
TIG/m ViaTran
TIG/m SELF-POWERED TRAMS
BATTERY / HYDROGEN HYBRID
ALL POWER CARRIED ON-BOARD
NO OVERHEAD WIRE
NO CHARGING AT STATIONS
TIG/m
Modern Street Railways
TIG/M, LLC
9160 JORDAN AVE.
CHATSWORTH, CA 91311
(818) 709-8500
brad@tig-m.com

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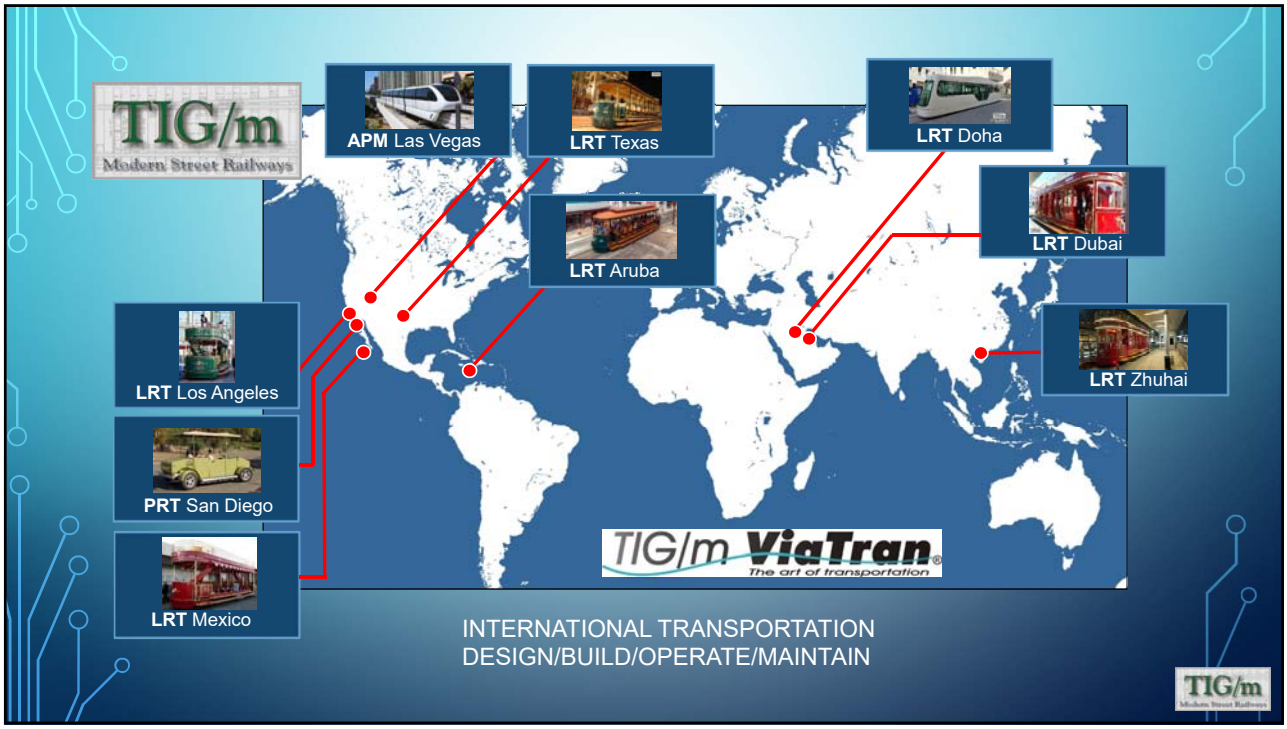
TIG/m
Modern Street Railways
APM Las Vegas
LRT Texas
LRT Doha
LRT Dubai
LRT Aruba
LRT Zhuhai
LRT Los Angeles
PRT San Diego
LRT Mexico
TIG/m ViaTran
The art of transportation
INTERNATIONAL TRANSPORTATION
DESIGN/BUILD/OPERATE/MAINTAIN
TIG/m

