

An aerial photograph of a lush green forest with a single white wind turbine standing prominently in the lower right quadrant. The forest is dense and vibrant green, with a winding path or stream visible through the trees. The wind turbine has three blades and a dark tower, casting a shadow on the forest floor.

Book of **Green Jobs**

A Guide to Middle-Skill Climate-Ready Jobs in Los Angeles County

January 2025

Agenda



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Center of Excellence for Labor Market Research



CENTER OF EXCELLENCE
FOR LABOR MARKET RESEARCH

The COE provide **quality labor market data and information** to help colleges with:



Assessing labor
market needs



Reviewing career
education programs



Investing in new
career education
programs



Grant program
planning and
investment

—
We aspire to be the
leading source of
workforce information
and insight for
California's
community colleges.

LAEDC Institute for Applied Economics

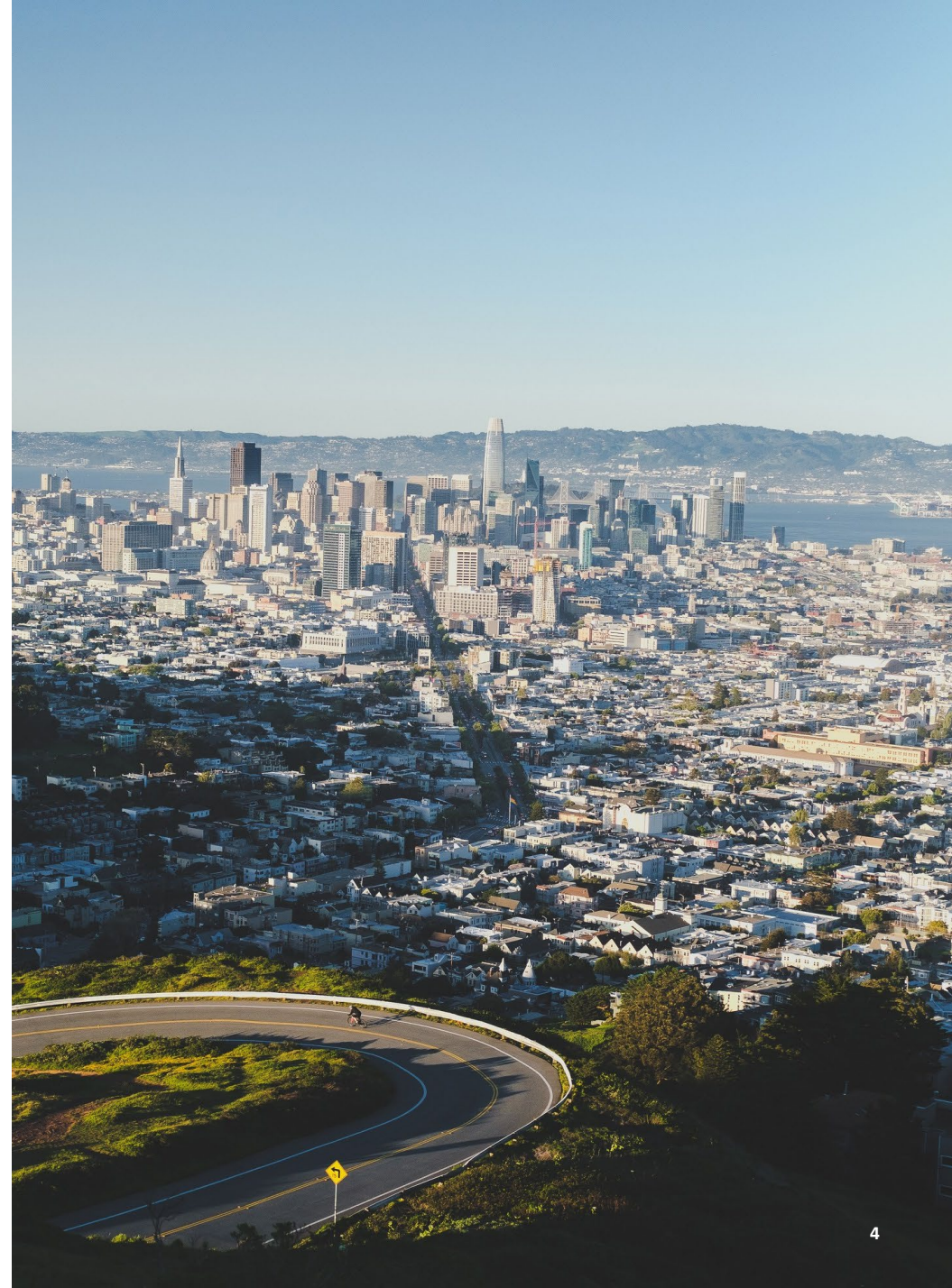


LOS ANGELES COUNTY
ECONOMIC DEVELOPMENT CORPORATION

Collaboratively Advancing Growth and Prosperity for All

The **LAEDC Institute for Applied Economics** performs objective economic research and analysis for a wide range of clients, detailing economic impact of development, business operations, and regulation, as well as providing intelligence about specific industry clusters, labor force, and workforce development issues.

The IAE produces national, state, and local economic forecasts annually, hosts quarterly economic briefings, and conducts economic impact studies in targeted industries.



Purpose

HOW MANY JOBS ARE IN THE GREEN ECONOMY?

The Book of Green Jobs focuses on middle-skill jobs crucial for a sustainable future and offers strategic insights into the labor market's transformation in response to climate change initiatives and emerging environmental policies.

Developments in Green Economy



Climate Goals and Policy Landscape

National commitments

- Paris Agreement

California's environmental policies

- AB-32 and SB 32



Labor Market and Industry-Specific Growth

Green jobs thriving in sectors:

- Renewable energy
- Clean transportation
- Green construction

Green job growth driven by federal and state incentives:

- Tax credits & rebates
- Stringent building standards.



Technological Advancements and Economic Trends

- Renewable energy
- Energy efficiency
- Clean transportation
- Battery storage
- Grid management
- Green manufacturing

Trends in the Green Economy



Recent Trends

Expansion of Renewable Energy Infrastructure

Growing Demand for Energy Efficient Solutions

Rise of Electric Vehicles (EVs)

