

GGZEM adviser Charlie Walther volunteers with design and construction of a traditional wooden tall ship, *Matthew Turner*, which will serve as an experiential learning platform for Bay Area youth. This 132-foot, two-masted sailing vessel looks 150-years old but has state-of-the art hybrid technology that can charge its batteries with solar panels and while under sail through generators connected to its propellers. All electrical needs on the ship will come from the batteries, including the twin 265-hp electric motors.

## TECHNICAL SPECIFICATIONS

132' Overall Length, 25' Beam & 38  
Berths for voyaging

11 Sails (7,200 sq ft), Height of main  
mast: 100'

Displacement: 175 tons

Constructed with Douglas Fir, Oregon  
White Oak and Bronze Fastenings

Two 200 KW electric motors  
regenerating power under sail

Two 45 KWH banks of Lithium batteries  
& Two 265 KW bio-fuel generators



*Far from the realm of theory, our team lives and breathes this work. We feel fortunate to have the opportunity to pursue our passions while making an impact on an industry that has touched our lives in meaningful ways. Want to get involved? Reach out and join us on the journey to a cleaner, brighter future.*