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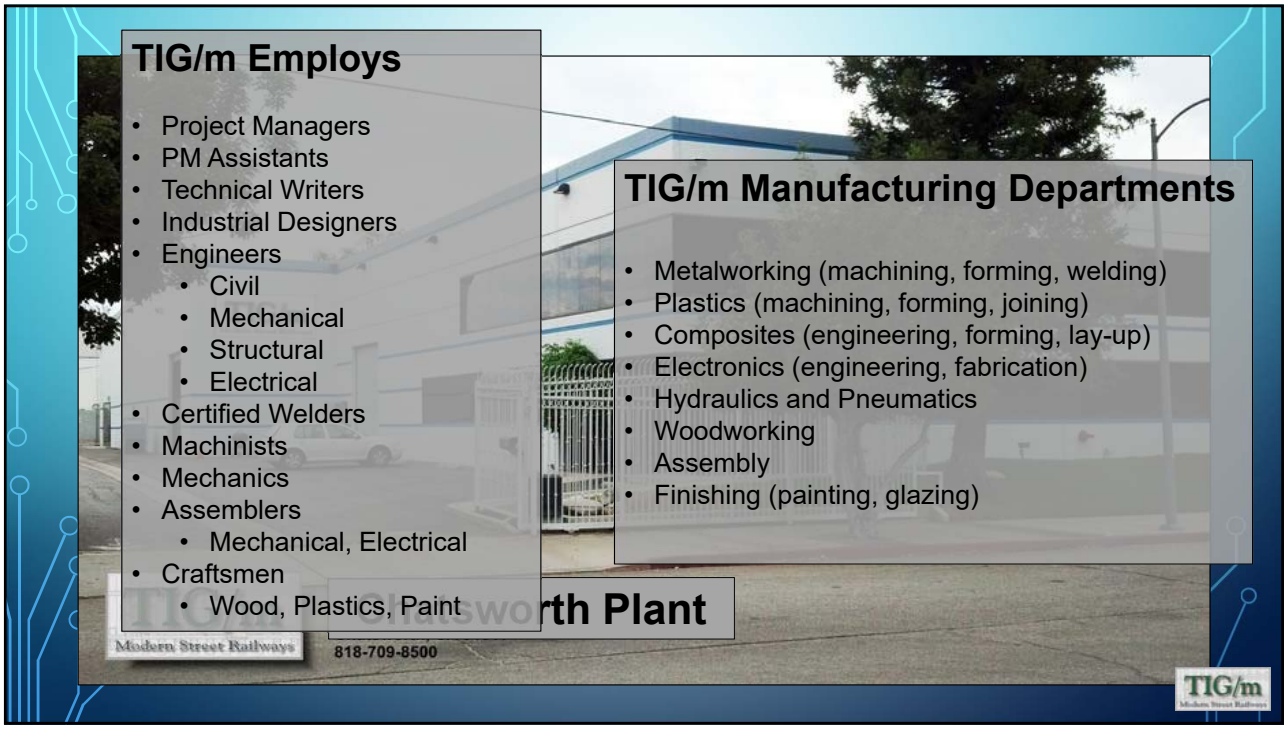
TIG/m Employs
• Project Managers
• PM Assistants
• Technical Writers
• Industrial Designers
• Engineers
  • Civil
  • Mechanical
  • Structural
  • Electrical
• Certified Welders
• Machinists
• Mechanics
• Assemblers
  • Mechanical, Electrical
• Craftsmen
  • Wood, Plastics, Paint
TIG/m Manufacturing Departments
• Metalworking (machining, forming, welding)
• Plastics (machining, forming, joining)
• Composites (engineering, forming, lay-up)
• Electronics (engineering, fabrication)
• Hydraulics and Pneumatics
• Woodworking
• Assembly
• Finishing (painting, glazing)
rth Plant
Modern Street Railways
818-709-8500
TIG/m

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2nd Plant
OUTGROWN
TIG/m
TIG/m Engineering Dept.
TIG/m Chatsworth –
Design/Engineering/Manufacturing
TIG/m

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TIG/m ViaTran
TIG/m MANUFACTURES:
BATTERY DOMINANT SERIAL-HYBRID
SELF-POWERED ELECTRIC TRAMS
TIG/m

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Heritage-style open, closed, and convertible
Single and Double-deck Trolleys
TIG/m
Modern single-body 100 passenger Trams
TIG/m ViaTran
Modern articulated 200 passenger Trams
TIG/m

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TIG/m Streetcars are true zero-emission electric vehicles. Because they are steel-wheeled vehicles there is no **non-tailpipe pollution** (tire and brake dust).

Assuming an average passenger occupancy of 50%, each TIG/m MRV-3A Streetcar will replace 25 cars on the road. During an average passenger service day a streetcar will Travel about 300 miles. That means that for each TIG/m Streetcar there will be a reduction of about **7,500 automobile vehicle miles traveled (VMT) per day**.

For a fleet of 5 = -37,500 VMT/day

For a fleet of 10 = -75,000 VMT/day

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Advantages of Steel Rail transit systems over Rubber Tire transit systems:

- **Steel wheel/steel rail transit vehicles experience only 15% of the rolling resistance of rubber-tired vehicles. This translates into lifetime propulsion energy savings of over 50%.**
- **Rail transit vehicles last, on average, four times longer than rubber tired transit vehicles.**
- **Rubber tired transit systems produce hazardous non-tailpipe pollution in the form of tire and brake dust. Even if they are electric, they still pollute.**
- **Tracks structurally improve the street surface, extending its usable lifetime.**
- **Published statistics show that real estate values within ¼ mile each side of a permanent guideway (track) increase, on average, by a factor of 4 times that of citywide averages. This does not happen with bus lines.**

