

# Connecting Through Clean Power:

THE CHARGE OF FERRY ELECTRIFICATION ACROSS NORTH AMERICA



# ~~The Good, The Bad, & The Ugly~~

THE

JUICE

THE

LAW

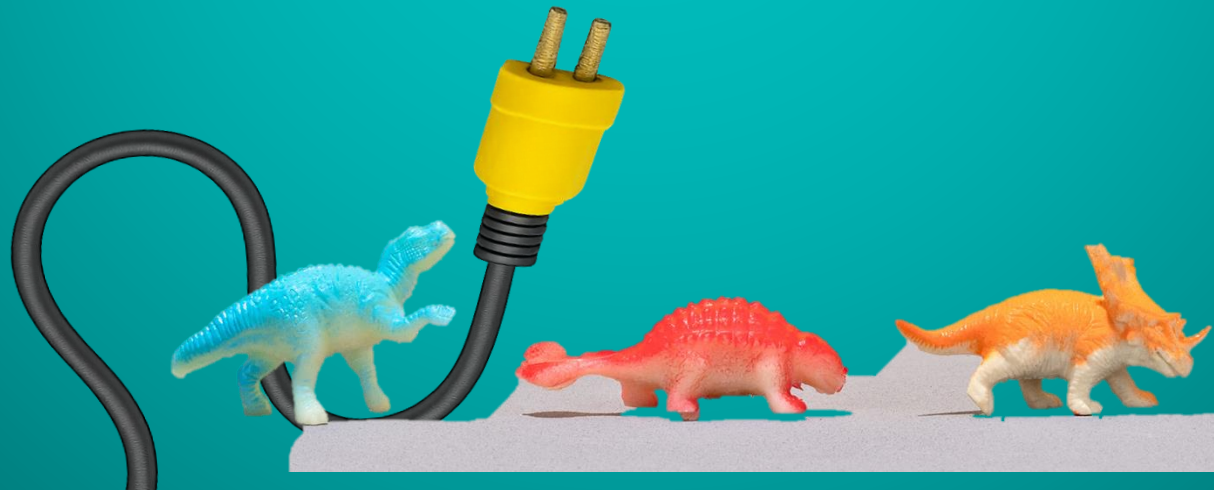
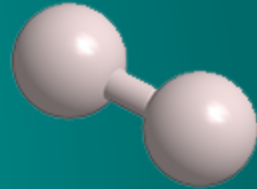
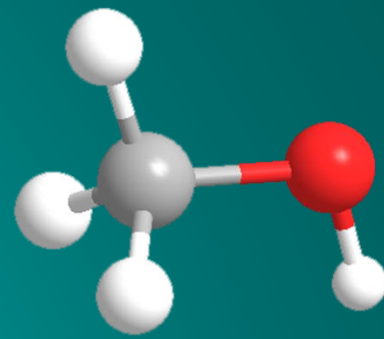
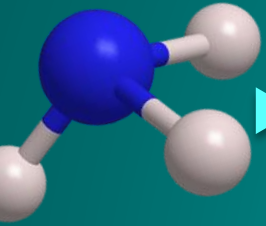
THE

MONEY



# What is worth the SQUEEZE?

- ▶ Power Density and Safety of Energy Storage Systems
- ▶ Shoreside Infrastructure and Grid Capabilities
- ▶ Power Generation Capability of Fuel Cells
- ▶ Supply and Acceptance of Alternative Fuels



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# Every Drop Counts

- ▶ HYBRID today...zero emissions SOMEDAY
- ▶ Design Implications
- ▶ Operational Hurdles
- ▶ Port Feasibilities

# Charging Ahead

- ▶ Connecting Ports to Plug
- ▶ Connecting Power to Plug

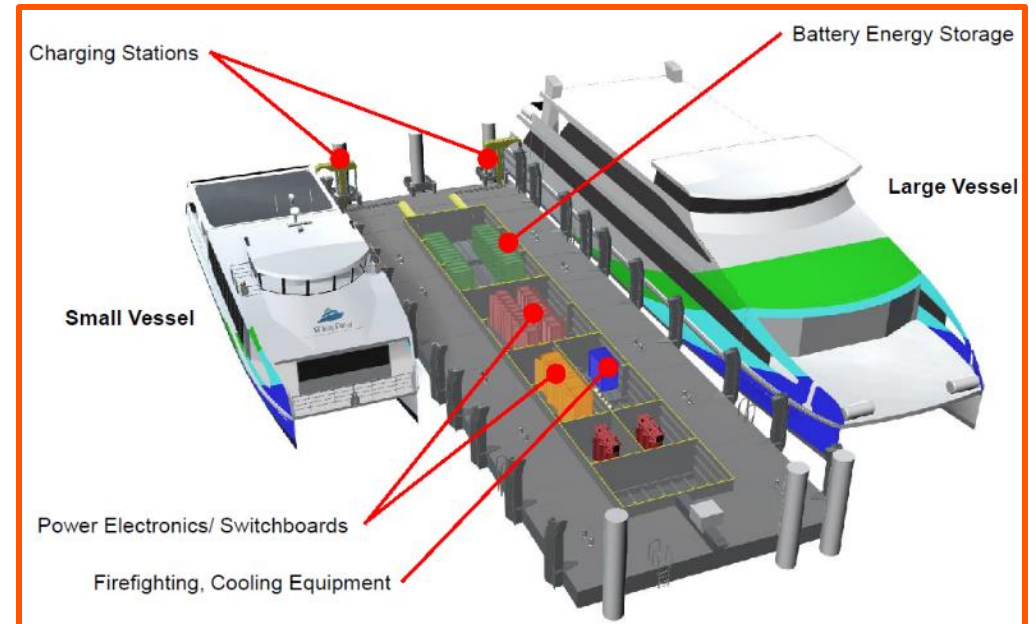


Image courtesy WETA Sept 12, 2023 Board Meeting: <https://weta.sanfranciscobayferry.com/sites/default/files/weta-public/currentmeeting/b091223aDECK.pdf>

# JUICE



# Charting the Course

Regulatory pressure is accelerating change

- ▶ Local vs. National
- ▶ California vs. National
- ▶ U.S. vs. IMO

Regulations vs. Technology vs. Affordability

Public-Private Partnerships

Keeping up with the JONES Act



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# Financing the FUTURE

GRANTS go to Government Run Ferries First

▶ Prime Private Projects – don't move ahead quickly

Inexperience drives RISK and COST

NOT set up for Grid Supplements



# MONEY

# Connecting the Design Dots

- ▶ Hull Materials
- ▶ Propulsion Systems
- ▶ Solar Panels
- ▶ 3D Printing
- ▶ AI



**THE END**

**THANK YOU**

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