

Regional Workforce Advisory Meeting: Energy, Construction and Utilities

February 19, 2021
9:00 AM - 12:00 PM



Housekeeping

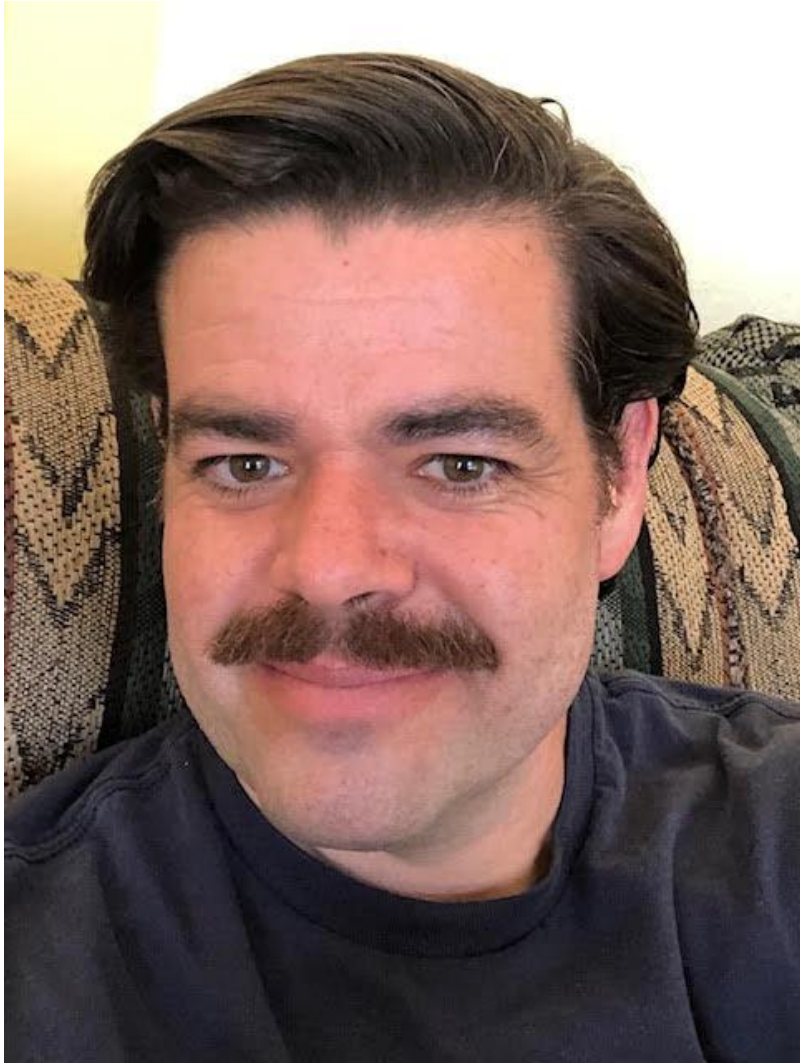
- **Enable your video (optional)**
- **Please stay on mute unless you are called on to ask a question**
- **Submit all questions, technical difficulties, or other commentary to the Chatbox; or raise your virtual hand to be called upon**
 - **“Raise Hand feature is under “Participants”**
- **This meeting will be recorded and will be provided as part of the post meeting materials**

Welcome and Introduction



Renee John
Project Leader
21st Century Workforce
Valley Vision

Welcome and Introduction



Orion Walker
Regional Director,
Employer Engagement,
Energy, Construction and
Utilities, Greater Sacramento
Region

Supported By



Agenda

- 9:00 AM** Welcome & Introduction
- 9:05 AM** Industry Insights, Economic, Policy and COVID-19
- 9:40 AM** Labor Market Trends & Occupations
- 9:40 AM** Employer Panel Discussion
- 10:10 AM** Break
- 10:20 AM** Policy/Market Drivers, Legislative Review
- 10:40 AM** Workforce Engagement Video
- 10:45 AM** Industry Insights with Q&A
- 11:45 AM** Workforce Engagement Video
- 11:50 AM** Opportunities to Partner & Climate, Justice, and Jobs Summit

Industry Insights, Economic, Policy and COVID-19



Dr. Robert Eyler

President, Economic Forensics
and Analytics, Inc.



Valley Vision

Energy, Construction, and Utilities

Recovery and the Future
The Economy 2021 to 2024

February 2021

Robert Eyler, PhD

President, Economic Forensics and Analytics
Professor, Economics, Sonoma State University

