H2 MOBILITY is a JV by 6 industry leaders

supported by 6 OEMs and german government
OUR MANDATE

H₂ MOBILITY
WASSERSTOFF TANKEN

SELCET > BUILD > OPERATE

NETWORK DELIVERY

HYDROGEN
ROADMAP FOR HYDROGEN INFRASTRUCTURE IN GERMANY

**2006-2015**
- Build the technological basis
- **GOAL**: 50 Stations

**until 2020**
- First nationwide network of stations
- **GOAL**: 100 Stations

**until 2025**
- Support the market development
- **GOAL**: ~400 Stations

**until 2030**
- Commercial Rollout
- **GOAL**: ~1000 Stations

**UNCONDITIONAL TO VEHICLE SALES AND DEMAND**

**CONDITIONAL TO VEHICLE SALES AND DEMAND**

+ ?

**tbd.**
2019: First Nationwide Network of 100 HRS

Focus on 7 metropolitan regions Berlin, Nuremberg, Munich, Stuttgart, Frankfurt, Rhine-Ruhr, Hamburg and the connecting Highways

2020+: Demand based prioritization

- we tender some stations to regional consortia allowing projectable demand
- the location with the highest demand commitment gets an additional station first
September 2019 // 75 STATIONS LIVE AND 27 IN IMPLEMENTATION

**Today**
75 stations live, 27 projected

**2020**
100 stations live

**2021**
Regional growth to 120-140
WE ARE PREPARED FOR FURTHER GROWTH!

Capacity for 40,000 FCEVs

Capacity for 15,000 FCEVs

400 FCEVs on the road

TODAY

Q4 2019
100 LOCATIONS – HOW MANY CUSTOMERS COULD SWITCH TO FCEV?

Analysis of the Reiner-Lemoine-Institute

Guiding Parameters:
• An HRS is within 5 km to home
• 90% of long distance travels up to 400 km are possible
• A detour of 5 km is accepted

→ 100 H2-Fueling locations enable 6,27 million private customers* to switch to an FCEV for their mobility demands

* based on whole population
KEY ADVANTAGE ENERGY DENSITY

FCEV: Mercedes GLC F-Cell
H₂-Tank: 142 kWh
100 kWh in 2 minutes

BEV: Tesla Model S
Battery: 100 kWh
100 kWh in 60 minutes (@ 100 kW)

H₂ Tank + H₂: < 100 kg

Battery > 600 kg
FOR A 100% CO2-NEUTRAL MOBILITY BATTERY AND FUEL CELL ELECTRIC VEHICLES WILL NEED TO CO-EXIST

Bubble size representing the relative annual energy consumption of this vehicle type in 2013

Weight

10,000 t

1,000

100

10

1

0.1

Average mileage per day/trip

10

100

1,000 km

FCEV

Bio and H2-based synthetic fuels

BEV

Small cars, urban mobility

Light commercial vehicles

Medium to large cars, fleets and taxis
STRENGTHS OF H2 CAN BE BEST UNDERSTOOD BY LOOKING AT USE CASES

Clever Shuttle
Clever and climate friendly: 50+ Toyota Mirai, Hyundai ix35 and Nexo for RideSharing in Germany

StreetScooter
100 FCEV transport vehicles for Deutsche Post / DHL with 500+ km range until 2021

Anheuser Busch
Brewery AB orders “up to 800” of hydrogen trucks from zero-emission startup Nikola
THE APP & WEBSITE H2.LIVE

H2.LIVE
The app for emission-free driving

Current & future locations, route guidance and 24/7 Live-Status (as available) of 700 bar Hydrogen Refuelling Stations

Foundation for a european platform to enable easy and borderless hydrogen refuelling

Customer portal for applying for a Fueling Card & insight in refueling data; Daily News around hydrogen Industry
TANKESCÖH2ÖN!