## Aoimori Railway–Keystone to Tohoku Shinkansen

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## Background

Concurrent with the opening of the Tohoku Shinkansen extension to Shin Aomori on 4 December 2010, Aoimori Railway Co., Ltd. celebrated the opening of its Aoimori extension linking north and south Aomori Prefecture.

The company was founded as a joint public-private venture on 30 May 2001, and when the Hachinohe extension of the Tohoku Shinkansen opened on 1 December 2002, Aoimori Railway took over the Metoki to Hachinohe section of the Tohoku main line from JR East for operation as a line running parallel to the shinkansen. It was Aoimori Railway's first step as a regional railway operator.

The December 2010 opening of the Aomori extension has linked 11 towns and cities with approximately 670,000 (48%) people out of the prefectural population of 1.37 million living near the line. The population centres are Aomori, the prefectural capital, and Hachinohe, a key centre for fishing and industry.

The reason for establishing Aoimori Railway in 2001 was to continue operating conventional lines abandoned by the JR group of operators as third-sector lines running parallel to new shinkansen lines. This idea was agreed by the government of the day, which made separate management of the conventional parallel line a condition for building the Morioka to Aomori extension of the Tohoku Shinkansen. Subsequent consultations with Aomori Prefecture and local trackside governments in July 1991 resulted in Aomori Prefecture agreeing in principle to separate management of the parallel line, and 7 years later a decision was taken to permit full-scale construction up to Shin Aomori Station. This decision increased the urgency to establish Aoimori Railway to take over management of the parallel lines.

A key difference between Aoimori Railway and other railway operators is that it uses a two-tier system where business segments are managed separately; in this case, management of infrastructure, such as the track and signals, is separate from train operations.

Although Aoimori Railway is the first railway business in Japan to use this two-tier system, overseas railway businesses use it commonly. Infrastructure companies established after privatization of national railways in Europe and New Zealand, manage the tracks, etc., while passenger and freight operations are managed by separate railway operators, encouraging new operators helps secure railways through track-leasing arrangements. (In New Zealand, the infrastructure was subsequently returned to the state and renationalized.)

At Aoimori Railway, infrastructure is managed by Aomori Prefecture while Aoimori Railway devotes itself solely to passenger transport as a third-sector operator. As described earlier, JR East requested separation of the parallel line for management by a different company as a condition for starting construction of the Tohoku Shinkansen Hachinohe extension, suggesting that JR East thought it would be difficult to run the parallel line at a profit after the shinkansen opening. However, because the local people still need conventional train services, Aoimori Railway adopted a two-tier system to run train services along the line as economically as possible.

In this two-tier system, Aoimori Railway pays track usage fees to the track owner Aomori Prefecture. Similarly, in addition to Aoimori Railway's passenger services, JR Freight runs freight trains between Tokyo and Hokkaido on the tracks, so JR Freight also pays track use fees. However, although freight trains with heavy axle loads cause more wear and tear to tracks than lighter passenger trains, resulting in higher maintenance costs, the track use fees were set low in accordance with the freight track use system determined by the government. Consequently, Aomori Prefecture must unfortunately bear the increased maintenance costs of letting JR Freight use its tracks.

## Relationship between Shinkansen and Aoimori Railway

As described earlier, the opening of the Tohoku Shinkansen led directly to the establishment of Aoimori Railway, so Aoimori Railway cannot be considered completely separately from the shinkansen. As railway demand has decreased with diversification of transport modes, both regional railways and shinkansen have respective roles to play.

Back in the 1970s, Japan planned to build motorways and shinkansen nationwide to underpin national prosperity. In



Aoimori Railway track crossed by elevated shinkansen track near Kitatakaiwa Station (left: from driver's cab; right: from platform)

(Aoimori Railway)

those days, the opening of a shinkansen meant expectations for more interaction between rural areas and major cities, helping stimulate regional economies. However, conversely, the effect of opening shinkansen just accelerated migration of rural populations to Tokyo. This drain on local populations weakened regional economic robustness, and local railways ultimately ceded their key transportation role to automobiles, resulting in line closures.

Even today, the popularization of air travel and penetration of private cars have multiplied options in the long-distance passenger travel sector, leaving local railways in decline.

The section of the Tohoku main line handed to Aomori Prefecture and Aoimori Railway was once the link between Tokyo and Aomori, and beyond to the Seikan ferry and on to Hokkaido, making it a key artery for carrying people and goods across Japan.

Nevertheless, even with the opening of the entire length of the Tohoku Shinkansen to Shin Aomori, the Tohoku main line and local lines can still play a role in competing effectively with air and car. The shinkansen brings people and tourists directly and quickly from Tokyo to Aomori while the conventional lines can play a role functioning as arteries within Aomori Prefecture carrying inter-regional travellers arriving by shinkansen onward to local destinations. For example, Aoimori Railway runs through famous hot spring areas, such as Asamushi and Komaki hot springs in the Tohoku region. Therefore, more than ever, local lines can be an important secondary network serving tourists coming to Aomori by shinkansen to visit sites like Lake Towada (Lake of Mystery) using Aoimori Railway, or the Shimokita Peninsula famed for tuna delicacies, and temples on Osorezan (Mt Fear) using the Ominato Line.

Furthermore, Aoimori Railway can play a feeder role in transporting local people to the shinkansen, so that they can travel onwards to other prefectures, Tokyo, and perhaps Narita Airport.

In conclusion, I would like to express my view on the hidden value found in local railways. In some strange way, stations—even small unmanned ones—are centres for their communities. Usually, we use railways without thinking, but once a line is closed and a station lost, the community loses vitality as if a light has gone out.

Although the Tohoku Shinkansen and Aoimori Railway run side by side from Hachinohe and Aomori (Shin Aomori), they are by no means rivals. Rather, I hope they can build a complementary relationship as an inseparable duo for revitalizing local communities.



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Mr Nagafuchi is currently an employee at Aoimori Railway Co. Ltd. Prior to joining the company in 2010, he was employed at Tenryu Hamanako Railway and has been a volunteer at a heritage railway in New Zealand.