eyler@econforensics.com

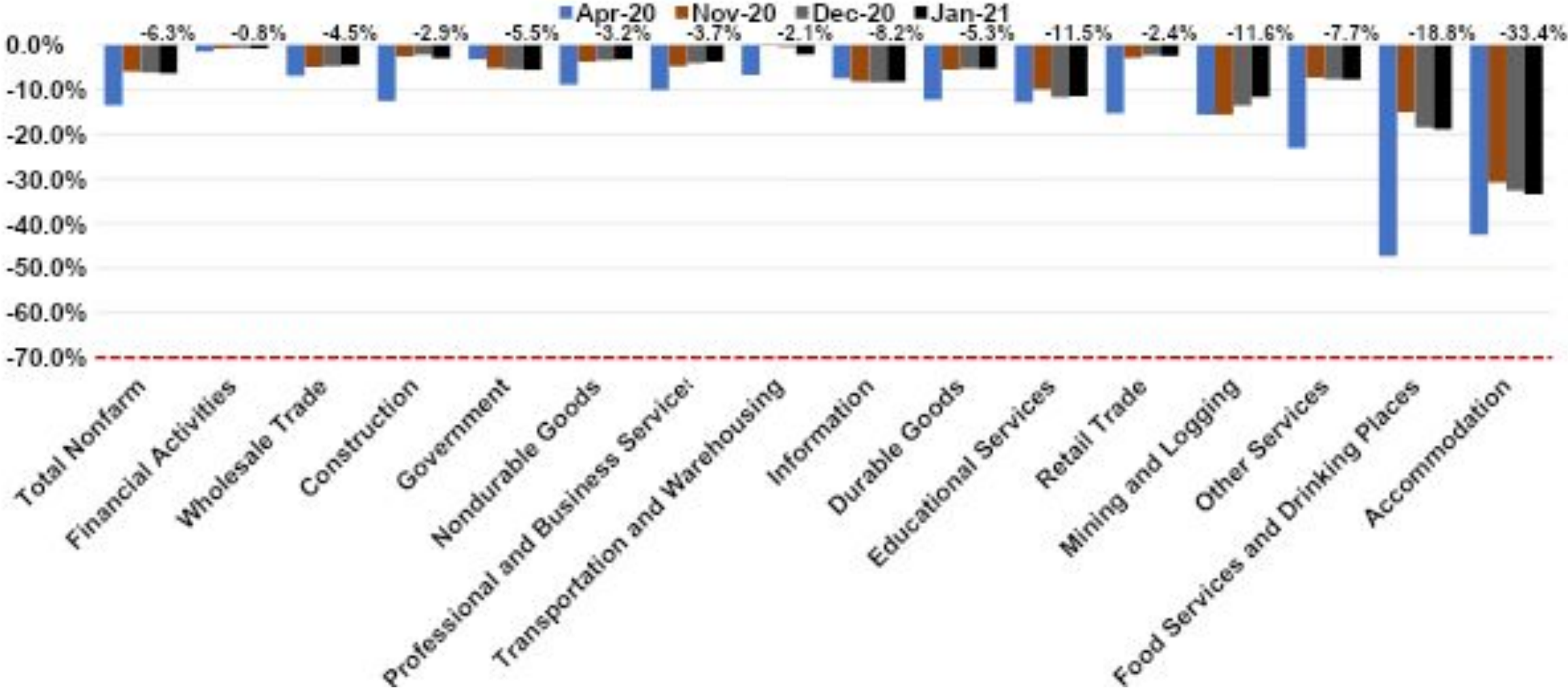
What Economists are Watching in 2021



Sources: Getty Images and Google Images



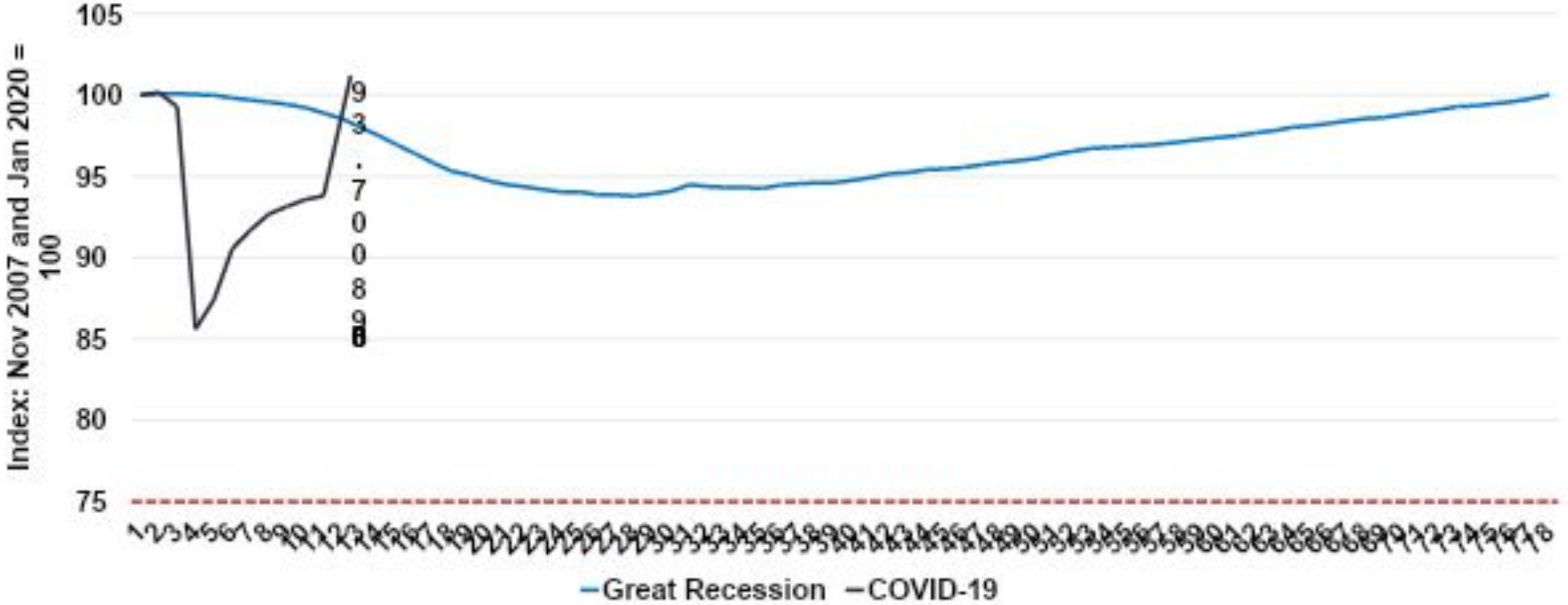
Changes in Jobs, Selected Industries, % Change since previous year, April, Nov, and Dec 2020, and Jan 2021. US



Source: Bureau of Labor Statistics (www.bls.gov) and EFA

Employment Recovery Comparison, United States, Great Recession and COVID-19

Recession, Months from Peak, Index Nov 2007 and Jan 2020 = 100



Source: BLS and EFA

Federal Reserve Philadelphia Forecast, Survey of Professional Forecasters

Forecasted inflation between 2.1 and 2.5% per year to 2024: interest rates to remain low to 2023 minimum

	REAL GDP (%)		UNEMPLOYMENT RATE (%)	
	PREVIOUS	NEW	PREVIOUS	NEW
<i>Quarterly data:</i>				
2021:Q1	3.2	3.2	6.7	6.3
2021:Q2	3.5	5.0	6.5	6.1
2021:Q3	3.5	5.3	6.1	5.7
2021:Q4	3.3	4.0	5.8	5.4
2022:Q1	N.A.	3.7	N.A.	5.1
<i>Annual data (projections are based on annual-average levels):</i>				
2021	4.0	4.5	6.3	5.9
2022	3.0	3.7	5.2	4.8
2023	2.1	3.1	4.6	4.2
2024	N.A.	2.5	N.A.	4.0

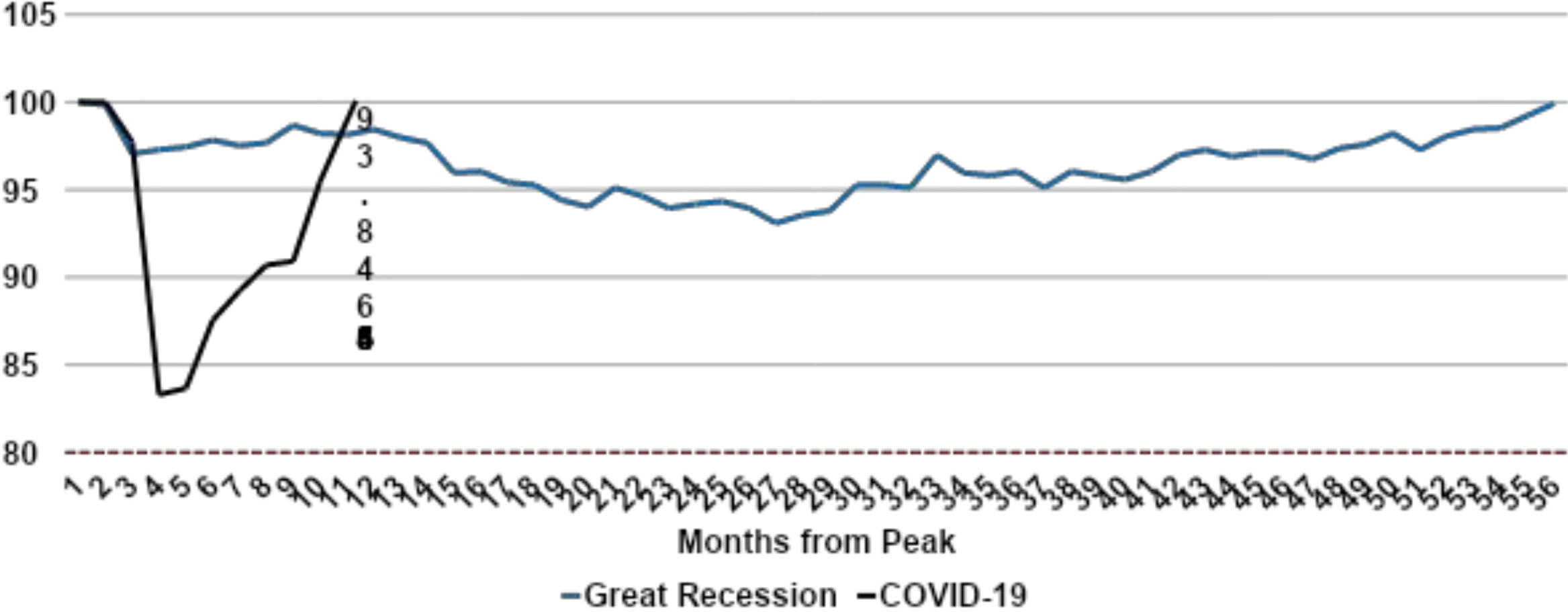
California, the North Far North and ECU

Employment Data, California, from Dec 2019 and Dec 2020

Unemployment Rate, Selected Areas, Non-Seasonally Adj

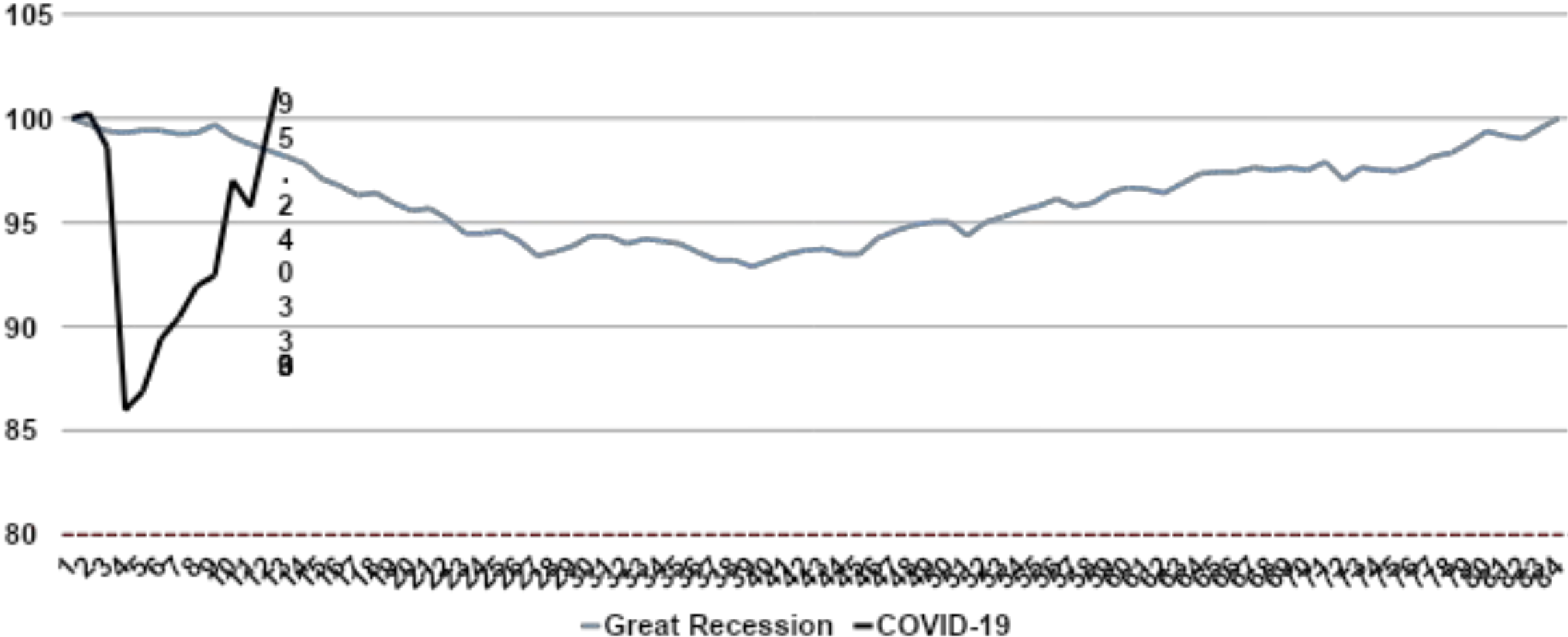
Category	Change California	% Change/ U Rate	Change Butte County	% Change/ U Rate	Change Shasta County	% Change/ U Rate	Change Yuba/ Sutter	% Change/ U Rate	Change Sac	% Change/ U Rate
Civilian Labor Force	-196,700	-1.0%	-4,800	-4.9%	-700	-0.9%	-6,500	-8.4%	7,600	0.7%
Civilian Employment	-1,207,100	-6.4%	-8,200	-8.7%	-3,500	-4.9%	-9,000	-12.5%	-40,600	-3.8%
Unemployment Rate		9.0%		8.2%		8.0%		10.7%		7.6%