Green Building and Sustainable Development

Job Growth in Clean Technology and Green Industries

Innovation in Water Conservation Management

Public and Private Sector Collaboration



Emerging Trends

Microgrids and Energy Resilience

Circular Economy Initiatives

Green Finance and Investment

Smart Cities and Sustainable Urban Planning

Climate Adaptation and Resilience Strategies

Green Jobs in Digital and Clean Technologies

Equity and Environmental Justice Initiatives

Innovate Water Conservation Technologies

Los Angeles County Climate-Ready Initiatives

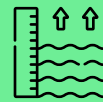
01
Adaptation and
Resilience Strategies



02
Equitable Climate
Action and Community
Engagement



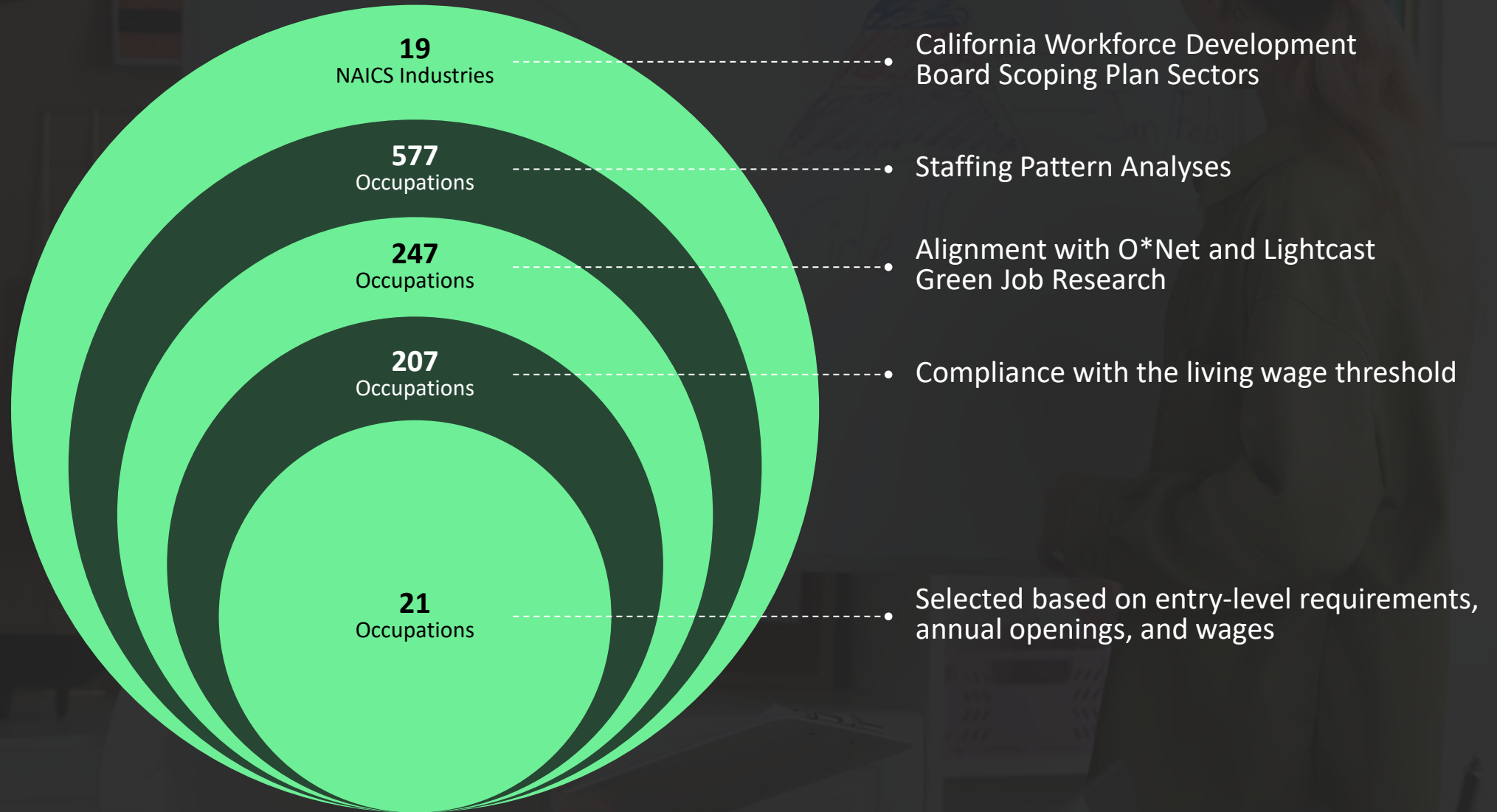
03
Coastal Resilience and
Sea-Level Rise
Preparedness



04
Water Management
and Conservation
Initiatives



Methodology



Occupational Groups



Steppingstone Occupations

- Require high school diploma or equivalent but frequently filled by community college graduates
- Essential to the county's transition to a green economy



Middle-Skill Occupations

- Require more than a high school diploma but less than a bachelor's degree
- Occupations crucial for advancing the region's green economy



Elevated Occupations

