Los Angeles Region Build Back Better Concept Proposal: Accelerating Equitable Growth, Sustainability and Resilience at America’s Leading Gateway to the Pacific Rim

**Vision:** Global commerce is critical to American prosperity, and optimizing supply chains for throughput, equitable growth, sustainability and resilience is critical to the nation’s economic recovery. Our proposal aims to drive innovation for efficiency, sustainability and equity in the Goods Movement Ecosystem in LA County (the largest and most important in the US). In the process we propose to make our region the world capital for technologies at the intersection of the Blue and Green Economies. San Pedro Bay Port complex in Los Angeles County is America’s leading gateway to the fast-growing economies of the Pacific Rim. More than 40% of waterborne cargo coming to America arrives here. As the largest engine of job creation in Southern California, it provides economic benefit to every state in the nation. Goods moving through the Ports of Los Angeles and Long Beach originate in or are destined for every congressional district in the US. That benefit has long come at a cost to the environment and health of disadvantaged populations who live near the ports and along the goods movement corridors that make up this critical artery of the US supply chain. The LA Region’s Build Back Better proposal is submitted by a powerful coalition of public and private partners who share our state and local government vision of equitable and sustainable growth for our Goods Movement Ecosystem (GME) regional growth cluster, centered on the innate convergence of the blue and green regenerative economies at and beyond the waterfront to grow new jobs and enterprises for our region, particularly for historically excluded populations, while improving our environment and increasing resilience of America’s leading trade gateway.

Whether from public health pandemics, climate change, cyber risks or international relations, the LA GME is vulnerable to disruptions that can have serious regional, national and global impacts. As of September 2021, a record 73 cargo ships were anchored off the coast of southern California waiting to drop off and pick up cargo from our ports, prompting President Biden to intervene to keep the Port Complex operating 24 hours a day as part of his administration’s plans to unblock and strengthen the resilience of America’s supply chains. Unblocking our ports is critical to unblocking US economic recovery.

With more than 480,000 LA County residents remaining unemployed 18 months into the pandemic --more than any other county in America-- we propose a series of innovative projects to accelerate the growth, equity, sustainability and resilience of this ecosystem to help put our most disadvantaged residents back to work in well-paying jobs, create and scale new enterprises with diverse ownership, clean our air and water, and make our regional goods movement ecosystem more resilient to disruptions in the future. Support for our proposal can make EDA a powerful partner in LA’s vision to become a national and global model for green growth in goods movement and a more environmentally responsible creator of value from the ocean, upon which our position in global commerce depends.

**Economic Opportunity:** As the nation’s most populous county, and home to its largest ports, our efforts to create a cleaner, stronger, more efficient and equitable GME will present powerful pathways to strengthen the regenerative use of resources in regional economic development through the green and blue economies. The term ‘Green Economy’ generally refers to economic activities that aim to reduce environmental risks and degradation through sustainable development; while many industries can fit under the ‘Green’ umbrella, renewable energy and transportation are the most critical within GME. The ‘Blue Economy’ is similarly defined as an economy focused on growth through sustainable use of resources, specifically from and in the
ocean. Critical ‘Blue’ GME sectors include ports, shipping, marine energy, carbon capture, aquaculture, and restoration. Transforming the GME will result in significant regional growth of these important interrelated economies. LA’s Green Economy currently produces 338,000 total jobs (direct, indirect and induced), accounting for one in twelve countywide, while LA’s Blue Economy produces 200,400 total jobs (direct, indirect and induced) and $20 billion in gross county product. Both economies are critical drivers of jobs within the San Pedro Bay Port Complex, which is responsible for 193,000 total jobs (direct, indirect, and induced) in Los Angeles and Long Beach, and just under 1 million jobs in the five-county region of Southern California — over 10% of all jobs in this region.