Employment Recovery Comparison, California, Great Recession and COVID-19 Recession, Months from Peak, Index Nov 2007 and Jan 2020 = 100

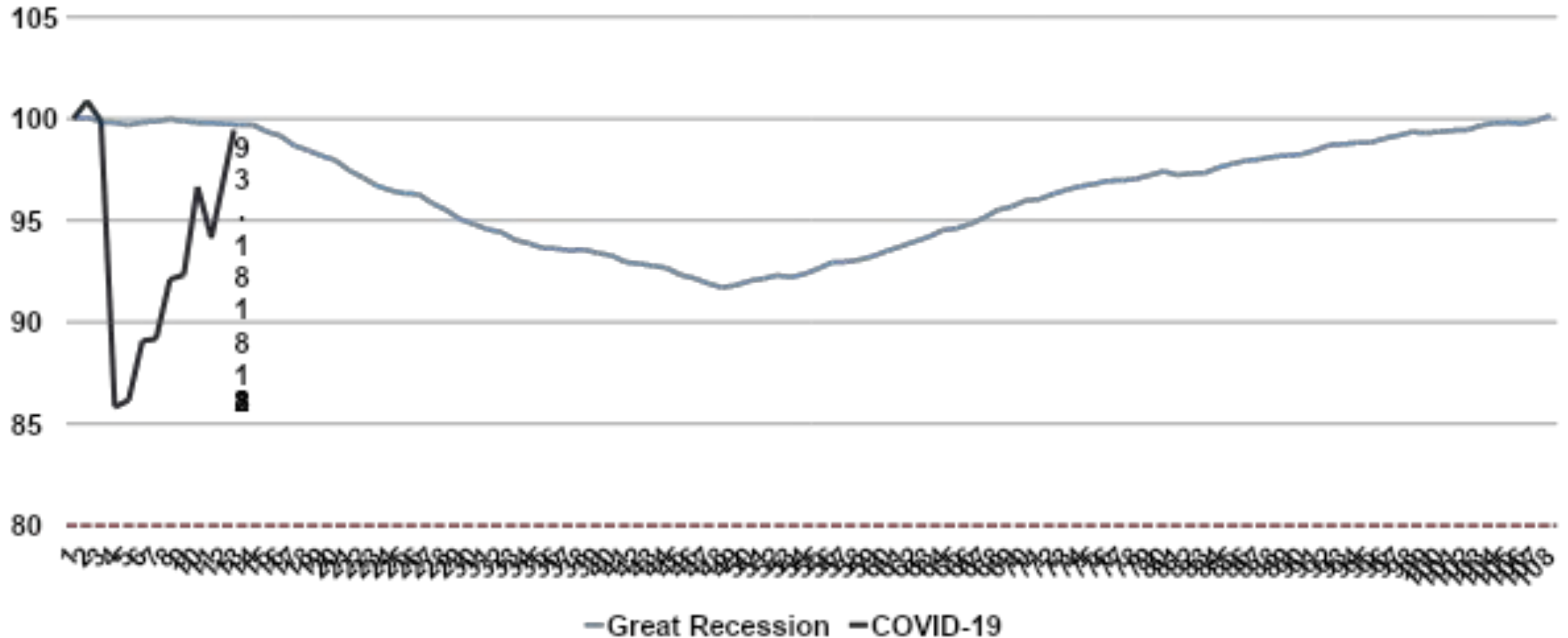


Source: California EDD and EFA

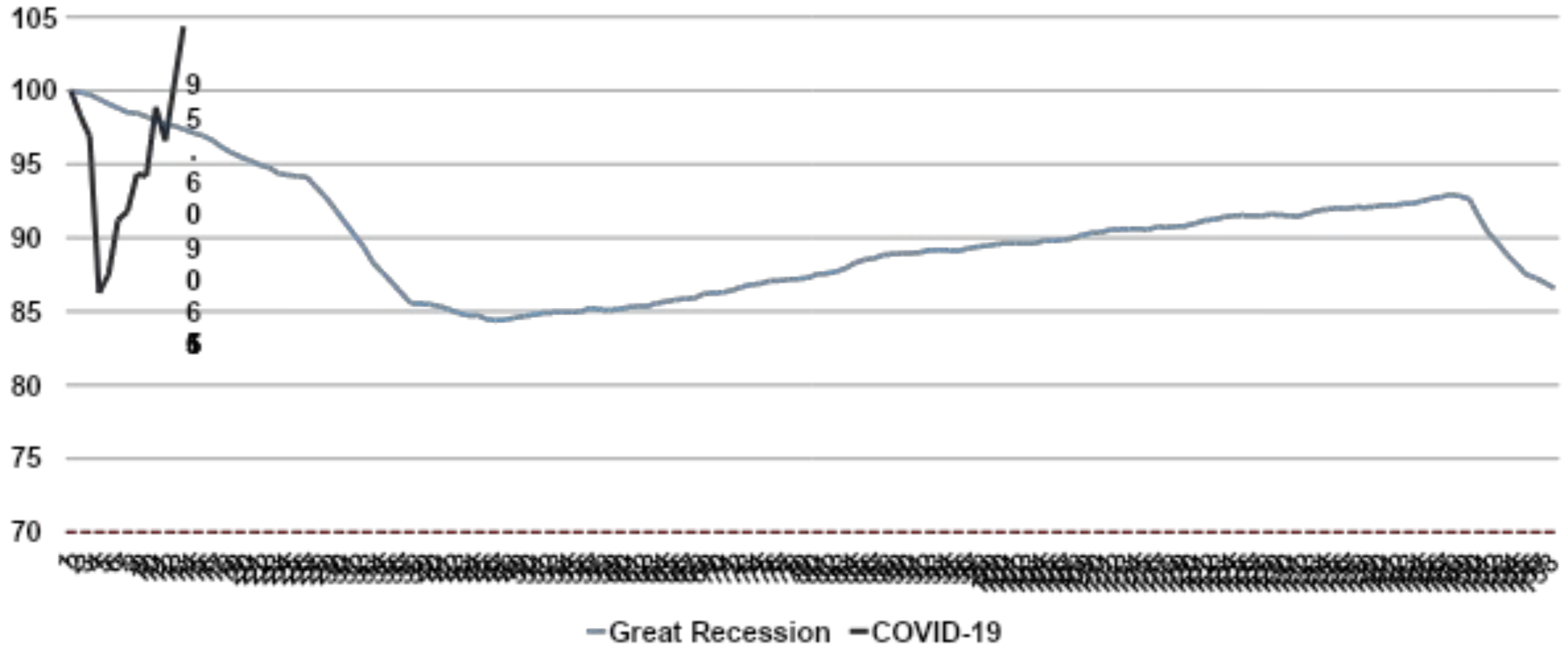
Employment Recovery Comparison, Sacramento MSA, Great Recession and COVID-19 Recession, Months from Peak, Index Nov 2007 and Jan 2020 = 100, as of Dec 2020



