

IJGlobal Transport ESG Award – N America – Forum Mobility

Angus Leslie Melville

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Forum Mobility – California Drayage was described by one of the judges as an “innovative solution with clear social and environmental outcomes” making it a shoo-in to win the IJGlobal Transport ESG Award for North American.

Another judge said of the transaction: “Forum Mobility has measurable results and demonstrable success achieved through an innovative approach, alongside evidence of a clear impact within certain, specific elements of an area within ESG. Decarbonising the trucking sector is clearly quite innovative with its own specific challenges.”

This is an excellent example of innovation led by an organisation – CBRE IM – that has all the skills under one roof to impact massive change in the transport sector to remove localised pollution from drayage... the short-haul trucking of freight from ports to transloading facilities.

Forum Mobility was founded in 2021 and is focused on electrifying trucking of freight from ports, forming a \$400 million JV in January 2023 with CBRE IM and minority shareholder Homecoming Capital to develop and operate charging depots and a fleet of electric trucks to service the ports of Los Angeles, Long Beach and Oakland.

The transportation sector is recognised as one of the largest contributors to greenhouse gas (GHG) emissions, and this development is celebrated as a pathfinder for heavy-duty transportation which has long been considered one of the hardest to decarbonise.

While efforts are increasingly being driven into reducing the carbon impact of shipping with electrification of vessels, hydrogen increasingly deployed in maritime services and old-world technology – sails – being rolled out (among others), Mobility Forum is playing a lead role in driving innovation on land.

Homecoming Capital provided \$100 million into the JV and the trucking-as-a-service (TaaS) startup also closed a \$15 million Series A funding round at the start of this year which saw participation from all existing seed investors:

- Obvious Ventures
- Edison International
- Overture
- Homecoming Capital

New investors include:

- CBRE IM
- Elemental Excelsior – nonprofit focused on scaling climate technologies



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- Amazon's Climate Pledge Fund – corporate venture programme that invests in companies accelerating Amazon's path to meeting the commitments of The Climate Pledge

The need for investment is driven by regulations mandating the electrification of drayage trucks in California through a number of initiatives, including developments by the California Air Resources Board (CARB) and its Advanced Clean Fleet (ACF).

CARB is developing a medium and heavy-duty zero-emission fleet regulation with the goal of achieving a zero-emission truck and bus California fleet by 2045 (where this is feasible) and significantly earlier for certain market segments such as last mile delivery and drayage applications.

To achieve ACF certification, California needs to install 53 medium-heavy duty (MHD) chargers per day until 2030, followed by 200 MHD chargers from 2030 to 2045. This will require more than \$90 billion of MHD charging infrastructure in California alone... and Forum Mobility gets it off to a flying start with this project.

The beauty of Forum's approach is that it simplifies the process of transitioning to electrified operations for drayage operators and provides a comprehensive solution that addresses multiple challenges faced by small, independent owner-operators.

It will achieve this goal by developing and operating large-scale charging depots near ports and along key drayage routes deploying economies of scale to drive costs down. And given its real estate credentials, CBRE is ideally positioned to drive this.

Forum creates value for operators by managing the complexities of acquiring land, procuring charging equipment, obtaining utility interconnection, zoning approvals and government incentives.

The end result of this is an ability to provide customers with a simple integrated electrification-as-a-service solution that includes EV charging and – if needed – an EV truck for one monthly price over a medium-to-long-term contract.

Forum stands out as a first mover in the market and has a competitive advantage to acquire scarce land with available power along the key drayage routes servicing the ports of Los Angeles and Long Beach.

What makes this development so attractive is that Forum can leverage the broader CBRE platform, giving it the ability to develop depots on otherwise hard to access land owned by a fund managed by CBRE IM.

Furthermore, the company is collaborating closely with the wider CBRE platform for site selection, project management, facilities management, and regulatory compliance activities.

The drivers

Given activity levels at ports along the 840-mile Californian coast – 12 ports in total (11 of them publicly owned) processing some 40% of all containerised imports and 30% of all exports in the US – drayage is big business.