Transforming the LA GME is intended to create equitable economic opportunities within the communities surrounding the Ports and along transportation corridors, (see Figure 1), which are some of the most vulnerable in the region. These communities, primarily Latinx (70%) and Black (29%), feature higher rates of poverty than national levels (49% versus 11%). Despite most adults working multiple, low-paying jobs to support their families, median household income is just $24,728. Residents are subject to air pollution and other environmental health challenges caused by GME-related operations and neighboring refineries. CalEnviroScreen 4.0, which identifies communities disproportionately burdened by multiple sources of pollution and associated health consequences, shows the LA GME corridors in the highest burdened percentile statewide (red in Figure). Lowering emissions while creating new jobs and business opportunities will help address economic and environmental inequality throughout the region.

A heightened sense of urgency for economic reinvention and growth in Los Angeles exists in the wake of the COVID-19 pandemic, especially as it exacerbated longstanding socio-economic inequities in our region. Although the regional economy was enjoying an unprecedented expansionary period prior to the pandemic, the number of people living in poverty in LA County remained the highest in the nation at 1.48 million according to Census Bureau ACS data for 2015-2019, highest of any US county by a factor of nearly 2x. The income divide severely impacted communities of color, with tensions surrounding racial inequities starting to boil over. During the first 2 months of the pandemic shutdown, LA County lost over 772,400 jobs with a disproportionate share of those lost by Black and Latinx workers. In May 2020, LA County unemployment reached 18.8% (compared to 14.8% for the US). Over the following 15 months, LA County recovered only 53% of the jobs lost, with unemployment remaining nearly twice the US rate at 9.7%. Many of the lost jobs were high quality, with an estimated decline of 392,000 living wage jobs between 2019 and 2020.

The communities to benefit most from this project have borne a disproportionate burden from the pandemic due to poverty, larger multigenerational households, employment in jobs that cannot be performed remotely, and disproportionate representation of workers and small business owners in the industries most impacted by COVID-19. Rather than building back the inequitable elements of the pre-pandemic economy, we need to build back better and ensure that all populations, especially our BIPOC and women residents, have equitable access to well-paying jobs and entrepreneurial opportunities within this new economy.
The LA GME offers significant potential to support innovations that will stimulate creation of new jobs and businesses, and build sustainability, equity and, ultimately, resilience. Our Coalition will facilitate development and piloting of valuable new technologies as well as the implementation of emerging technologies at scale, from carbon capture on shipping vessels and kinetic energy at sea to efficient hydrogen and electric infrastructure on land. Focused on equitable outcomes, our coalition is committed to developing a workforce reflective of the region, creating substantially greater economic opportunities for BIPOC workers and entrepreneurs in communities historically most impacted and least supported by the LA GME.

The impact of these efforts is likely to be immense given the scale of the GME. Transitioning to cleaner technology will help jumpstart the near 80% increase in sustainability-focused jobs that is predicted to occur by 2050, according to the LA Green New Deal (double the rate for all jobs), and promote environmental justice and positive health outcomes in communities historically most negatively impacted by the GME. Moreover, it will firmly establish LA and the US as leaders in sustainable and inclusive growth in the rapidly expanding blue economy, which the Organization of Economic Cooperation and Development (OECD) expects to double globally by 2030 through investments in sustainability and innovation.