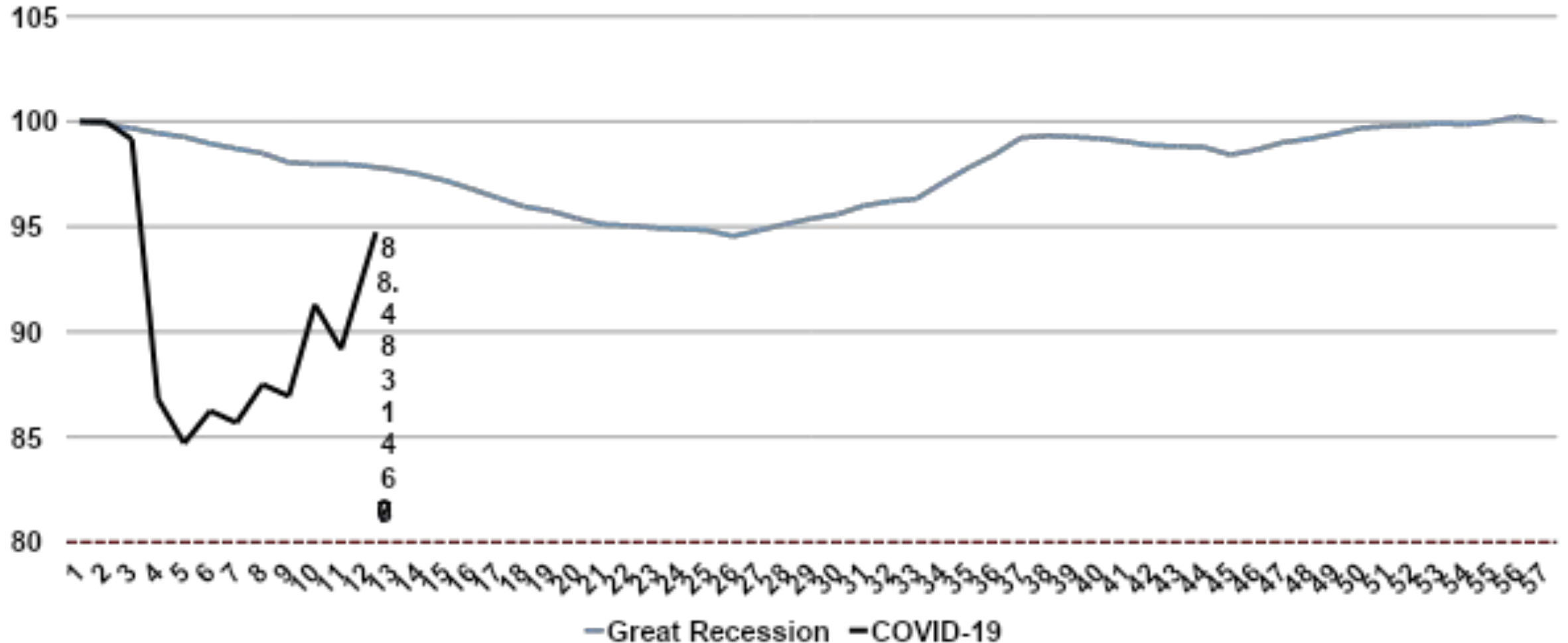
Employment Recovery Comparison, Great Recession and COVID-19 Recession, Months from Peak, Index Nov 2007 and Jan 2020 = 100, as of Dec 2020, Butte County



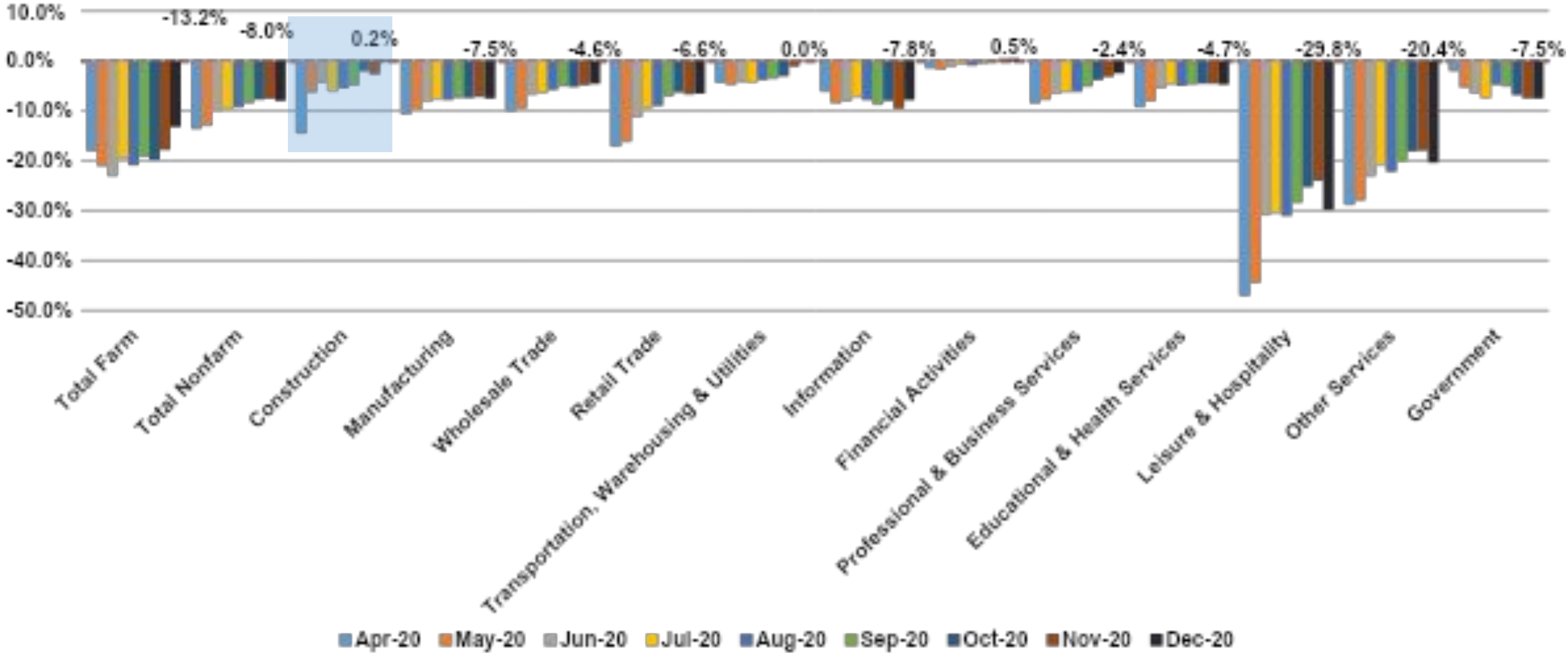
Median Home Price Growth, Dec 2018 and Dec 2019 Compared to Dec 2020, Shasta County



Employment Recovery Comparison, Great Recession and COVID-19 Recession, Months from Peak, Index Nov 2007 and Jan 2020 = 100, as of Dec 2020, Yuba and Sutter Counties