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Advantages of Self-Powered streetcars over catenary powered systems :

- **Wayside power systems (including passenger station charging systems of so-called "wireless" streetcars) represent, on average, 30-50% of the cost of streetcar infrastructure. (in some cases much more)**
- **Wayside power system represent a "single point failure" mode, if the wayside power system fails, all vehicles are immobilized. Not so with individually powered trams.**
- **Wayside power systems have a greater impact on the built environment than the tracks or the vehicles themselves.**
- **Eliminating wayside power represents the removal of the two major impediments to implementation of new streetcar lines:**
  - ✓ **High Cost of Infrastructure (both short and long term, both CAPEX and OPEX)**
  - ✓ **Resistance of the public to visible power lines, poles, and substations.**

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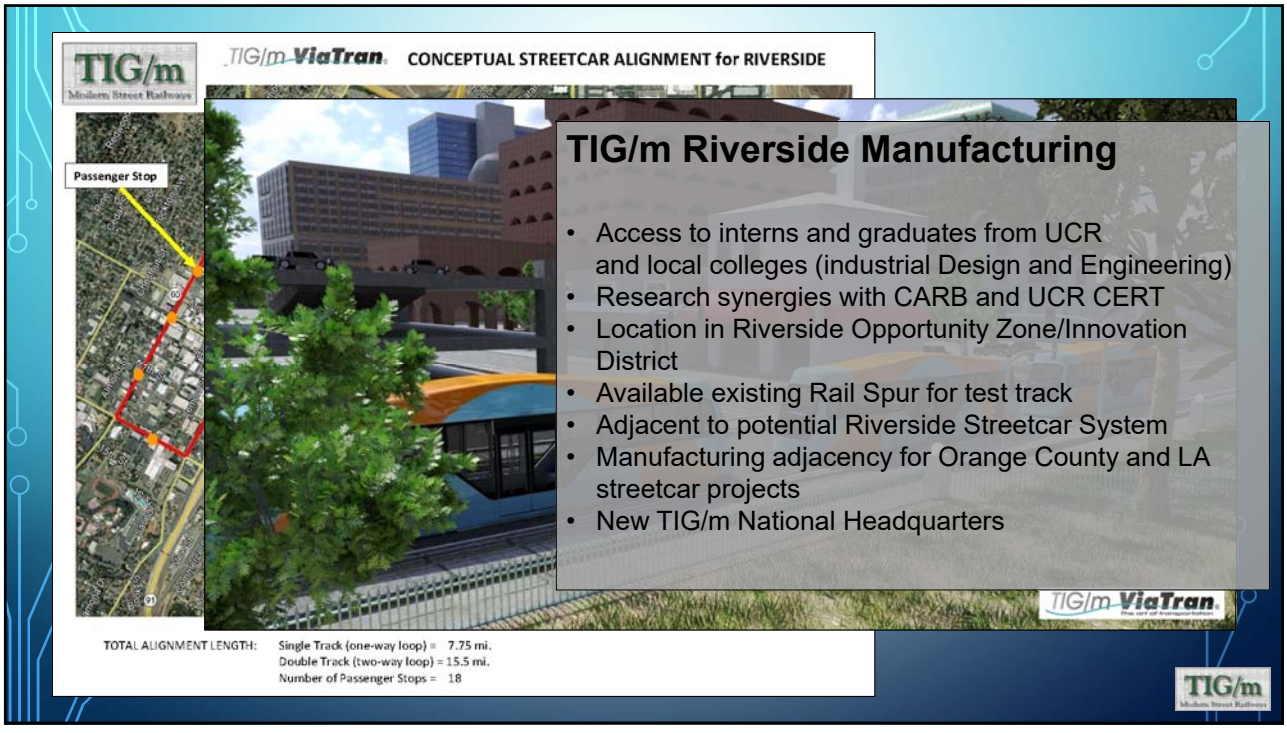

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MODERN TRAMS
TIG/m MRV-3AC single-body Modern Streetcar.
(pass.cap. 100. 33 seated + 67 standing)
TIG/m

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TIG/m ViaTran
TIG/m

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PRODUCTS AND SERVICES

TIG/m provides turn-key street railway system design, construction, and vehicle fabrication

- Demand Analysis/Feasibility Study
- Civil Design of track alignments
- Track Engineering
- Maintenance Facility Design
- Design and Procurement of track, rail hardware, and special-work (turnouts, etc.)
- Track Construction
- Design and Fabrication of streetcars (Trams)
- Operations and Maintenance