**Coalition: Los Angeles County Economic Development Corporation (LAEDC) will lead the coalition and its COO Stephen Cheung will be the Regional Economic Competitiveness Officer.** LAEDC will provide outreach, guidance, and coordination, and contribute cluster and labor market research, business technical assistance and workforce development. Nine core coalition members and 36 additional members will support specific projects. **The City of Los Angeles** with leadership from the Mayor’s Office and the City Council with direct support from key departments including the Economic and Workforce Development Department (EWDD), LA Department of Water and Power (LADWP), Public Works, and the LA Department of Transportation will coordinate and leverage city initiatives and resources. **The Port of Los Angeles** will leverage its Clean Air Action Plan and resources to reduce port-related emissions and increase GME efficiency and opportunities for underserved communities. **AltaSea at the Port of LA** will leverage resources to complete the construction of its ‘Center of Innovation’ and lead the ‘Blue Economy Goods Movement’ subproject. **Los Angeles Cleantech Incubator (LACI)** will train individuals to maintain Battery Electric Vehicles and repair EV charging stations, and support entrepreneurs to advance BEV solutions. **Urban Movement Labs (UML)** will leverage existing partners working in electric mobility, last-mile goods delivery, and aerial drone delivery to develop a network of micro distribution hubs across LA, and support outreach and engagement. **Santa Monica College** will leverage its leadership role in the Los Angeles Regional Strong Workforce Consortium of 19 LA area community colleges to upskill and reskill workforce. The **Entrepreneur Education Center, Inc. (EECI)** will leverage experience and resources to provide leadership for equitable economic development and entrepreneurship among BIPOC and at-risk youth. **Long Beach Economic Partnership** will leverage resources for workforce and incubation efforts.

**Cluster Projects:** Our proposed projects will leverage blue and green technology to transform the GME from sea to land, helping secure triple bottom line benefits for our region, including inclusive economic growth, enhanced environmental sustainability and improved human health while strengthening one of the most critical links of America’s supply chain. A focus on training and entrepreneurial support for BIPOC and women will serve as a direct workforce pipeline for all projects while technological innovation and infrastructure investment will help reduce emissions and improve health and environmental outcomes, uplifting communities which have
historically borne the greatest impacts of goods movement. Our coalition commits to tracking overall success through the following metrics: **Living Wage Jobs Created**: Track the number of new full-time, living wage jobs created by businesses supported by cluster activities, and especially those accessible to workers without a 4-year degree. **Job Representation**: Track the placement rate of BIPOC and women from project educational and training programs in GME jobs. **Access to Capital**: Measure increased regional access to capital for entrepreneurs from marginalized communities, such as women and BIPOC founders. **Follow-On Capital**: Track the amount of follow-on capital from any source raised by businesses receiving technical assistance or other support from the cluster. **Pay Equity**: Measure the racial and gender pay equity for roles at all levels at businesses participating in cluster activities. **Environmental Quality**: Track the reduction of PM10, SO2, NOx, and other emissions and improvement in water quality resulting from the port and other cluster activities. **Health Outcomes**: track health improvement in communities in GME corridors, including lower rates of cardiovascular disease and asthma. Project descriptions & success metrics follow.

1) **AltaSea ‘Center of Innovation’ for the Blue Economy**: Completing construction of the AltaSea ‘Center of Innovation’ in the PoLA and supporting innovative ‘Blue Economy Goods Movement’ technologies in ocean transportation, carbon capture, blue energy, underwater robotics, and aquaculture. **Success Metrics**: New quality, accessible jobs (220 permanent FTE research & private sector blue economy jobs and ~4,000 one-year, FTE construction jobs spread across 4 years); 180k sqft. of incubator and research space to support Blue Economy entities; new tech for sustainable goods movement at sea and on the waterfront. **Project Lead**: AltaSea.

2) **Transition to Clean Energy Within LA GME**: Creating and/or improving renewable energy infrastructure and reducing emissions by electrification, increasing capacity to produce and distribute hydrogen fuel in GME corridors, carbon capture, and developing a pilot kinetic energy system outside the Port of LA breakwater. **Success Metrics**: New quality, accessible jobs (475 EV network technician and 950 battery electric vehicle maintenance technician jobs over ten years, plus new jobs in hydrogen fuel infrastructure development and transportation); hydrogen fueling station along critical GME corridor and hydrogen fuel cell electric drayage trucks; kinetic wave energy infrastructure; reduced emissions; improved health outcomes in communities along GME corridor & throughout LA. **Project Leads**: Port of Los Angeles and LACI.