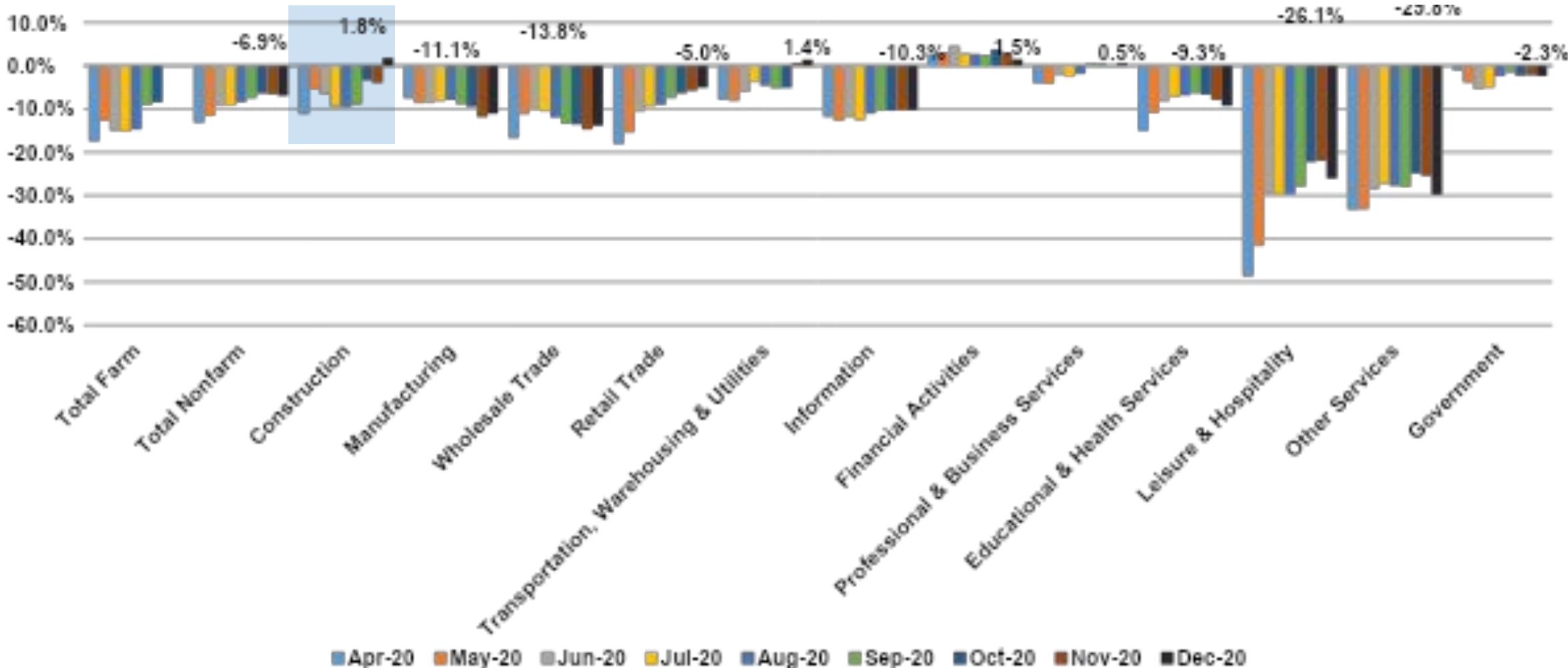


Jobs Lost (% Change from Previous Year), California April to Dec 2020



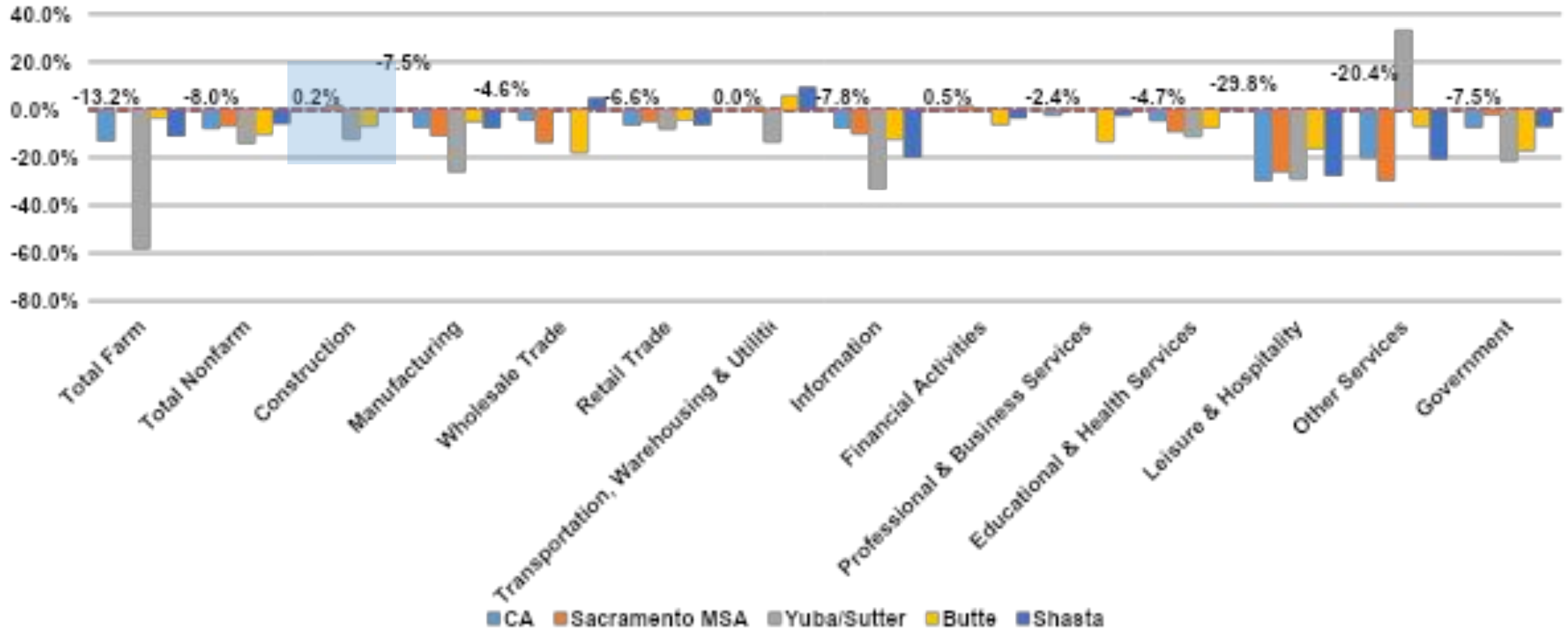
Source: California EDD and EFA

Jobs Lost (% Change from Previous Year), Sacramento MSA, April to Dec 2020



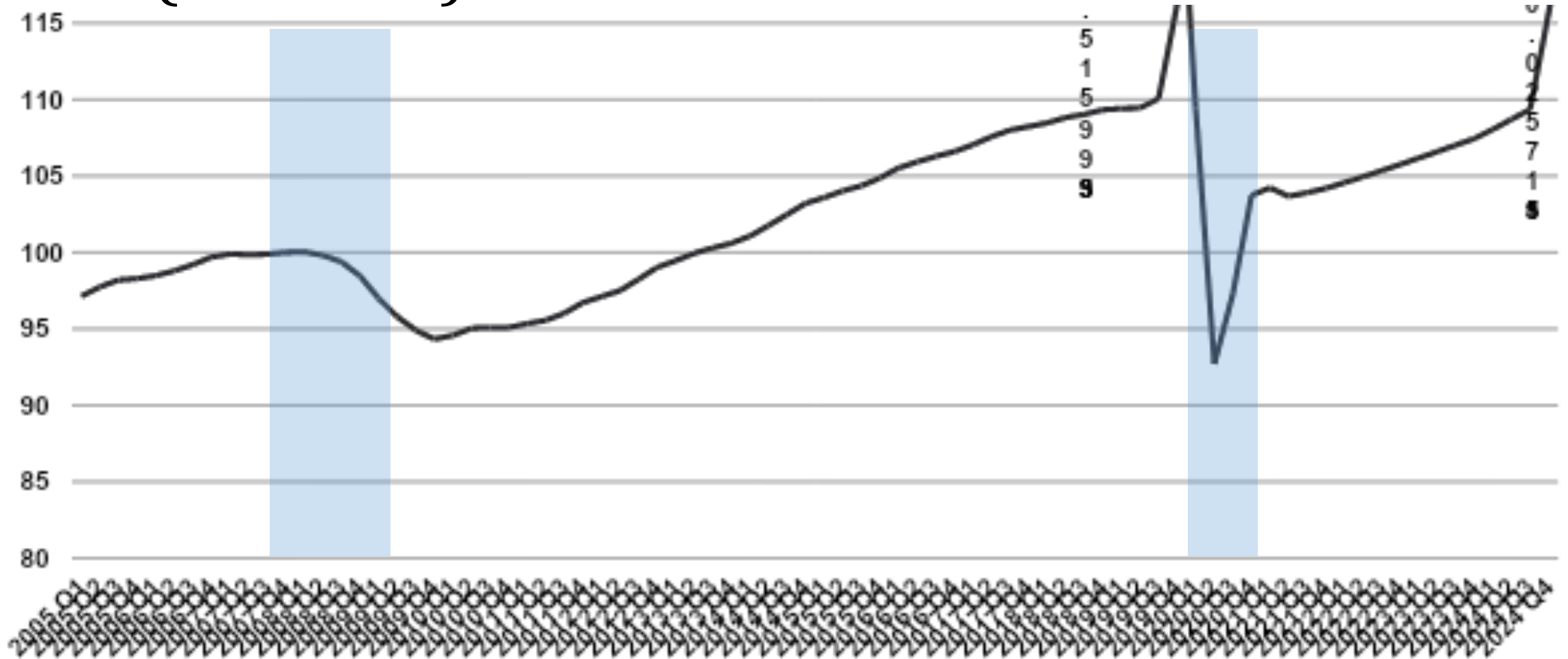
Source: California EDD and EFA

Jobs Lost (% Change from Previous Year), Selected Areas and CA, Dec 2020

