

Market Consultation

Emission-free Rail Transport Almelo-Mariënborg-Hardenberg and Zutphen-Hengelo-Oldenzaal



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Table of contents

1	Emission-free Rail Transport Almelo-Mariënberg-Hardenberg and Zutphen-Hengelo-Oldenzaal	3
1.1	Market consultation.....	3
1.2	Scope	3
1.3	Proposed method of contracting/tendering	8
2	Our questions.....	9
3	Market consultation procedure.....	10
3.1	We want your ideas!	10
3.2	Procedure	10
3.3	Timetable.....	11
3.4	Contact.....	11
3.5	Open and honest	11

1 Emission-free Rail Transport Almelo-Mariënberg-Hardenberg and Zutphen-Hengelo-Oldenzaal

Given the urgency of the climate problem, the Dutch rail sector aims to achieve full carbon-neutrality (across the entire rail chain). In 2013, the carbon footprint from operating trains in the Netherlands was around 800 kilotonnes. Since then, the Dutch railway sector has launched a drastic reduction effort and since 2017, all electric trains in the Netherlands are powered by emission-free wind energy. The result has been an annual carbon footprint of just over 10% (85 kilotonnes). The remaining footprint comes from diesel trains. In passenger transport, new transport franchises and major equipment overhauls are ideal points at which to take important steps towards emission-free rail transport. Two new transport franchises are anticipated in the near future.

In 2021, the provinces of Overijssel and Gelderland and the Ministry of Infrastructure and Water Management will make a decision on how they intend to implement the new franchises for passenger transport on the Almelo-Mariënberg-Hardenberg and Zutphen-Hengelo-Oldenzaal routes. At the start of the new franchises start, the current diesel-powered rolling stock will be technically and financially written off, thus offering a chance to take steps towards more sustainable transport.

Until recently, conventional electrification seemed to be the only way to achieve sustainability in time. To investigate this further, ProRail, commissioned by the province of Overijssel and the Ministry of Infrastructure and Water Management, has, since June 2020, been carrying out a study into the full electrification of the Almelo-Mariënberg and Zutphen-Hengelo routes. ProRail has advised the Ministry of Infrastructure and Water Management to reassess whether the decision for full electrification remains the right choice after completion of the exploration phase of both projects, using the knowledge and insights available at that time. The provinces of Overijssel and Gelderland and the Ministry of Infrastructure and Water Management have asked ProRail to reassess the provisional choice for electrification.

1.1 Market consultation

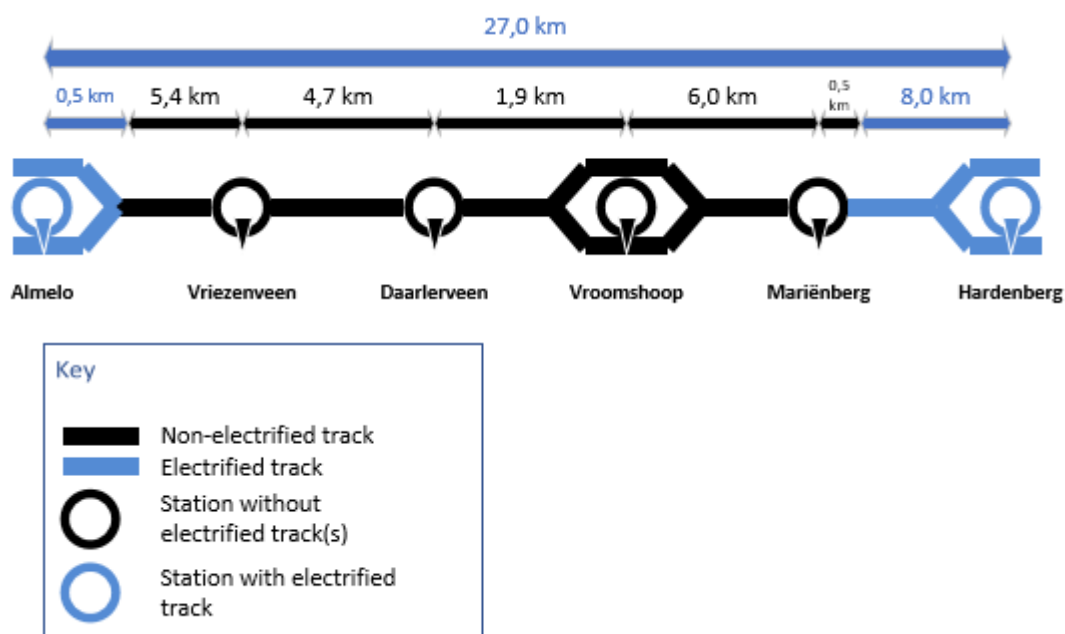
ProRail notes that the development of alternative train drive technologies is extremely rapid. More knowledge of and experience with new, sustainable technologies are needed to fully consider them in investment decisions. For this reason ProRail, in cooperation with the provinces of Overijssel and Gelderland and the Ministry of Infrastructure and Water Management, decided to conduct this market consultation. Since rolling stock suppliers have the most up-to-date knowledge of these technologies, this market consultation is aimed at you. The consultation will be an important building block in the final choice for an emission-free drive technology. This is the first opportunity for the introduction of alternative, emission-free drive technologies in the east of the Netherlands. The market consultation concerns two diesel routes. However, several provinces are eagerly anticipating the decision in view of its potential consequences for other diesel routes.

