Electric Mountain Locomotive (EML)

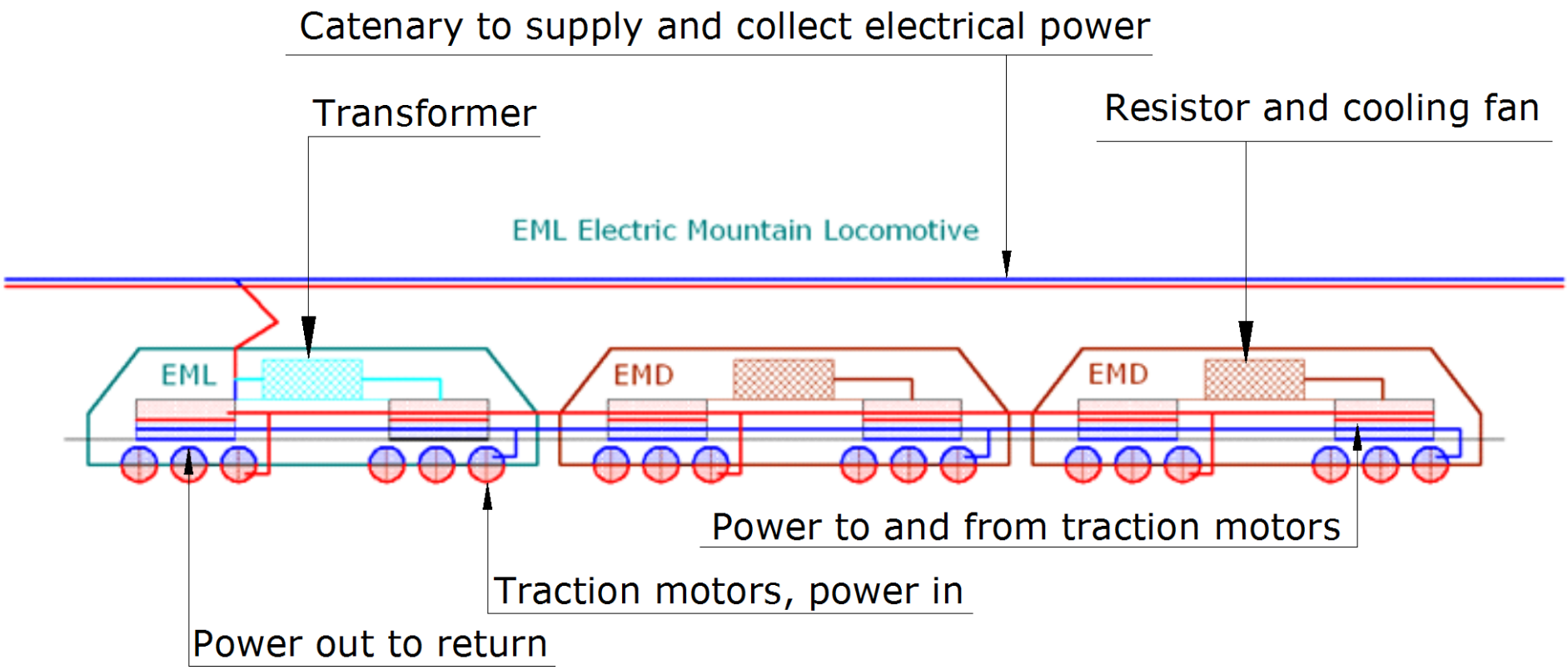
- The original intent for this electric locomotive setup was for the Cajon Pass in southern California. (1992 for the BNSF)
- This electrified freight corridor would run from Barstow CA to the port of Long Beach CA and visa versa.
- Much power is required to move the trains over the Cajon Pass, so, with this proposal we can re-use the regenerated electrical power on the down hill run, therefore to help to feed the power need by other up-hill moving trains on the pass route.
- In addition, this proposal will also help to reduce diesel exhaust gases in the Los Angeles region; a well desired goal.

- Des by R.N. in the early 90ies in Kauai HI
- HSR EML

Explanation for the electrical power flows from and to the catenaries. The EML will always be the lead locomotive. The EML will be coupled on the point of origin and de-coupled at the point of destination. In either case the EMD's will further transport the trains along none-electrified corridors.

- Schematics of the EML – EMD
- Red = Electrical power in to the locomotives from the catenary.
- Blue = Electrical regenerated power out during braking from the EMD and the EML to the Catenary.
- Cyan = Transformers, they will process the power to the respective needed voltage and cycle.
- EMD diesel generated electrical power will flow to the traction motors as required (i.e. during a startup)
- Under certain times the catenary electrical power will provide all the power to run the train (i.e. after a startup) During this time the Electrical Power will flow from the catenary via the EML to the EMD traction motors.
- Power supply transmission lines could often follow along the rail lines right of way RoW; this would help to earn money from the RoW, also a join venture between the railroads and the power distributors. The towers would be in the right of way and over the track segments.
- This should be likely, since we will build relative large towers for the 345 KV to perhaps 500 KV main distribution lines.
- In addition we may also install a fiber optic trunk line along the CHSR right-of-way. This will be used for CHSR signaling, CHS communications and to provide for a fee common public access. Recommended for light-rail in Kauai in 1992

EML = Electric Locomotive and EMD = Diesel Locomotive



Pumped Hydro Electric Power

During electric power surplus we pump water from below to the storage basin and during peak power demand we reverse the flow and generate electricity again.