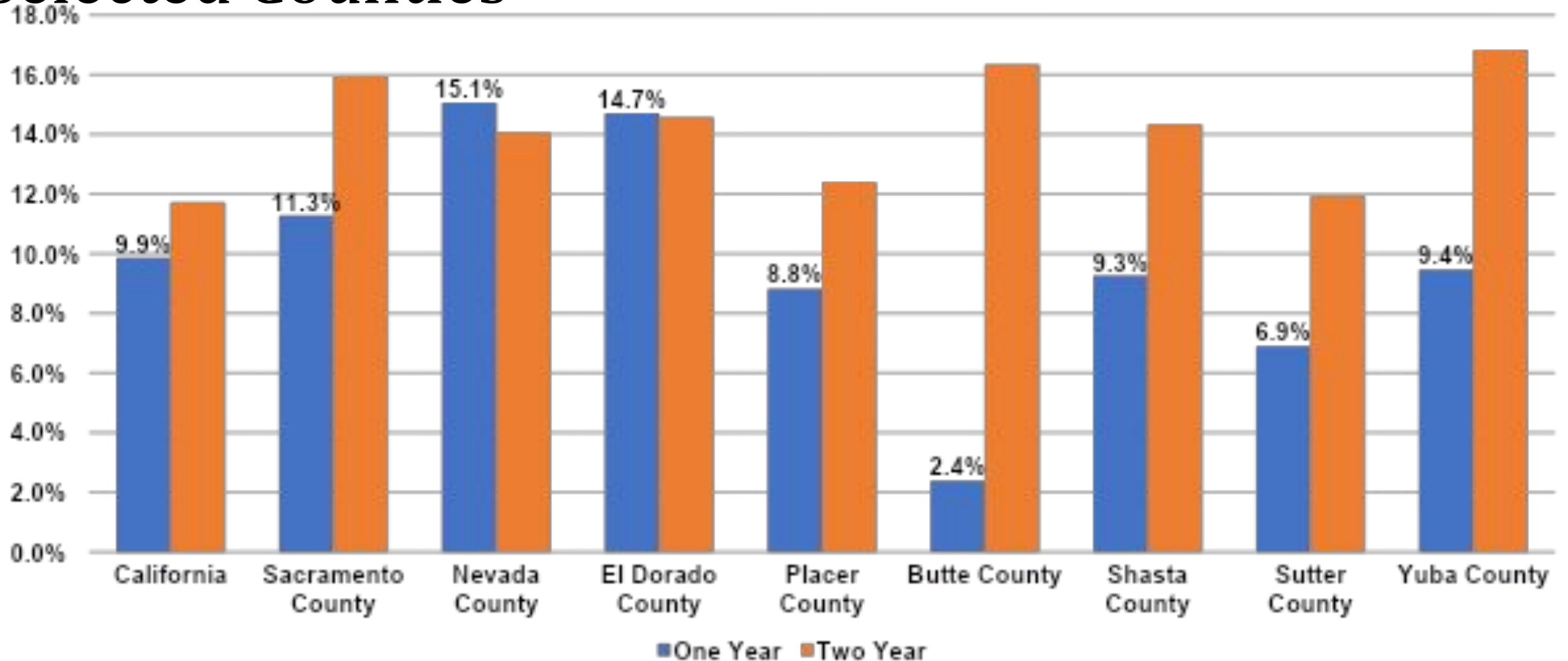


Employment in California, Index

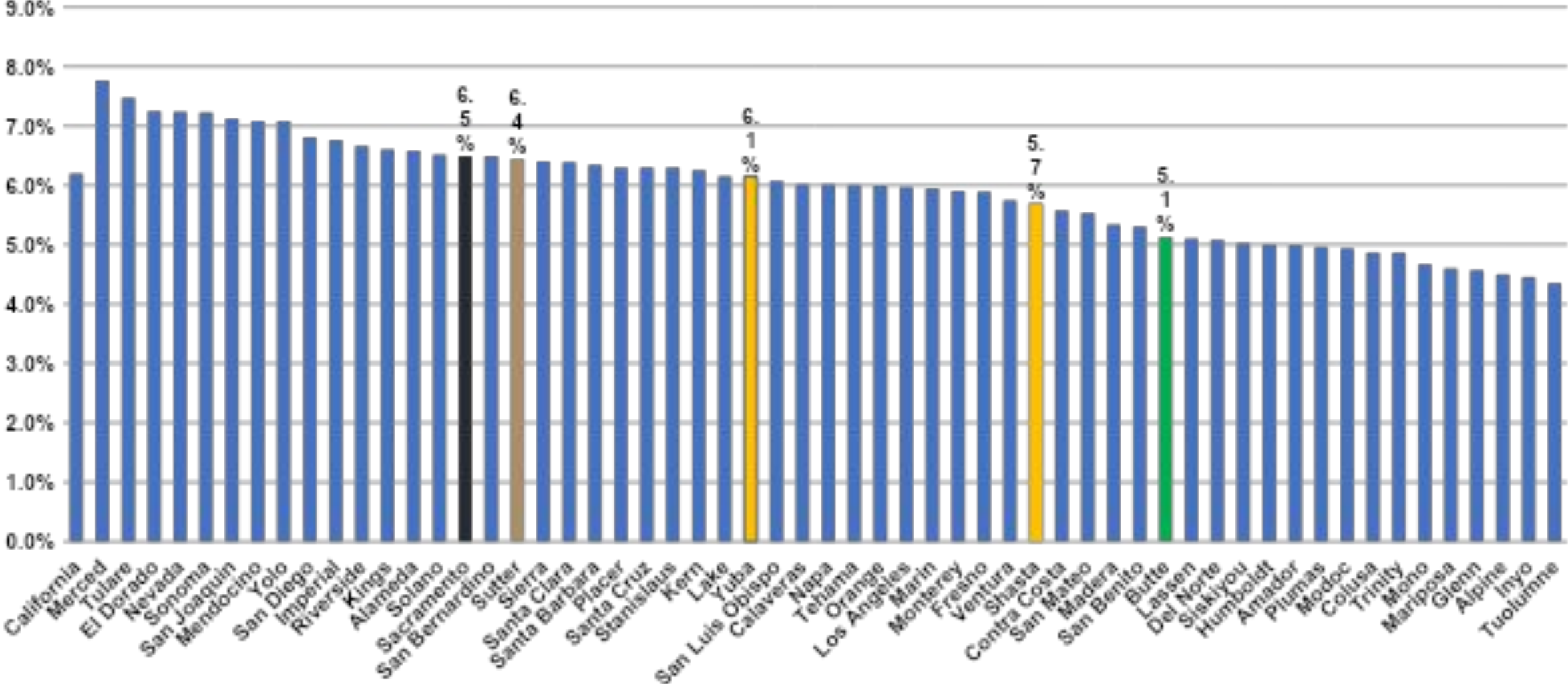
November 2007 = 100, Q1 2005 to Q4 2024 (Forecast)



Median Home Price Growth, Dec 2018 and Dec 2019 Compared to Dec 2020, California and Selected Counties



Housing Forecast, Dec 2020, Zillow™ Research, % Change for the coming year to Dec 2021, Median Home Price Growth