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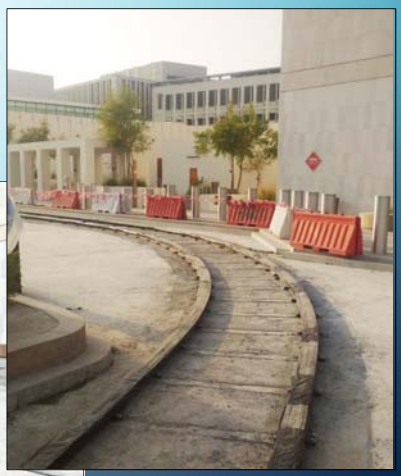
TRACK INSTALLATION



- Non-electrified
- Low impact
- Rapid and inexpensive installation

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TRACK INSTALLATION

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HYDROGEN FUELING SYSTEMS

On-site hydrogen production

Eliminates high cost of transportation, distribution, and transfer losses

Electrolysis of H^2O

Compression and Storage

Dispensing System

TIG/m Streetcar

Depending on local cost of electricity, H^2 costs can be as low as $2-4 GGE

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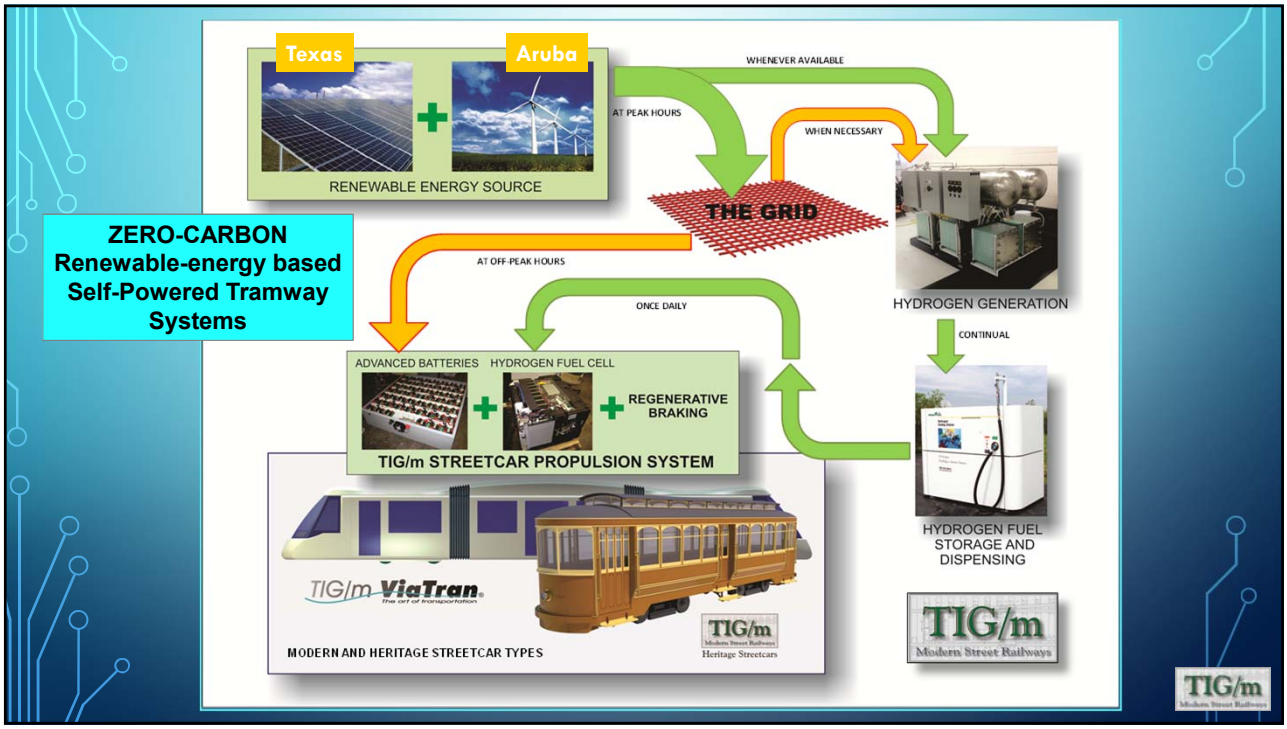
Texas
Aruba
RENEWABLE ENERGY SOURCE
WHENEVER AVAILABLE
AT PEAK HOURS
WHEN NECESSARY
THE GRID
HYDROGEN GENERATION
ZERO-CARBON
Renewable-energy based
Self-Powered Tramway
Systems
AT OFF-PEAK HOURS
ONCE DAILY
CONTINUAL
ADVANCED BATTERIES
HYDROGEN FUEL CELL
REGENERATIVE
BRAKING
TIG/m STREETCAR PROPULSION SYSTEM
HYDROGEN FUEL
STORAGE AND
DISPENSING
TIG/m ViaTran
MODERN AND HERITAGE STREETCAR TYPES
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Modern Street Railways
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Thank you for your interest in our street railway systems
We hope we can be of service to you
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