

SUSTAINABLE ENERGY WEEK 2024

BUILDING RESILIENT & JUST ENERGY SYSTEMS

16-20 SEPTEMBER 2024 | PALAIS DES NATIONS | GENEVA



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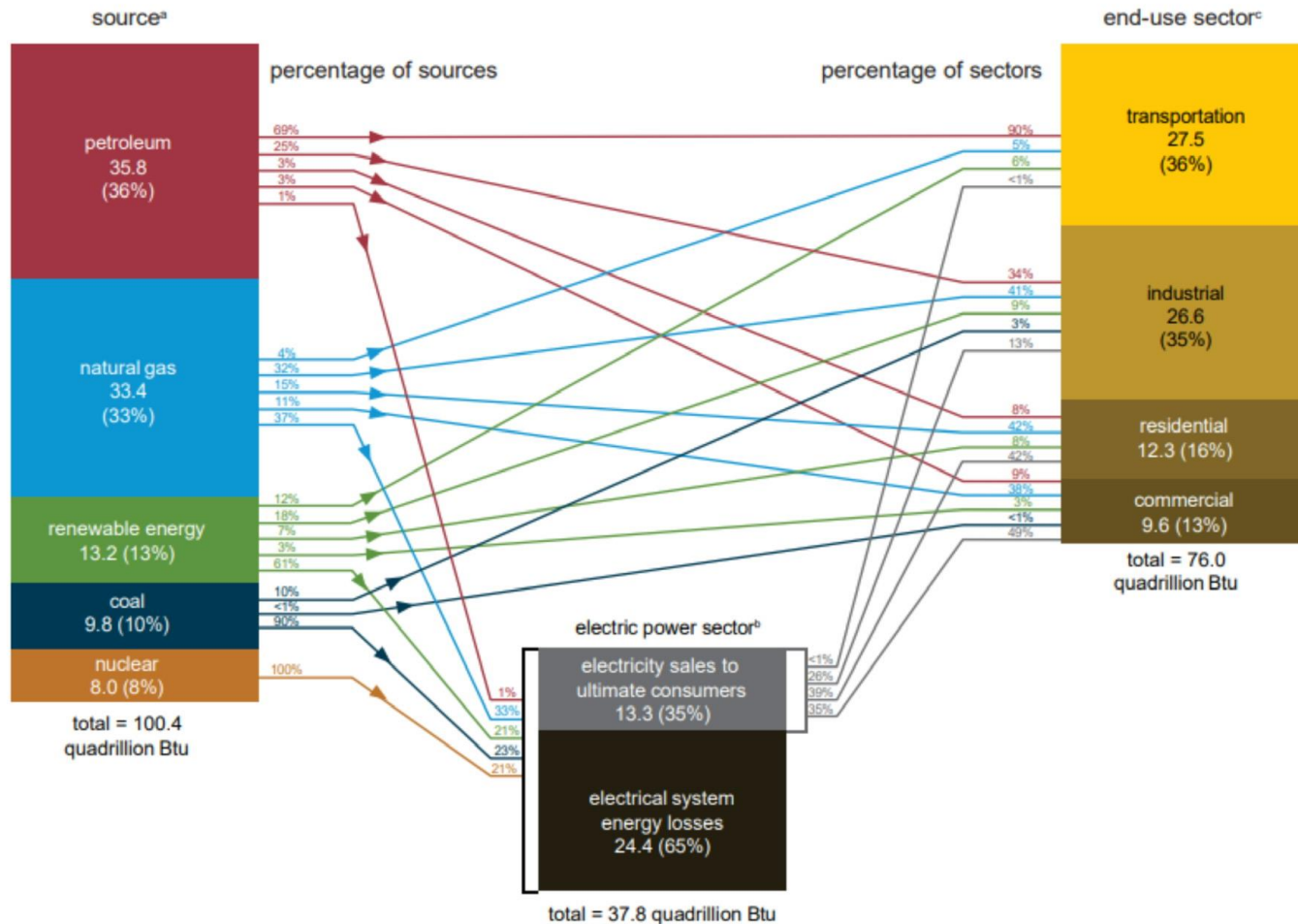
E-Mobility; Electric Grid Impacts



