



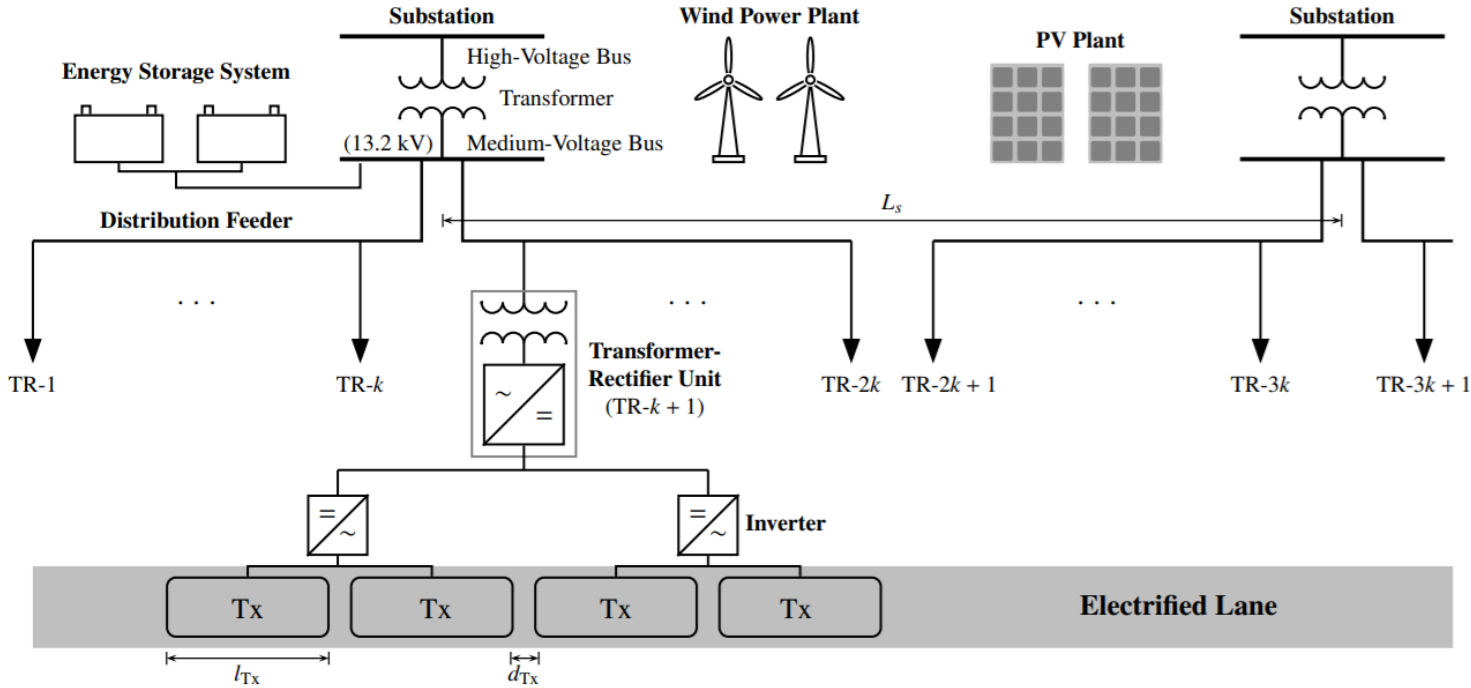
NSF Engineering Research Center

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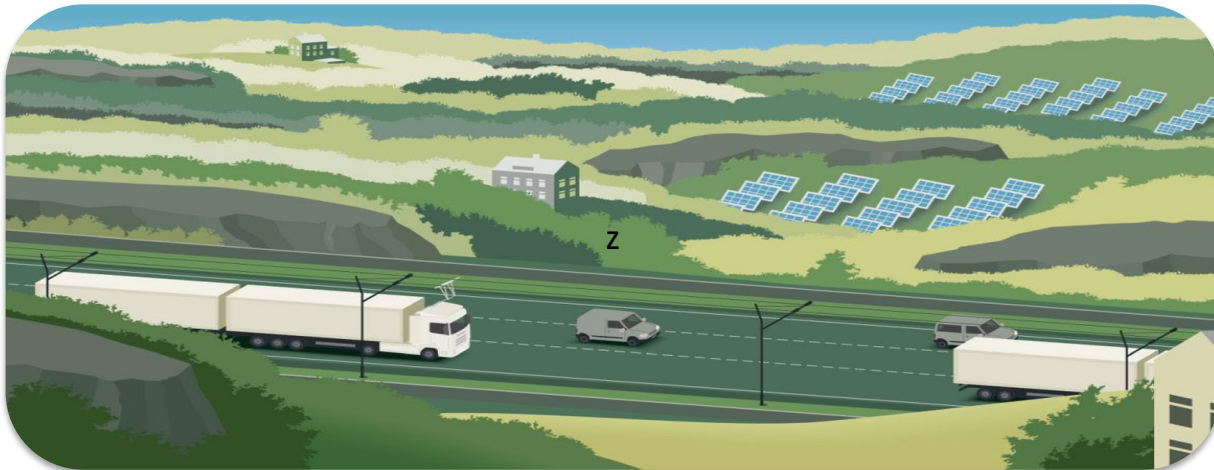