- Require bachelor's or more advanced degree but still accessible to community college graduates
- Advanced roles critical to driving innovation and leadership in the county's green economy



Emerging Occupations

- Require more than a high school diploma but less than a bachelor's degree
- High potential for growth as green economy expands

Steppingstone Occupations

Typical Entry Level Education: High School Diploma or Equivalent

SOC Code	Description	2022 Jobs	2022 Median Hourly Earnings	2022-2028 Forecasted Growth	2022-2028 Job Openings	2022-2028 Percent Net Change in Jobs	Percent of 2022 Jobs in Green Sectors
47-2111	Electricians	15,185	\$33.03	4.2%	8,620	56.8%	60.1%
47-2152	Plumbers, Pipefitters, and Steamfitters	10,368	\$27.42	9.1%	6,540	63.1%	10.5%
51-4121	Welders, Cutters, Solderers, and Brazers	6,921	\$23.27	-6.6%	3,370	48.7%	8.6%
47-4011	Construction and Building Inspectors	3,216	\$39.49	5.3%	2,420	75.2%	6.0%
47-4041	Hazardous Materials Removal Workers	1,671	\$23.90	15.2%	1,420	85.0%	77.1%
51-8031	Water and Wastewater Treatment Plant and System Operators	1,652	\$38.55	-5.6%	780	47.2%	10.8%

Middle-Skill Occupations

Typical Entry Level Education: Associate Degree / Postsecondary Nondegree Award / Some college, no degree