We invite you to offer your solutions for emission-free rail transport on the Almelo-Mariënberg-Hardenberg and Zutphen-Hengelo-Oldenzaal routes.

1.2 Scope

ProRail is seeking solutions that will help realise emission-free train transport on the Almelo-Mariënberg-Hardenberg and Zutphen-Hengelo-Oldenzaal routes. The routes are partially electrified (1500 V/DC, max. 4000 A).

ProRail

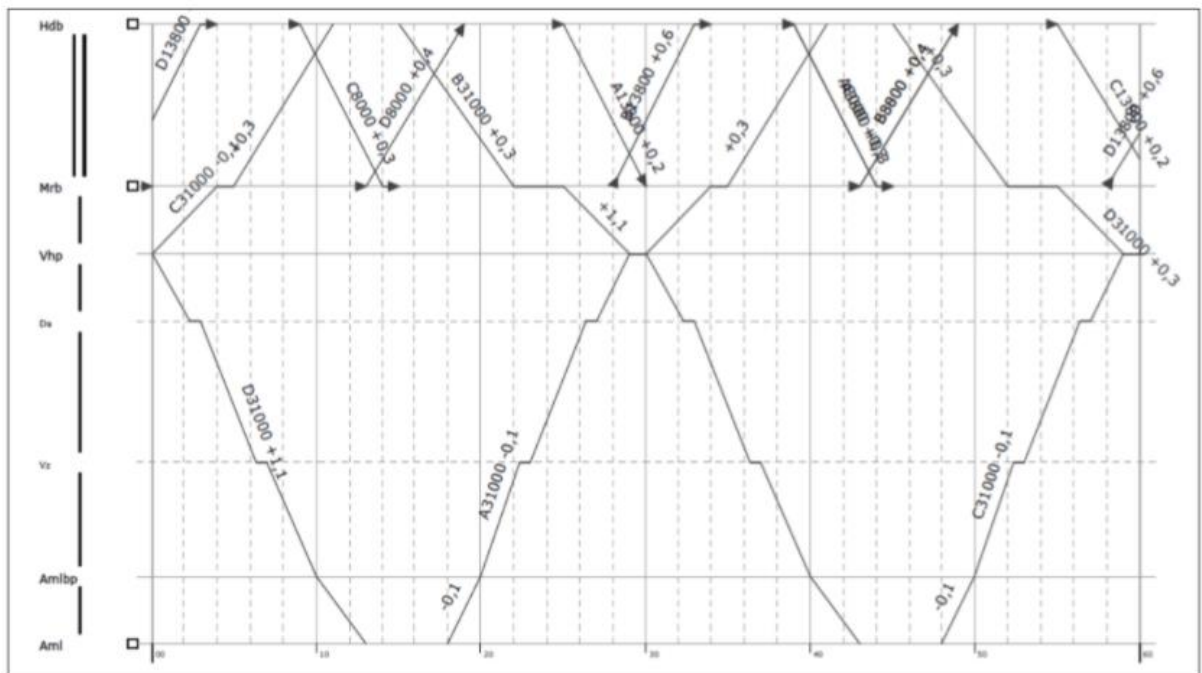


Almelo-Marienberg-Hardenberg

The Almelo-Marienberg-Hardenberg train service is part of the Vechtdallijnen franchise, which also includes the Zwolle-Emmen train service, which is operated with electric trains. The Almelo-Marienberg-Hardenberg route has a length of 27.0 km and has four intermediate stops, which are served by a stopping train (local train) twice an hour. It is assumed that two trains together cover approximately 0.5 