Drayage trucks in 2020 emitted nearly 400 million metric tons of greenhouse gases (GHG) at the Port of Long Beach. Electrifying the whole drayage fleet operating in the ports of Los Angeles, Long Beach and Oakland, would result in a reduction of annually of at least 2.5m tones of Co2.

Over a decade of operations, this represents close to 25 million tons of Co2 emissions reduction which is the equivalent of the annual emissions of 567,452 gasoline-powered passenger vehicles driven for 1 year.

This is a significant positive impact on the regional environment and but also on the health of local communities (see next section).

However, the goal for developments of this nature is also to ensure that green credentials are maintained and – to this end – Forum is pursuing microgrid opportunities which will allow the business to self-generate renewable energy once existing power is secured on site.

As the individual sites progress, Forum will submit interconnection applications to build solar and storage at its charging depots, thereby reducing reliance on the grid. It also plans to install battery energy storage systems (BESS) to reduce peak demand and provide grid resiliency.

The heavy-duty chargers and the electric trucks used by Forum will be bi-directional, capable of returning power to the grid. The combination of onsite solar, battery storage and bi-directional chargers will minimise peak loads and electricity costs at depots while providing ancillary services and resiliency to the grid, serving as a clean dispatchable microgrid.

Social impact

As part of Forum Mobility's ESG credentials, one aspect that should not be overlooked is the impact on local populations from reduced localised pollution from heavy goods vehicles.

It is a reality that low-income communities are more likely to live near ports and freight hubs and – as a result – these communities have increased risks of asthma, cancer and cardiovascular disease. According to sources, life expectancy near the Port of Oakland is 6.6 years lower than surrounding areas of the county.

By building charging depots required to electrify drayage trucking, Forum will help reduce emissions, improve air quality and health outcomes for these communities.

A recent EDF study estimated that transitioning to 100% zero-emission truck sales by 2040 would generate nearly \$500 billion in health benefits and avoid more than 57,000 premature deaths in the US.

Furthermore, more than 80% of drayage truckers in California are small independent owner-operators (IOOs) who often do not have the financial capacity to fund the purchase of an expensive new EV truck or the technical capability to develop and operate EV charging infrastructure.

By shifting the high upfront costs of buying an EV truck and building charging infrastructure to recurring monthly opex payments, Forum is providing equitable access to IOOs to electrify their operations.

This not only supports the transition to cleaner transportation but also provides economic benefits to small business owners that might otherwise be forced out of the industry.

Commentary

Forum Mobility's plan to enable the transition of drayage services in the port areas for Los Angeles, Long Beach and Oakland has been widely celebrated as a pathfinder for similar developments.

However, it is the combination of CBRE IM alongside the wider CBRE Group – as well as the impressive line-up of investors – that makes this transaction stand out.

Matt LeDucq, chief executive and co-founder of Forum Mobility, said at earlier this year: "This network will need a lot of infrastructure and real estate, and CBRE IM is the perfect partner to help us build charging where it's needed most.

"Fleets can bring their trucks to our network, or we can provide electric trucks bundled with charging. Today we can provide a Class 8 electric truck, and all its charging needs, at a monthly price that's competitive with diesel – without the emissions.

"With new rules coming soon from the California Air Resources Board, we help fleets and drivers looking to make the jump to electric."

Rodrigo Prudencio, principal at Amazon's Climate Pledge Fund, added: "To address global warming at scale, we need solutions that support the transition to electric vehicles, especially in hard-to-decarbonise sectors like heavy duty trucking.

"Forum Mobility's solution will help small business owners electrify their transportation fleets, remove air pollution from

California's ports, and provide the charging infrastructure needed to support the growing use of electric trucks."

Pat Arnold of Homecoming Capital rounded off: "Electric trucks work. But to deploy them at scale, we need to build a tremendous amount of charging infrastructure. The Forum Mobility team has construction in their DNA – and is perfectly suited to deploy the infrastructure required to enable drayage truck electrification."

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