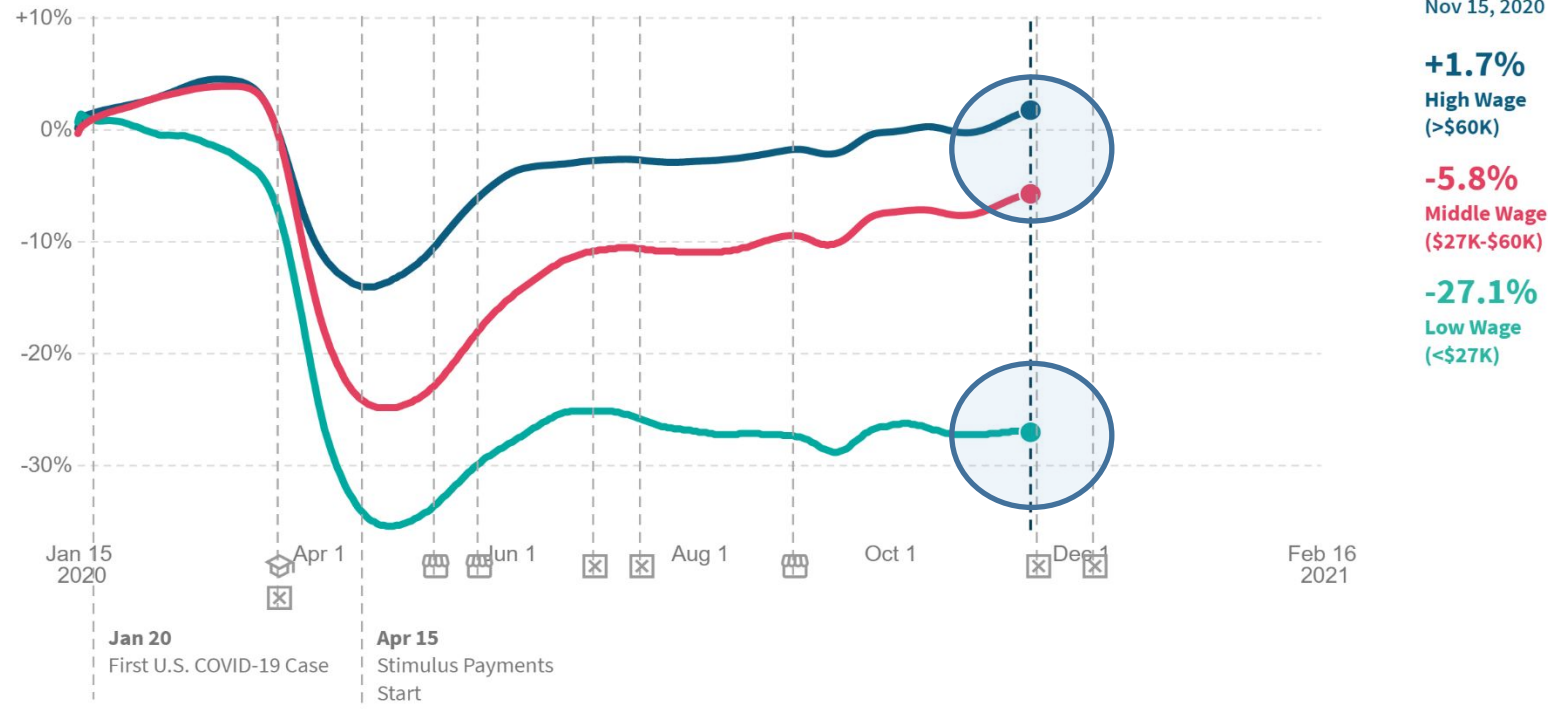
Source: Zillow™ Research

K-Shaped Recovery: Different Outcomes for Different Workers, California



Percent Change in Employment*

In **California**, as of **November 15 2020**, employment rates among workers in the top wage quartile **increased** by **1.7%** compared to January 2020 (not seasonally adjusted).



*Change in employment rates (not seasonally adjusted), indexed to January 4-31, 2020. This series is based on payroll data from Paychex and Intuit, worker-level data on employment and earnings from Earnin, and timesheet data from Kronos. The dotted line in the low-wage series is a prediction of employment rates based on Kronos data.

last updated: February 08, 2021 next update expected: February 16, 2021

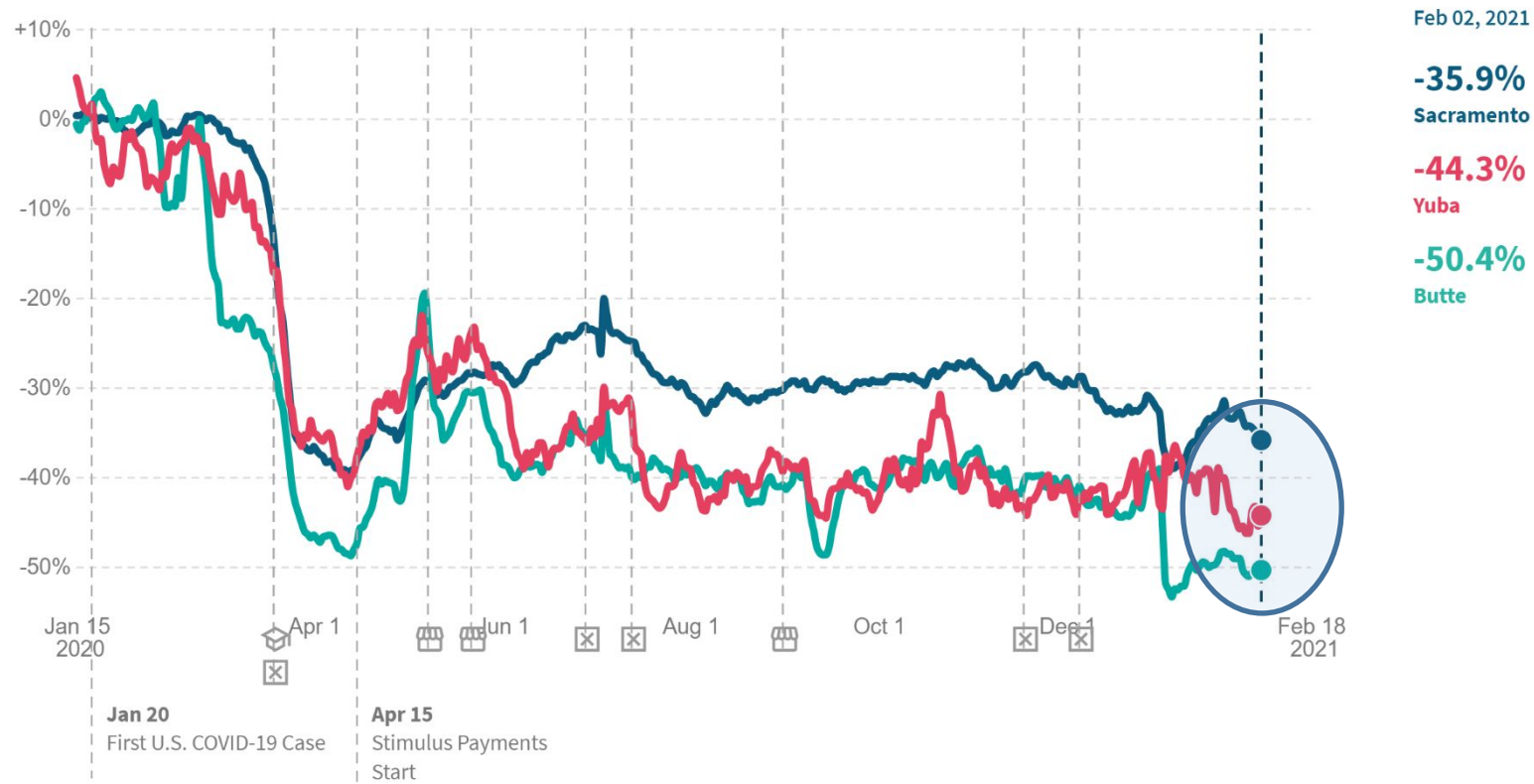
Pressures on:

1. Local government (rising social services demand);
2. Non-profits;
3. Apartments and other rental units; and
4. Ability of local businesses to hire back once cycle turns.

Small Businesses : Regional Watch with Caveats

Percent Change in Number of Small Businesses Open*

In **Sacramento**, as of **February 02 2021**, the number of small businesses open **decreased** by **35.9%** compared to January 2020.



Some nasty frictions and questions to answer for policy makers:

1. What industries to support?
2. Does it matter 12 months from now?
3. How do these changes affect commercial real estate?
4. How do these changes affect residential real estate and labor force?

*Change in small businesses open (defined as having financial transaction activity), indexed to January 4-31 2020 and seasonally adjusted. This series is based on data from Womply.

last updated: **February 13, 2021** next update expected: **February 19, 2021**

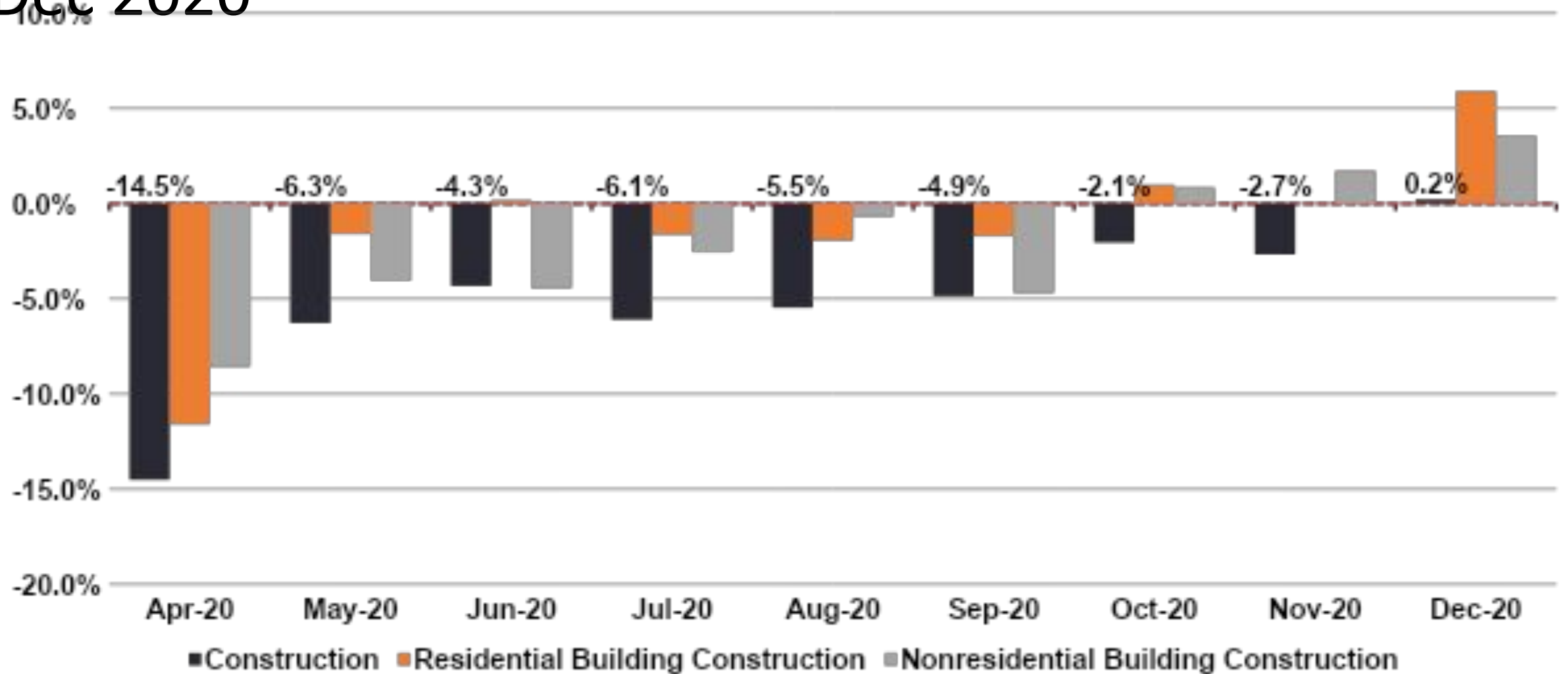
ECU Industries: Opportunities & Challenges