million timetabled kilometres every year. Starting in mid-2022, the first 0.5 kilometres of the route, including the departure track, will be electrified. The further route between Almelo and Marienberg (18.5 km) is not electrified. The final section between Marienberg and Hardenberg (8.0 km), including the arrival track in Hardenberg, is electrified. The normative platform length on this route is 131 metres. The route is shown schematically below:

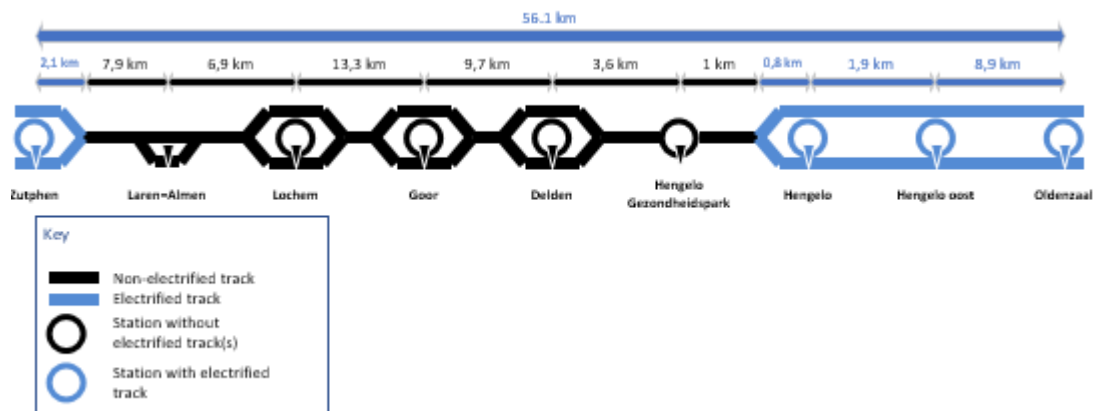
ProRail

At present, the track speed is 120 km/h. The possibility of increasing the track speed to 140 km/h is being investigated. This would contribute to the robustness of the train service, as well as shorten journey times and increase transfer times in Hardenberg and Almelo. The timetable to be realised is A/B/C/D31000, as shown in the timetable diagram below:



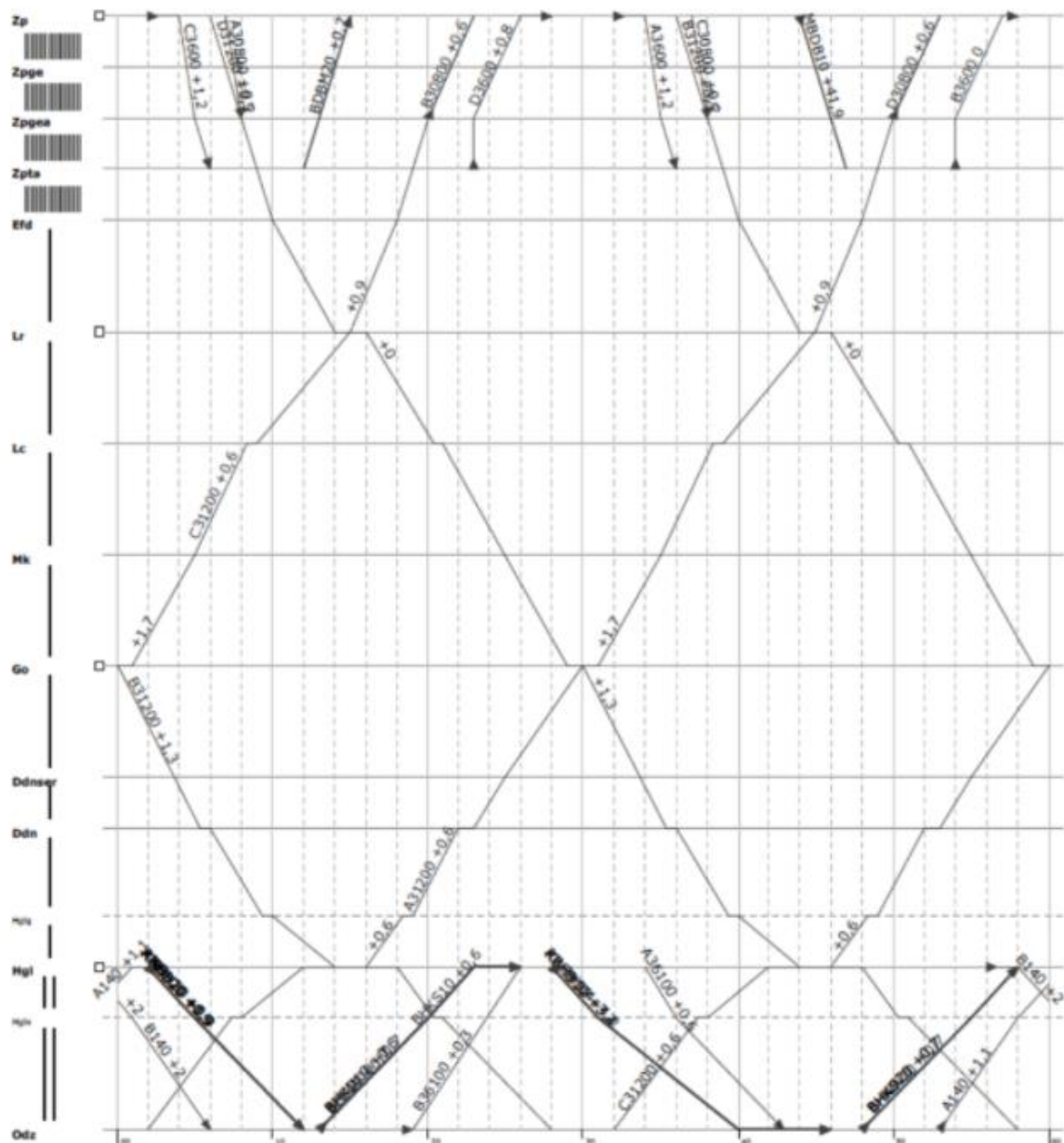
Zutphen-Hengelo-Oldenzaal

The Zutphen-Hengelo-Oldenzaal route has a length of 56.1 km, has six intermediate stops and is served by a stopping train (local train) twice an hour. It is assumed that nine trains together cover approximately 1.4 million timetabled kilometres every year. The train towards Hengelo has a scheduled stop at timing point Laren=Almen; the trains from both directions pass each other at this point. Including the departure track in Zutphen, the first 2.1 km is electrified. The further route between Zutphen and Hengelo (42.4 km) is not electrified. The final section between Hengelo and Oldenzaal (11.6 km), including the arrival track in Oldenzaal, is electrified. The normative platform length on this route is 115 metres, which can be extended to 180 metres. The route is shown schematically below:



ProRail

At present, the track speed is 130 km/h. The possibility of increasing the track speed to 140 km/h is being investigated. This would contribute to the robustness of the train service, as well as shorten journey times and increase transfer times in Hengelo and Zutphen. The timetable to be realised is A/B/C/D31200, as shown in the timetable diagram below:



1.3 Proposed method of contracting/tendering

The method of contracting and tendering is determined by the province(s) granting the franchise.

2 Our questions

The provinces of Overijssel and Gelderland expect to launch a tender for passenger services on the Almelo-Mariënborg-Hardenberg and Zutphen-Hengelo-Oldenzaal routes in around one year's time. ProRail, the provinces of Overijssel and Gelderland and the Ministry of Infrastructure and Water Management have the following questions regarding alternative solutions for emission-free rail transport:

1. How do you think that emission-free rail transport can best be achieved on the two routes in scope?
2. What rolling stock can you offer by early 2022 so that the delivery of approved, emission-free trains can take place by mid-2025? What are the associated technical specifications (axle loads, etc.), seating capacity and delivery times? If delivery of approved, emission-free trains were to be postponed until mid-2026, what possibilities would this offer?
3. What are the costs associated with the aforementioned rolling stock options? What are the investment costs and the annual costs with a depreciation amortisation period of 30 years and an annual distance covered of 150,000 km or 250,000 km? How do these costs compare with a comparable diesel train in your portfolio? **We are aware that this is information that you would rather keep confidential or supply in indicative figures. Please do not hesitate to contact us to identify a solution that is consistent with your and our needs.**
4. Which emission-free trains have you already sold and where do they run in a regular service? May we contact the user(s) of these trains?
5. What is the maximum distance that your trains can travel without an external energy supply? What train features are important for running a timetable, such as acceleration, reliability, 'recharging time' and performance in different weather conditions?
6. Do you think that it is possible to achieve emission-free rail transport on the individual routes in scope without adjustments to the infrastructure?
7. If not, what minimum adjustments to the infrastructure do you think are needed to achieve emission-free rail transport on the routes in scope?
8. What features of the energy source do emergency services need to take into account if a train accident occurs?
9. What is the environmental impact of the drive technology over its entire life cycle?
10. What types of contract are possible for emission-free trains?
11. Are there any other aspects that you think are important for a good comparison, and if so, which?

Please provide the answers to these questions in Appendix 1.

3 Market consultation procedure

3.1 We want your ideas!

Emission-free rail transport on existing diesel lines, with no or minimal modifications to the rail infrastructure.

In preparation for a proposed tender for the Almelo-Mariënberg-Hardenberg and Zutphen-Hengelo-Oldenzaal transport franchises, the provinces of Overijssel and Gelderland, the Ministry of Infrastructure and Water Management and ProRail wish to gain more insight into the market and the availability of emission-free trains.

We expect this market consultation to provide us with a picture of the suppliers that are available, current developments in the market and the extent to which solutions are available that can meet the functional specifications.

3.2 Procedure

This market consultation was published on (inter alia) TenderNed as an open market consultation. This means that all parties in the market have the opportunity to participate.

The market consultation comprises two steps:

1. Written: responding to the questions (see Section 2);
2. Individual discussions with (some of) the market parties from whom responses were received.

You are firstly asked to submit the attached questionnaire by email before the date specified in paragraph 3.3.

ProRail will then analyse the responses and, based on this analysis, may decide to schedule a follow-up meeting with all or some of the parties. The Ministry of Infrastructure and Water Management and the province(s) granting the franchise will also be present at these meetings. The purpose of the follow-up meeting is to answer any questions and for you to explain your vision in more detail. A meeting is expected to last around 45 minutes.

A report will be compiled for each individual meeting and submitted to the participating party for approval. ProRail will then produce one integral (anonymised) report of all meetings that contains the most important conclusions from the written responses and the meetings. No competitively sensitive information will be shared in this integral report. We will then send this document in draft form to all participants in the consultation with the request to read it and pass any comments on to ProRail. Once all participants have had the opportunity to provide comments, the document will be finalised by ProRail. The final document will be attached to the tender file for future tendering procedures for information purposes. The conclusions will be implemented in the tender file and/or the tendering procedure where ProRail and the franchising province(s) deem it feasible and useful.

3.3 Timetable

Date	Activity
18 March 2021	Publication/invitation to market consultation by ProRail
1 April 2021	Deadline for questions regarding the information provided
12 April 2021	ProRail provides responses to the questions asked and any amended documentation
19 April 2021	Deadline for submitting responses to the questions in Section 2
20 April 2021	Invitation to participate in individual meetings
26 or 28 April 2021	Individual meetings
10 May 2021	Draft report sent to participants in market consultation
18 May 2021	Final report sent to participants in market consultation

3.4 Contact

If you have any questions relating to this market consultation or wish to register, please contact:
Marijke van Laar (Tender Manager)
Marijke.vanLaar@prorail.nl
+31(0) 642799608

3.5 Open and honest

Participation in the market consultation is entirely voluntary and will not lead to any privileges in a tendering procedure. By the same token, not participating in the market consultation will not lead to exclusion from any tendering procedures.

By participating in this market consultation, you agree that the information you provide may be used by ProRail, the provinces of Overijssel and Gelderland and the Ministry of Infrastructure and Water Management in (preparations for) future tendering procedures. Commercial (numerical) information provided by you will be treated confidentially by the parties.

ProRail, the provinces of Overijssel and Gelderland and the Ministry of Infrastructure and Water Management attach great importance to transparent processes. There is no intention to favour participating market parties in the market consultation or to put non-participating parties at a disadvantage. Accordingly, all relevant information resulting from the market consultation will be made available to all potential bidders upon publication of any future tenders or will be added to the tender dossier.

Any costs incurred as a result of participation in this market consultation will not be reimbursed.