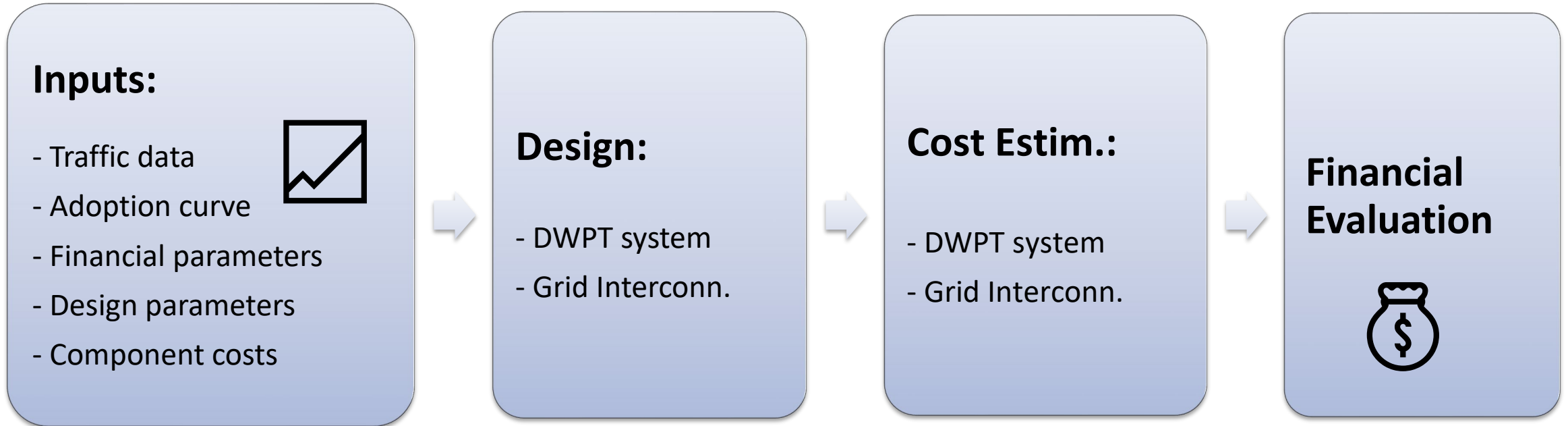
CERV Panel Session 11
February 7, 2023

DWPT Checks All the Boxes

- High Cap. Exp.
- Low technology readiness level
- Technical Stds. not in place
- Investment risk



