

Construction-Site (train) vehicle of the future

Challenge:

We are in the process of renewing our construction site fleet, we want them to run on non-fossil energy

Goal:

Create a model, prototype, design of a new generation of construction site train vehicles, that run on non-fossil energy and can (at least partially) operate without connection to electrical lines.

Description:

Today our construction site fleet (120 locomotives) run on Diesel. For the next generation of trains, we want to shift to non-fossil energy (batteries, H2, gas, super caps, ...). The solution however needs to run under any weather condition and on non-electrified lines, e.g. new tunnels and tracks and may be cut off from daylight (and an exterior power supply) for days. To this end we are looking for partners which offer solutions that may help us to go this way. These might be modular drive trains / power trains, means of drastic weight reduction or completely new angles and solutions.

Hurdles (that we see today):

- Weather conditions in Switzerland (heat, cold, snow, rain, clouds)
- Modularity
- gas station redesign
- logistics
- construction of “fueling” facilities to supply third parties
- Maintainability and usability