

Eastern Norway County Network

Lotta Möllerfalk

Energy Stations for Green Commercial Transport

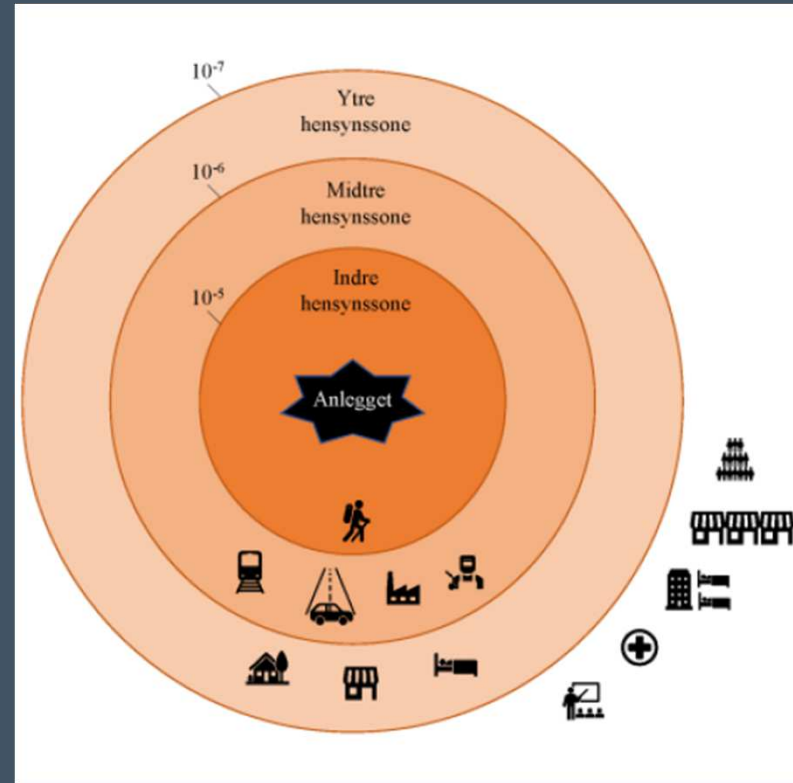
October 4th 2023

Energy Stations project



- ① 1/3 of the emissions from roads in our area are from heavy duty vehicles.
- ① Our government has a national target that 50% of all new heavy transports in 2030 are emission free.
- ① Norway is in the forefront of the electrification of passenger cars.
- ① There is almost no infrastructure for fossil free heavy duty vehicles.
- ① **Purpose:** Contribute to the faster establishment of energy stations for green commercial transport in Eastern Norway
- ① **Period of project: 2022-2024**
- ① The project receives government funding
- ① **The project is tech-neutral, multi-fuel approach: cbg/lbg, H2 and BEV**

Criteria for selection



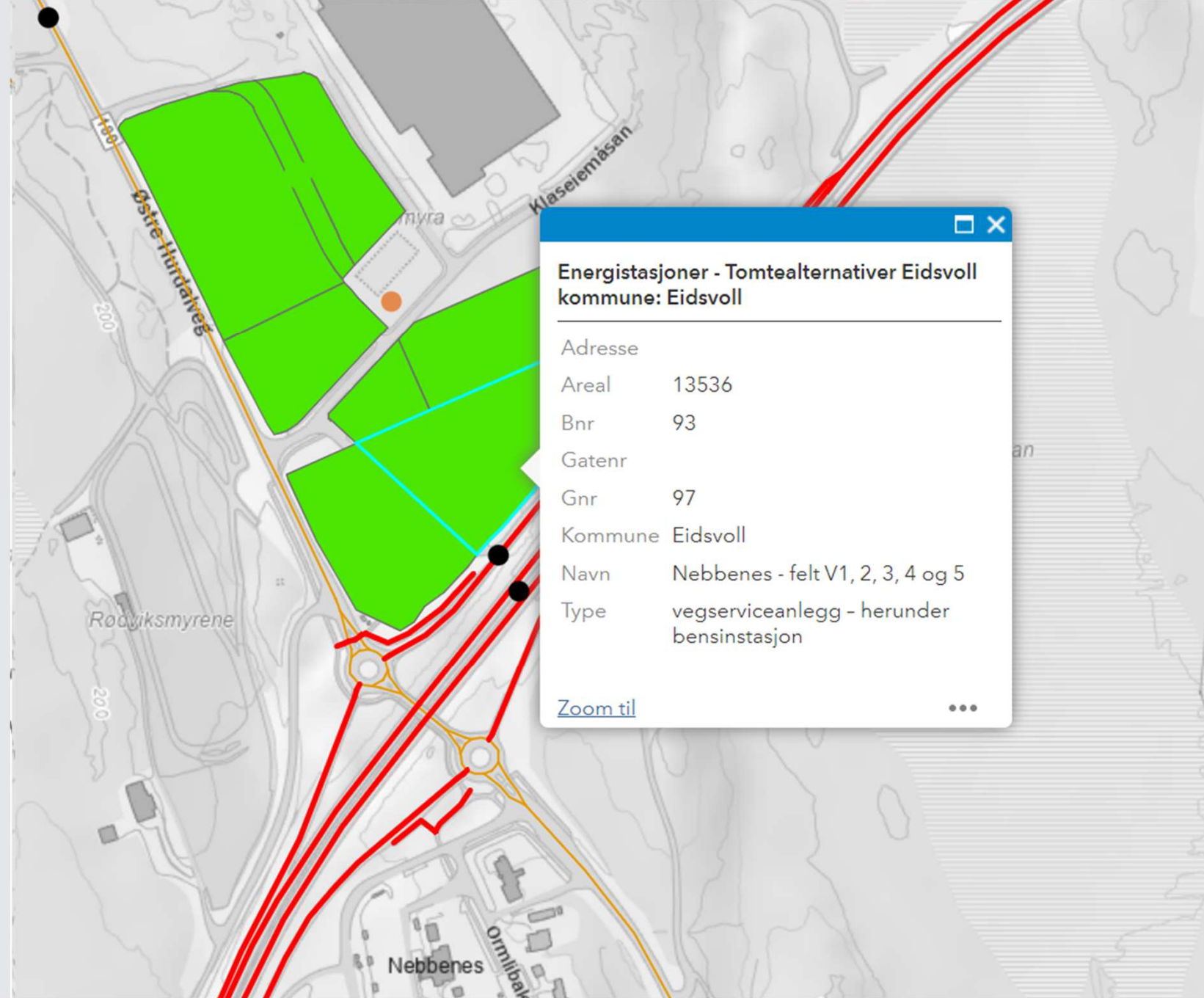
Generally:

- We look at different map layers.
- Different area requirements, safety distances and criteria depending on the energy carrier, and whether co-location or not.
- Match the existing traffic pattern, avoid detours for drivers.
- Size: drive in and out of the station without reversing. Defined tracking curves for different vehicles are used as a basis for the design. Safe traffic flow!
- Regulation of area. Areas regulated for transport purposes (preferably roads or road service facilities), or industry will be favorable for the development of energy stations. Avoid areas that are set aside or regulated for agricultural, nature and outdoor purposes as well as reindeer husbandry.
- Access to service facilities, grocery stores
- Neighbors
- Landowner
- Distance to other stations, not too far and not too close.
- Grid capacity, distance to substation.
- Proximity to 24-hour rest areas for professional drivers

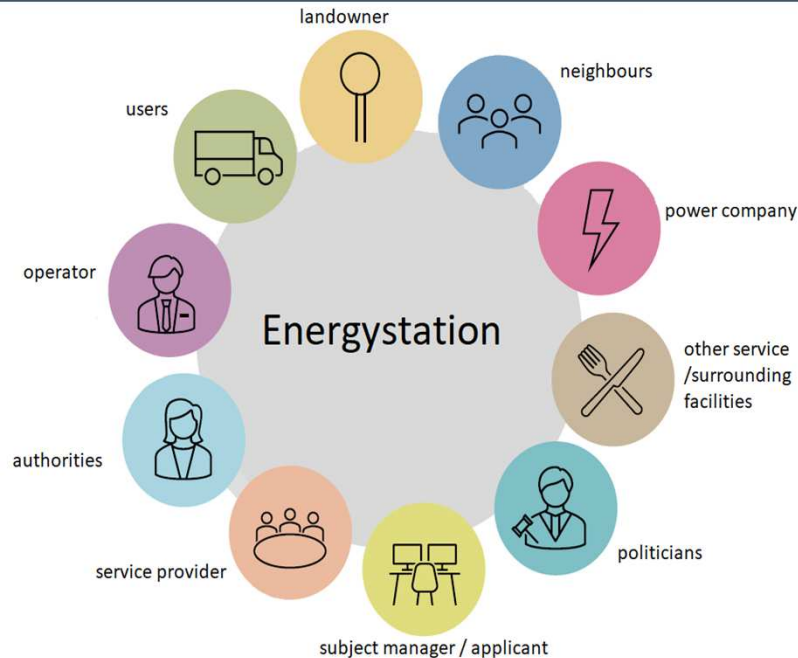
Traction, range and efficiency varies with weight, topography, driving patterns, etc.

They all have different properties and are suitable in different places.

We add layers to the map, in order to exclude areas before arranging physical meetings of the remaining options.



Stakeholder process



Users: transport companies and possibly their user organizations, but more directly each individual truck driver. The user will not be involved in the process until after the energy station has been established.