SOC Code	Description	2022 Jobs	2022 Median Hourly Earnings	2022-2028 Forecasted Growth	2022-2028 Job Openings	2022-2028 Percent Net Change in Jobs	Percent of 2022 Jobs in Green Sectors
49-3023	Automotive Service Technicians and Mechanics	17,020	\$25.61	-2.0%	8,040	47.2%	28.9%
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	7,449	\$27.32	-1.9%	3,420	45.9%	3.1%
17-3023	Electrical and Electronic Engineering Technologists and Technicians	2,895	\$32.74	-6.2%	1,420	49.0%	6.7%
17-3011	Architectural and Civil Drafters	2,972	\$29.27	6.2%	1,900	63.9%	7.3%
19-4042	Environmental Science and Protection Technicians, Including Health	1,246	\$25.45	4.0%	810	65.0%	4.9%
17-3022	Civil Engineering Technologists and Technicians	1,209	\$37.90	2.8%	690	57.1%	3.7%
17-3027	Mechanical Engineering Technologists and Technicians	928	\$33.72	-3.1%	460	49.6%	2.3%
17-3026	Industrial Engineering Technologists and Technicians	743	\$36.19	18.8%	600	80.7%	2.4%

Elevated Occupations

Typical Entry Level Education: Bachelor's Degree

SOC Code	Description	2022 Jobs	2022 Median Hourly Earnings	2022-2028 Forecasted Growth	2022-2028 Job Openings	2022-2028 Percent Net Change in Jobs	Percent of 2022 Jobs in Green Sectors
11-9021	Construction Managers	14,980	\$41.54	8.3%	7,820	52.2%	28.1%
13-1041	Compliance Officers	12,765	\$38.03	7.7%	7,080	55.5%	3.8%
13-1081	Logisticians	6,954	\$38.30	20.9%	5,170	74.3%	4.3%
19-4021	Biological Technicians	1,184	\$28.55	20.8%	1,240	104.8%	0.8%

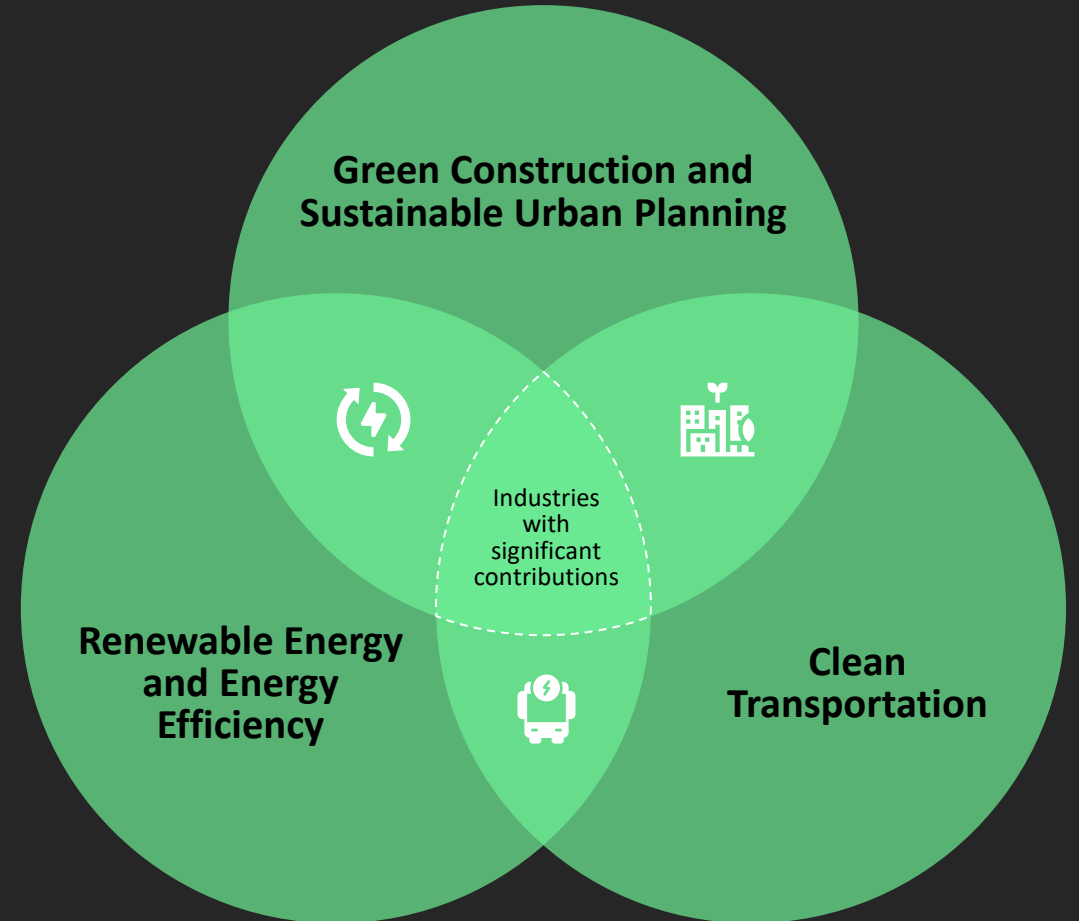
Emerging Occupations

Typical Entry Level Education: Associate degree / Postsecondary Nondegree Award / Some college, no degree

