge railway between Stavanger and Egersund on 1 March 1878 . The railway was extended from Egersund to Flekkefjord on 1 November 1904 as the Flekkefjord Line . On 21 December 1924 , the Jæren Line 's only branch opened , the Ålgård Line from Ganddal to Ålgård . On 1 March 1944 , the Jæren Line became part of the Sørland Line , when the line opened between Sira and Kristiansand and the Jæren Line was converted to standard gauge . The Sørland Line from Egersund to Stavanger was opened as electric on 3 June 1956 . This resulted in Class 65 and Class 67 electric multiple units being used on local trains on the line . In 1960 , the services were replaced by Class 68 units . The section from Stavanger to Sandnes became the first part of the Norwegian railway network , after the Ofoten Line , to centrally controlled . The centralized traffic control opened from Stavanger to Sandnes on 20 March 1964 , and from Sandnes to Egersund on 7 July . The whole line received partial automatic train control on 31 December 1986 .

The commuter rail system was introduced from 1 January 1992 , after an agreement between NSB , Rogaland County Municipality and the six municipalities along the line . NSB introduced new Class 69 multiple units , while the county municipality introduced a fare coordination with the corresponding bus services . The increase in service involved 15 departures per direction per day , and the travel time from Stavanger to Egersund was reduced from 80 to 55 minutes . In addition , NSB started with a half @-@ hour headway between Stavanger and Sandnes . A new station , Sandnes Sentrum , was opened in the city center of Sandnes at the time the new service started . NSB stated that the goal was to increase the daily ridership from 2 @,@ 900 to 5 @,@ 000 passengers by 1994 . The stations were also upgraded , including new sheds . The Scanet train radio system was installed between 1993 and 1996 .

The service was a success , and NSB received a 112 % increase in ridership the first year . This resulted in the company introducing a similar service between Trondheim and Innherred , the Trøndelag Commuter Rail , in 1993 . In 1993 , NSB won Statens Byggeskikkpris , among other things for the new sheds on the Jæren Line . By 1995 , ridership was up 150 % from before the service started . In 1997 , NSB announced that they would order 36 new electric multiple units , which would among other things replace the aging trains on the Jæren Commuter Rail . The new Class 72 trains were put into service on 8 August 2002 , several years behind schedule . In April 2004 , the rail administration opened Jåttå Station , which was located close to Viking Stadion , the new home ground of Tippeligaen side Viking FK .

By 2005 , ridership had increased to 2 @.@ 5 million per year , up 278 % from 1991 , giving a 7 % market share in the corridor . To further increase capacity and regularity , the Norwegian National Rail Administration decided to rebuild the section from Stavanger to Sandnes to double track . At the same time , a new freight terminal was to be built at Ganddal , meaning that the section would only have to be shared with intercity trains . The upgrade involved closing Hillevåg Station , and building three new stations : Paradis , Jåttåvågen and Gausel . Construction was started in 2006 and was estimated to be completed by 2009 . It was estimated to cost 2 @.@ 2 billion Norwegian krone . From April to November 2009 , the section from Ganddal to Stavanger was closed while the last part of the upgrade was completed . The new line was opened on 16 November 2009 and from 14 December , the 15 @-@ minute headway was introduced between Stavanger and Sandnes .

= = Future = =

The National Rail Administration has developed a plan for possible expansion of the commuter rail . The main possibilities have been discussed : rebuilding the section from Sandnes to Egersund to double track , taking back into use the Ålgård Line , which branches off at Ganddal , and building a new branch from south of Gausel to Stavanger Airport , Sola . An alternative to several of the options is a light rail , which may or may not be built as a tram @-@ train , which would use parts of the existing double track between Stavanger and Sandnes .

The Ålgård Line is a 12 @.@ 24 @-@ kilometer ( 7 @.@ 61 mi ) long railway which branches from the Sørland Line at Ganddal . It runs via Foss @-@ Eikeland and Figgjo to Ålgård , and was opened

on 20 December 1924 . Passenger services were terminated on 1 November 1955 , making it the line with the most frequent passenger traffic in Norway to be closed . Freight trains operated until 1988 . The first 3 kilometers ( 1 @. @ 9 mi ) are used for freight trains to access a cement factory . The line has officially been closed , but has not been abandoned . The National Rail Administration retains ownership and can in the future renovate the line for operation . The annual traffic potential for the Ålgård Line is 600 @, @ 000 passengers . Plans call for stations at Vagle , Figgjo , Kongeparken and Ålgård . It is possible to operate the trains that currently terminate at Sandnes to Ålgård without new infrastructure investments to the Sørland Line . However , the line would need a full upgrade , including new tracks , electric system and signaling . Ålgård is also a good location for a park and ride for European Route E39 .

A branch to Sola has been considered to allow the trains to operate to Sola and the airport . The line would branch from the Sørland Line south of Gausel , and be built so trains from the branch could run both northwards and southwards . Proposed stations include the airport , Solakrossen , Forus West , Statoil 's head office and possibly the shopping center Kvadrat . This would give a travel time of 17 minutes from the airport to the city center , and 10 minutes from the airport to Sandnes . This route has , however , also been proposed as part of the light rail system . It would give about 2 @. @ 5 million annual passengers .

Plans have been made that would either double or triple the frequency on all the services on the existing commuter rail network . However , increased frequency south of Sandnes will require double track . Should the frequency be doubled , double track would have to be built to where the current service to Nærbø terminates . Plans call for these trains to possibly be extended to either Varhaug or Vigrestad . Should the frequency be tripled , double track would be needed all the way to Egersund . Parts of the Jæren Line is straight enough to permit speeds between 200 and 250 kilometers per hour ( 120 and 160 mph ) . However , several shorter parts need to be rebuilt to allow this , particularly between Egersund and Oгна , and from Bryne to Ganddal . In particular , the section from Oгна to Egersund would probably have to follow an all @- @ new route , should it be rebuilt to double track . The effect of higher maximum speeds is greatest for intercity trains , as the commuter trains have so frequent stops they have little to gain from the increased speeds .

When the Jæren Line was built , the station in Egersund was located in the city center . With the opening of the Sørland Line , the station was moved 1 kilometre ( 0 @. @ 62 mi ) north of the city center . Egersund Station has been proposed moved back to its old location for the commuter rail , giving Egersund two stations : one for commuter trains and one for regional trains . The right @- @ of @- @ way still exists for this route , making construction easy . A new Sørland Line has also been proposed , which would run south instead of north from Egersund . This would mean that a city center location for Egersund Station would be better for intercity trains as well .

Rogaland County Municipality is in the planning process of building a light rail in Greater Stavanger . The initial plans call for a Y @- @ shaped service which could be operational by 2018 , with possibilities for further expansion . As of 2010 , the plans call for a 16 @. @ 2 kilometres ( 10 @. @ 1 mi ) line from Stavanger to Sandnes , and a 7 @. @ 7 or 8 @. @ 8 kilometres ( 4 @. @ 8 or 5 @. @ 5 mi ) branch to the airport . The travel time from Sandnes to Stavanger would be 29 minutes , and is therefore a supplement to the commuter rail . The light rail would have interchange with the light rail at Stavanger , Paradis , Jåttåvågen , Gausel and Sandnes Sentrum . Several new branches of the light rail have been proposed for later construction .