Land owner: can be private, companies, public, the municipality. It is common for the responsible applicant to work on behalf of an operator or service provider, and for the landowner to normally take a relatively passive role. Land is often leased to operators on fixed-term contracts.



Operators: normally a charging operator **or** gas supplier (offering biogas or hydrogen). Other services are normally done by other service providers.



Surrounding facilities : normal offer of food/drink/serving and dressing room/shower/WC. May also have the ongoing supervision of the station and in some cases responsible for the financial operation of the energy station.



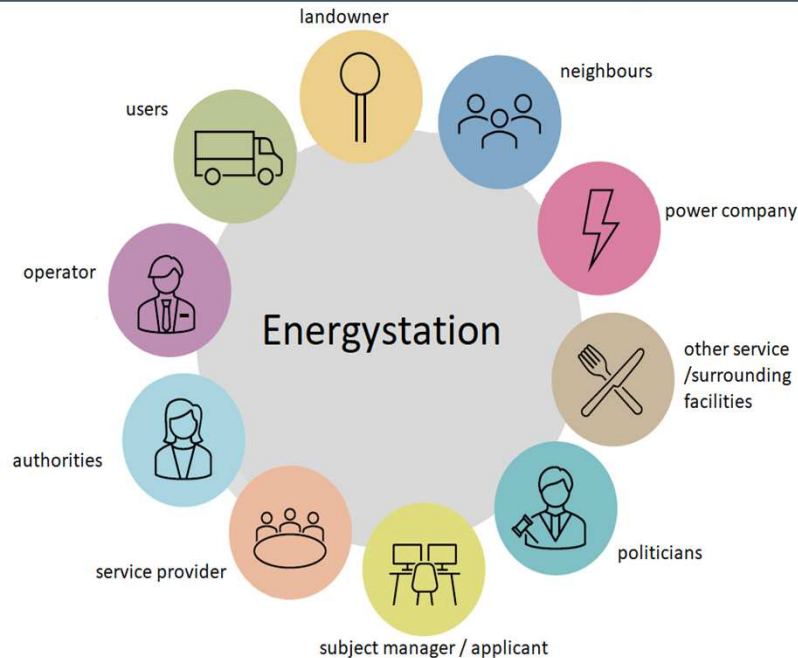
Service provider: normally an operator that owns several stations. May be traditional players from the fuel market, but also "new" players offering charging, biogas or hydrogen.



Subject manager/responsible applicant: An approved consultant who assists the operator in the planning or construction case process. Regulatory plans must be drawn up by an approved professional consultant. Construction cases can be submitted by private individuals, but normally this will be handled by the operator and then in collaboration with a professional consultant.

Who to include and how to organize the process?

Stakeholder process



Who to include and how to organize the process?



Authorities: Superior authorities monitor that the plan is in accordance with overall goals and guidelines. Several of the superior authorities have the right to object, and can stop proceedings if they disagree with the measure. The most important authorities in such cases are:

- State administrator
- Counties
- The municipality as planning authority, and building case manager
- Directorates responsible for electricity supply, floods, landslides, stormwater, and Directorate for Community Safety and Preparation
- Norwegian Environment Agency (pollution)
- The Road Administration, road authority



Grid company: supplies power to the energy station. Has a license for the supply of electrical power and must provide assurance of an adequate power supply. It is not possible to provide sufficient or the desired amount of power in all places. The owner of the initiative must normally pay for the necessary establishment of the power supply through a construction grant.

If access to power is limited, it may take a (long) time to establish sufficient supply. In the event of a request for access to power over 1,000 kW, the grid owner must notify and consult the regional grid owner, who in turn can refuse establishment.



Neighbors: Private individuals, companies or public bodies. Must be heard as part of the planning and construction work. Placing an energy station close to built-up areas can create major conflicts with neighbors, which can create a long and challenging process. There will then also be higher requirements for, among other things, safety, noise and dust. Areas close to children and young people should also be avoided.



Politicians: When the proposer and the administration (case manager) in the municipality consider a plan to be complete, the plan is put out for consultation and public inspection. It is the politicians who process the draft plan and can decide to put the plan out for public inspection or send it back to the administration to make changes. They can also decide to reject the plan.

It is actually working!



Lotta Möllerfalk

lotta.mollerfalk@innlandetfylke.no

+47 453 92 684

Based on all above:

When we find potential, suitable locations we typically arrange a physical inspection, where we invite participants broadly. We try to get many parts of stakeholders covered to ensure local support, acceptance, and thus reduction of time spent on objections.

The purpose is rather to arrange an arena for different actors to meet, connect and start discussions, than to view the actual spot. We already know that it is a good location.

After this – our project typically takes a step back. We continue to support in the process if there is a need, but mostly other parts of the value chain take over the reins from here.

We are a catalyst, we break down barriers and speed up the process. Other parties build the stations!

Thank you for your time!