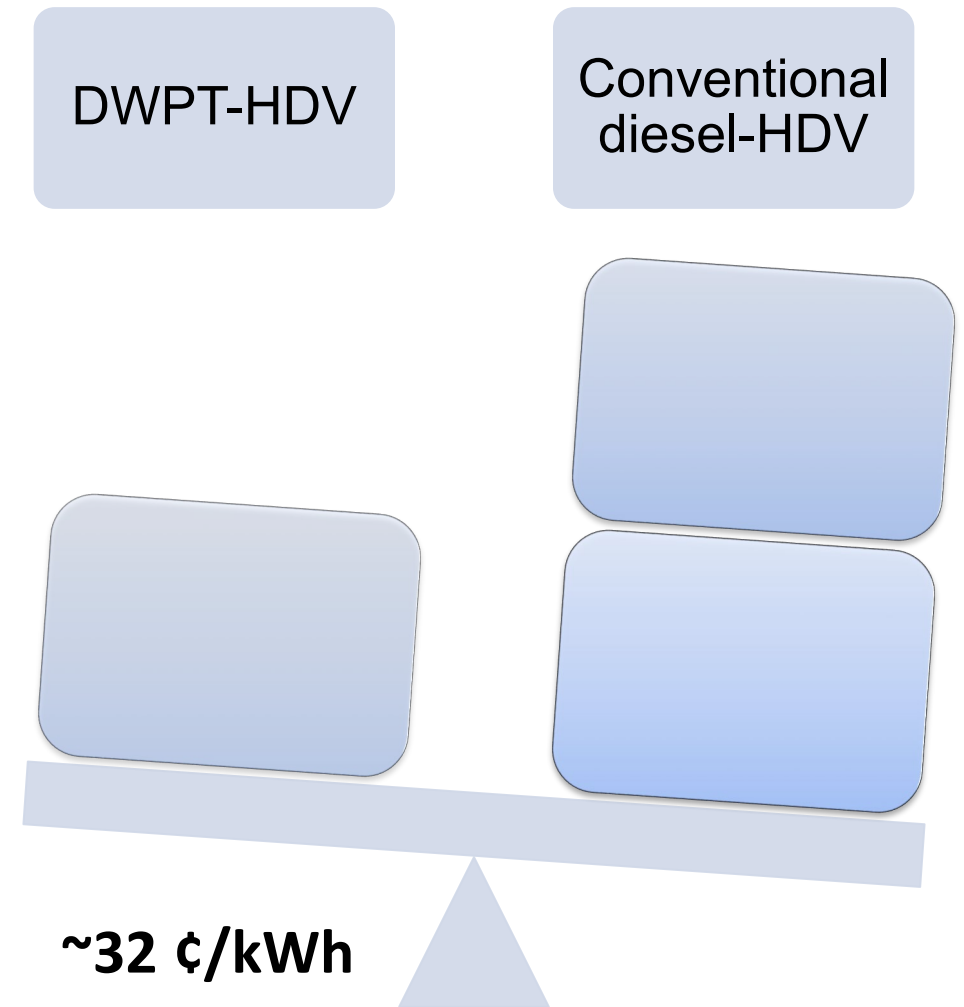
Data-Driven Techno-Economic Assessment



DWPT System Operator

Does it Make Financial Sense?

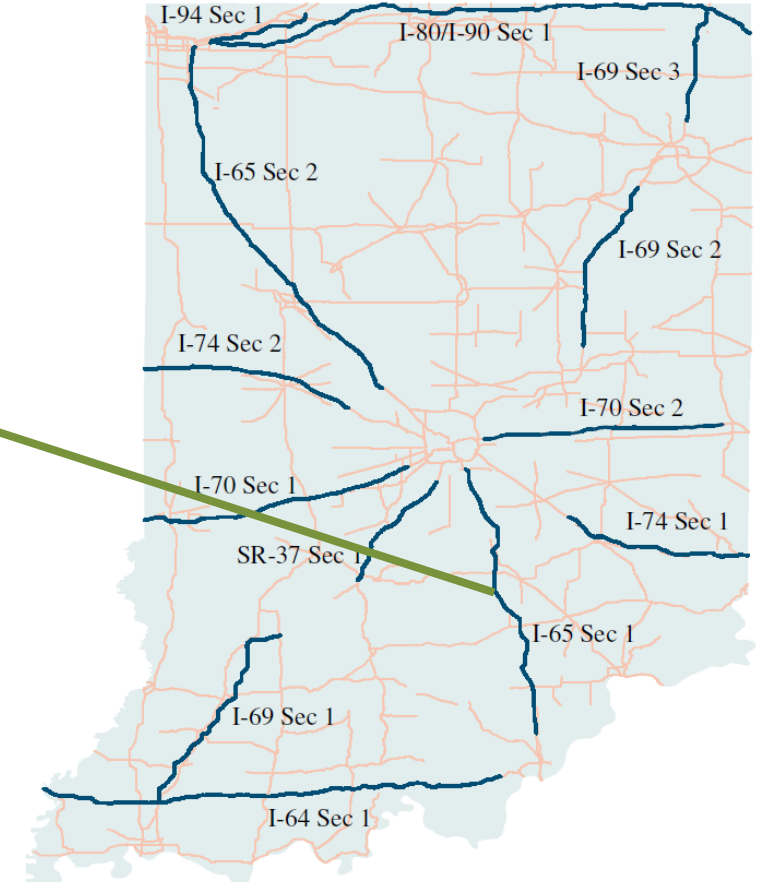
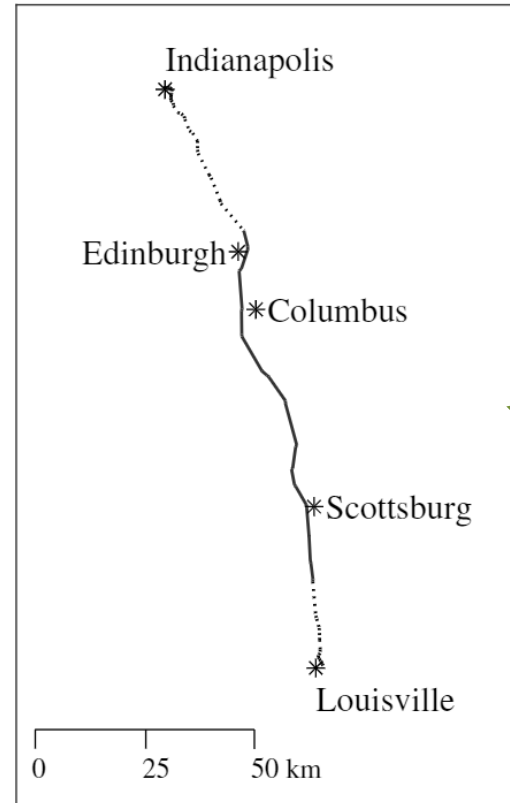
- DWPT roadway operator perspective:
The *levelized cost of the roadway (LCOR)* = the minimum electricity selling price (\$/kWh) that ensures profitable system implementation.
- Fleet operator perspective:
 $TCO\ of\ DWPT-HDV <$
 $TCO\ of\ diesel\ HDV ?$



Indiana Case Studies

- Traffic data-driven methodology
- All major IN interstates
- Heavy-duty freight corridors
- Adoption scenario

- CAP.EX.: ~\$2.5M/lane-km
- Net present value:
~\$2–5M/lane-km
@ 25¢/kWh
30–40 yrs lifetime



Key Takeaway: Technology Adoption vs LCOR

