

INPUT

MODELING FRAMEWORK

Car fleet

- share of BEVs
- share of long-distance drivers
- traffic load

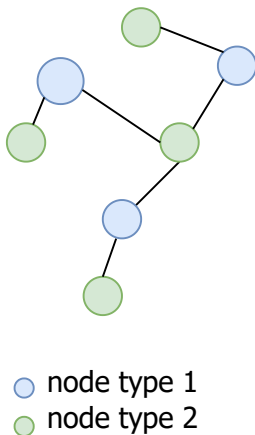
BEV technology

- energy consumption
- driving range
- charging capacity

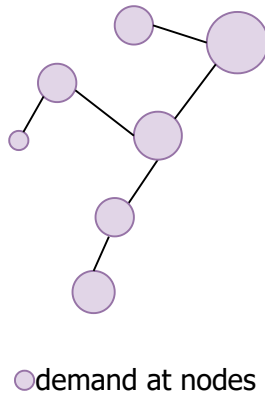
Infrastructure specifics

- peak capacity of charging station
- grid constraint
- infrastructure costs

Highway network topology



Demand calculation

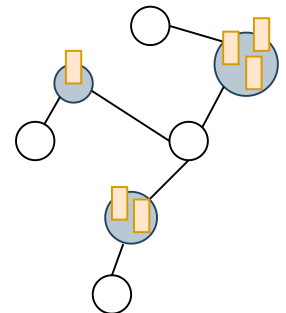


HighCharge
mixed-integer linear program

- mixed-integer linear program
- node-based allocation approach
- consideration of traffic flow in highway network

Allocation and sizing of charging infrastructure

● charging points
■ charging stations



OUTPUT