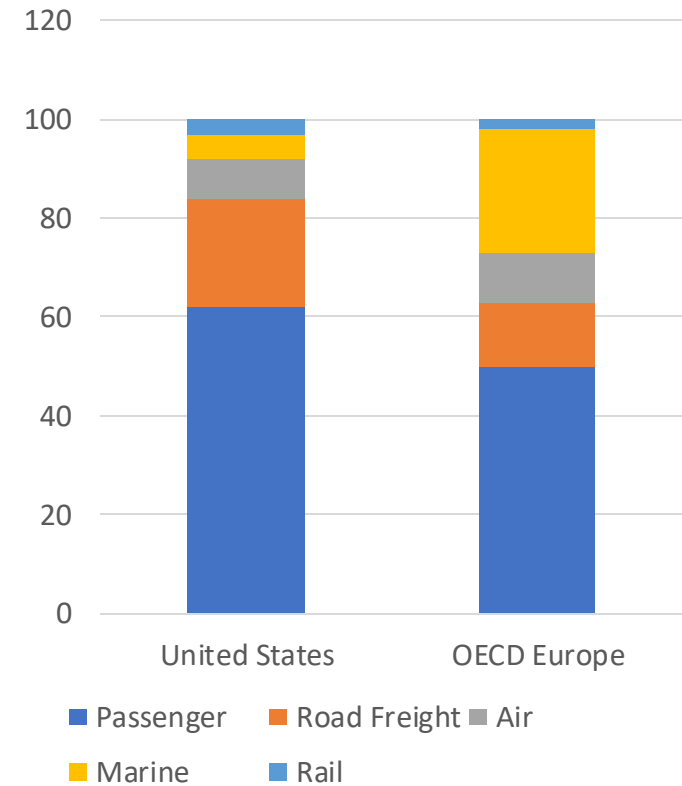
Energy Consumption

U.S. energy consumption by source and sector, 2022

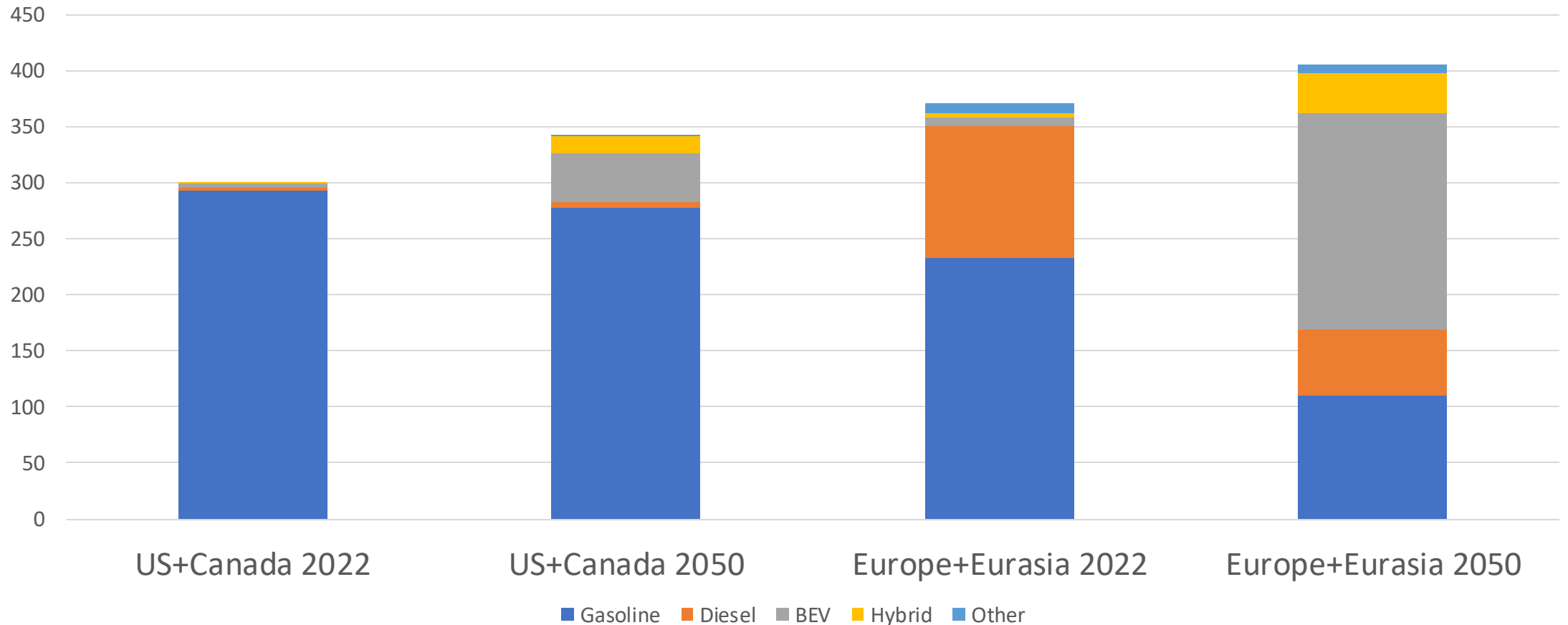
quadrillion British thermal units (Btu)



Transport End Use Energy by mode



Projected Vehicle Stocks North America and Europe/Eurasia



Other Considerations

- Public Charging Infrastructure location and scale
 - Host (big box retailer) native load 400-500kw
 - Charging capacity: $4 \times 350\text{kw} + 8 \times 150\text{kw} = 2.6 \text{ MW}$
- Public charging pricing and competition
- Need for managed charging
 - Avoid the 11 pm/12 AM problem
 - Match charging to times of surplus (increasingly during the day)
- Capturing the storage value inherent in BEVs (V2G technology)
 - Inverter integration
 - Black start capacity?

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Thank you!

Jim Robb

Chair, Group of Experts Cleaner Electricity Systems

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The views expressed are those of Jim Robb and do not necessarily reflect the views of the United Nations