SOC Code	Description	2022 Jobs	2022 Median Hourly Earnings	2022-2028 Forecasted Growth	2022-2028 Job Openings	2022-2028 Percent Net Change in Jobs	Percent of 2022 Jobs in Green Sectors
19-4031	Chemical Technicians	1,688	\$23.31	-3.2%	1,090	64.6%	6.7%
17-3025	Environmental Engineering Technologists and Technicians	239	\$36.36	-31.0%	20	8.4%	14.1%
49-9081	Wind Turbine Service Technicians	207	\$29.83	-1.2%	110	53.3%	24.5%

Industries for engagement

Engaging key industries is critical for the successful development and deployment of a green workforce in Los Angeles County. The following industries have been identified as priority areas for engagement due to their significant contributions to the green economy and their potential for job creation in middle-skill occupations.



Key Findings

The job market is evolving, driven by green industries, technology, and the need for middle-skill jobs. Collaboration and education are key to a sustainable future.



1

Significant Growth in Green Industries

2

Demand for Middle-Skill Occupations

3

Technological Advancements

4

Educational Gaps and Workforce Development Challenges

5

Collaboration Between Stakeholders

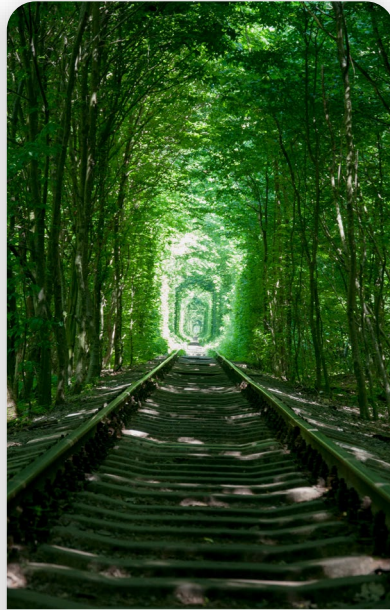
Recommendations and Use Cases



Enhance Educational Programs and Curriculum Development



Increase Funding and Support for Green Workforce Development



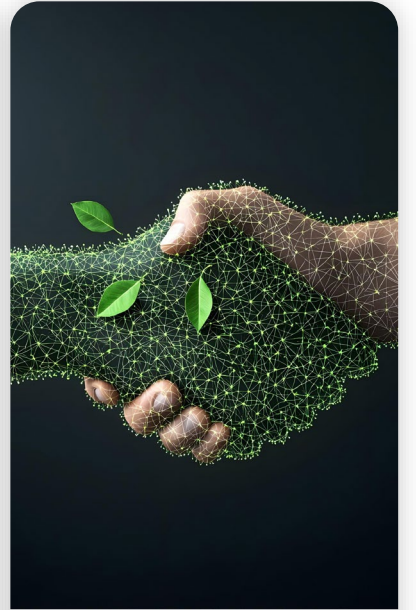
Promote Awareness of Green Career Pathways



Strengthen Industry-Education Partnerships



Support Equity and Inclusion in the Green Workforce



Develop a Regional Green Workforce Strategy



Green Jobs Panelists

➤ **Darrow Soares:** *Professor Emeritus of AC/Building Automation, Mt. San Antonio College & School and College Outreach Coordinator, North American Sustainable Refrigeration Council (NASRC)*

➤ **Dr. Jo Tavares:** *Director of the CA Center for Climate Change Education, hosted at West LA College*

➤ **Jeff Clary:** *Senior Director of Climate Strategies, Foundation for California Community Colleges*

➤ **Kauleen Menard:** *Director of Green Jobs Regional Partnership, Los Angeles Cleantech Incubator (LACI)*

➤ **Daniel Ferguson:** *Senior Director of Workforce Development, Los Angeles Cleantech Incubator (LACI)*

➤ **Stella Ursua:** *Director of Community Engagement & Partnerships, GRID Alternatives*

➤ **Ferris Kavar:** *Director of Sustainability, Santa Monica College*

➤ **Carrie Hester:** *Head of Development, USGBC California*

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