2018

Deployment of charging infrastructure for public transit

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ABB in sustainable transportation
eBus: Time and usage is primordial to a transit agency/operator

Charging out of reg. service (in depot)

Customer expecting 5 to 8 hours

Charging in service (terminal or “on route”)

Customer expecting minutes at terminal, seconds in route

AC or DC chargers 10 KW–150KW

DC chargers 150KW – 1MW

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June 27, 2018
Slide 3
Operation is the key factor for selecting the right technology

Other important elements:
• Fleet size
• Common interface standard product
• Power demand impact
• Capital cost versus total cost of ownership
• Real estate
• etc.

Legend:
- Depot Charging
- Terminal Charging
- On route charging
Standardization

Ex. Pan-canadian e-bus demonstration project

- **Demonstration** project of automatic fast charging for electric buses at terminals
- Based on « OppCharge » connection standard ([https://www.oppcharge.org/](https://www.oppcharge.org/))
- **World premier** for a demonstration project involving few cities with different bus and chargers OEMs
- Under the leadership of **CUTRIC**, project with 18 members including 3 cities (Brampton, Newmarket & Vancouver) in 2 provinces, 2 electric bus manufacturers (New Flyer & Nova Bus) and 2 charging equipment manufacturers (ABB & Siemens) and research and universities org.
Limiting the impact on the grid

Ex. TOSA project – Geneva Line 23

- A technology allowing the elimination of peak current caused by flash charge
- Allow partial recharge at bus stops in 15-20 seconds
- No impact on the electrical grid, reducing electrical costs (reduce demand pricing charges)
- Allow a better integration within the city (smaller input current feed required).
- Elimination of wires for trolleybus applications
- Ideal for electrification of high frequency / high capacity network (BRT)
Digitalization

Ex. project « Alfred Nobel »

- Initiated in 2017, between FP Innovation, Technoparc Montréal, Ericsson and ABB
- Evaluation of a new mobility service, on demand, for the first/last mile. Concept around an autonomous shuttle, fully electric, connected, and adapted to Canadian winter conditions.
- Local collaborative project with the desire to involve world class companies and act as incubator for local & regional « startups »
- First phase of the project will be in the Technoparc MTL
- « Living lab » to see and live the experience.