3) **Program Assistance Technologies for Enhanced Efficiency Within Port Complex**: Using program assistance technologies to increase efficiency in digitization and connectivity of information allowing for access and sharing between freight and GME infrastructure, supply chain partners, utilization, scheduling, security, and environmental stewardship to speed up cargo processing and reduce GHG. **Success Metrics**: Improved efficiency in Port operations and supply chain; increased volume of cargo processed; reduced environmental impacts through

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1 Kosmont Companies SUMMARY FISCAL BENEFIT ANALYSIS of AltaSea.
improved sensing and monitoring; 100% preservation of existing jobs with new or restructured roles and training support. **Project Lead:** Ports of Los Angeles & Long Beach and JPL.

4) **Transforming Last Mile Fulfillment:** Establishing local micro distribution hubs to create zero emission delivery zones throughout LA and reduce the inequitable impacts of warehousing. **Success Metrics:** New quality, accessible jobs to operate and maintain fleets of electric delivery vehicles and support distribution hubs (each hub may create 50-100 jobs starting at $20/hr); expanded EV infrastructure; improved supply chain efficiencies; reduced emissions; improved health outcomes in communities along GME corridor. **Project Lead:** Urban Movement Labs.

5) **Equitable Entrepreneurship for Regenerative Economies:** Supporting equitable incubation and entrepreneurship programs and activities emphasizing blue and green business incubation and acceleration. **Success Metrics:** Increased BIPOC, blue, and green tech business start-ups including 240 new BIPOC-led small businesses and/or non-profit organizations that will be generated and sustained through EEC (over 5 years) and 60 new businesses through ExpandLA. **Project Leads:** Entrepreneur Educational Center, Inc., ExpandLA, LACI, AltaSea.

6) **Equitable Workforce Development for Regenerative Economies:** Supporting equitable workforce development with an emphasis on filling green and blue jobs created under projects 1-5. **Success Metrics:** Increased BIPOC workforce representation; improved jobs accessibility to individuals w/out 4-year degree through new CTE programming at regional community colleges; 120+ workforce program participants, (60 EV network technician / 60 HD EV technician), 100% from underserved communities, 25% female (20% incumbent workers). **Project Leads:** LAEDC Center for Competitive Workforce and Los Angeles Regional Strong Workforce Consortium.

**Phase 2 Matching Funds:** The coalition has secured more than the required matching funds of 20% of our total proposed budget for Phase 2 ($70M). $6M match is committed from the Port of LA and $6M match is committed from the State of CA for construction of the AltaSea Center of Innovation. The Advanced Transportation and Logistics initiative has the ability to commit $1M in match. SCAG Last Mile Freight program grants of up to $5M will also be utilized as match.

**Barriers to implementation:** Barriers to completing AltaSea construction are potential challenges with final permitting due to coordination required between multiple jurisdictions; AltaSea is working closely with Port and other government offices to facilitate this permitting. Transitioning to clean energy will require national infrastructure investment beyond the scope of this project; the Port and its partners are committed to overcoming this barrier through public-private collaboration. The need to coordinate varying entities will be a barrier to increasing efficiency; JPL assessment during Phase 1 will present a pathway to facilitate coordination. Last Mile Fulfillment barriers are primarily existing distribution models of national commercial freight carriers. This project would provide dedicated facilities for micro distribution, reduce cost barriers for commercial carriers and facilitate last-mile fulfillment. Locating an appropriate parcel for workforce training could take more time than expected; the team will access an alternate training facility such as LATTC or Advanced Prototyping Center on LACI's campus.

**General Timeline:** Initial assessments to improve efficiency within the GME will take place during Phase I, and move to implementation in Phase II. Developing clean energy infrastructure will span -and continue beyond- the duration of the project. Phase 1 AltaSea construction will be completed by 2022, Phase 2 by 2024, and Phase 3 by 2025; programming will be ongoing throughout the project. It will take 1-2 years for initial micro distribution hub development; 5+ years for full build-out across the region; and 2-3 years before aerial drone delivery of goods to be operational. Workforce development training will be conducted 2022-2026.