- Challenges:
 - Economic recovery and a “shadow effect”
 - Costs
 - Costs of doing business rising due to COVID-19
 - Revenues
 - Direct: slower economy means fewer projects in pipeline, more deferred maintenance.
 - Indirect: Office space vacancy + construction slowdown may create lower demand conditions
 - Lingering issues with COVID-19 and social policy
- Opportunities
 - Climate change focus with new president: will solar and wind finally see mass adoption?
 - Is fiscal policy coming to help finance these jobs?
 - Will biomass get more focus?
 - Electricians, installers, natural resource workers may be in high-demand

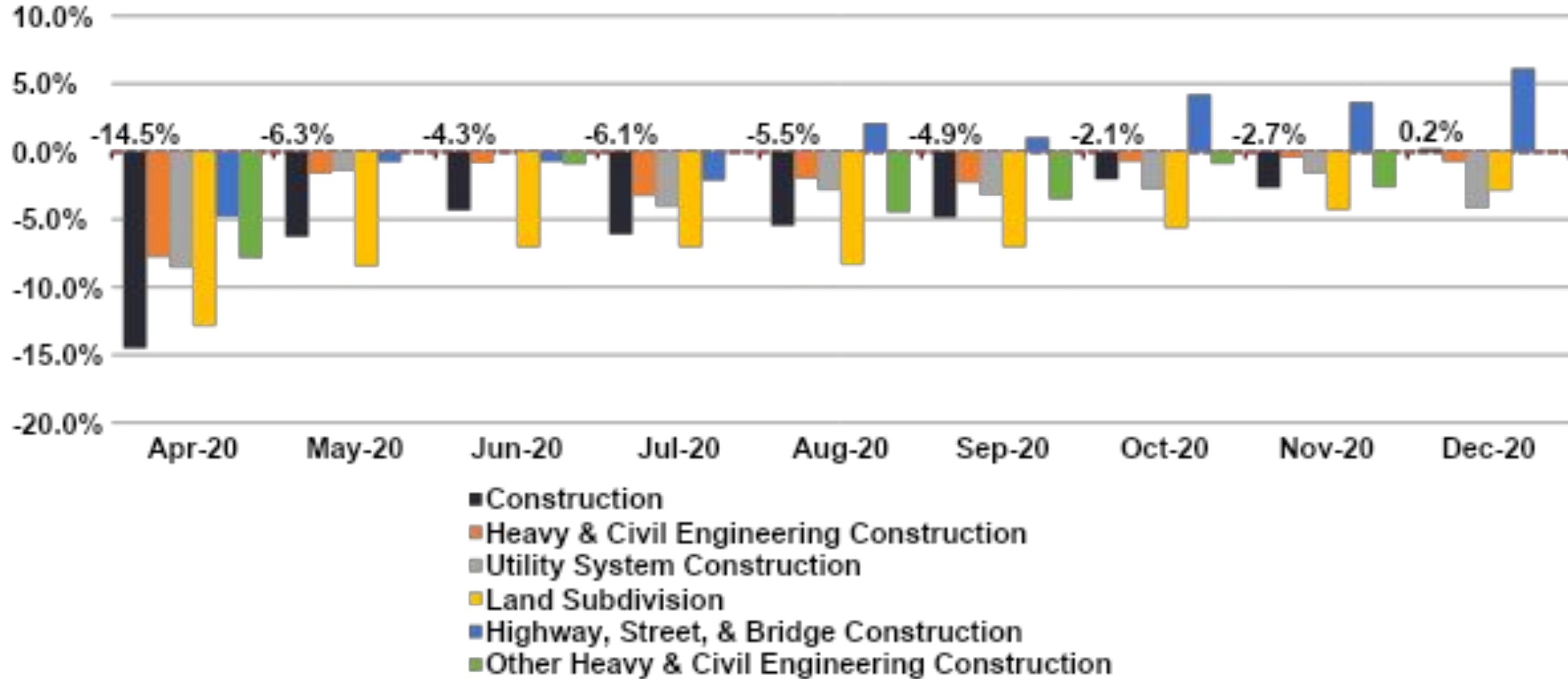


Source: Google Images

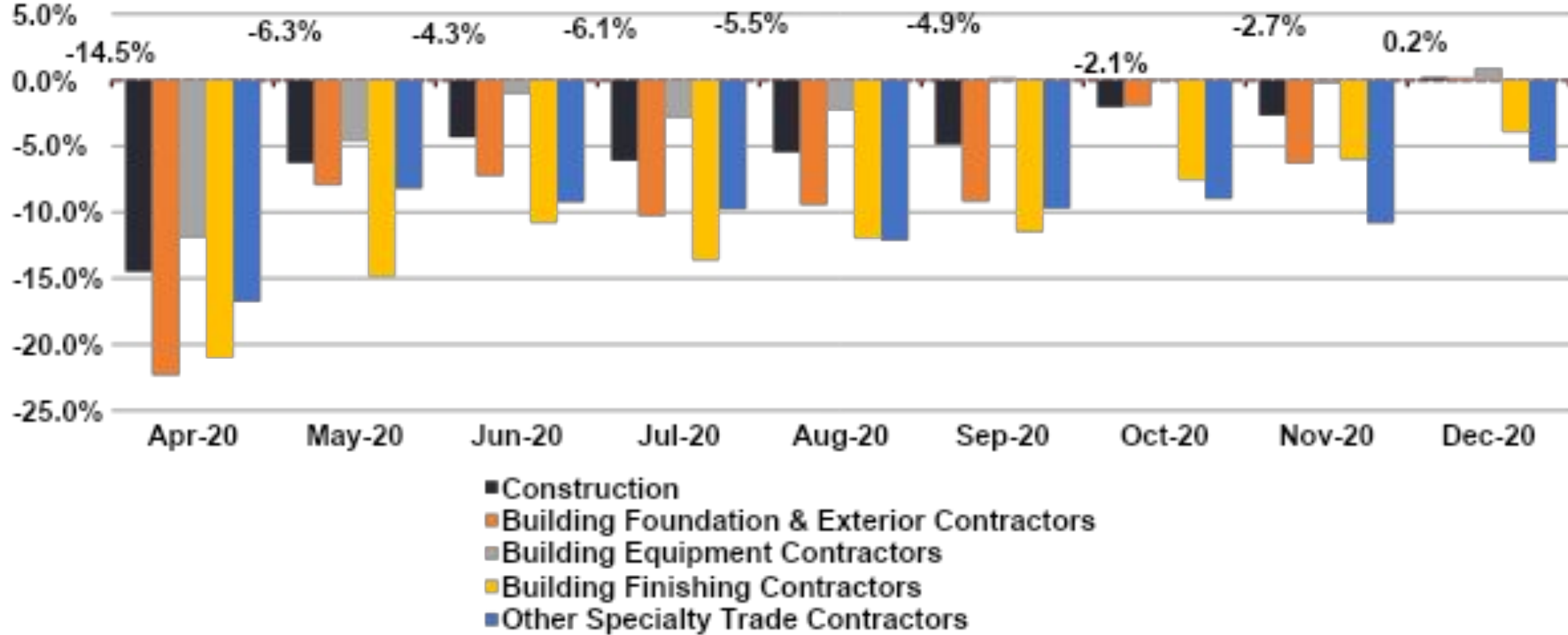
Construction Employment: Buildings, % Change from the Previous Year, California, April 2020 to Dec 2020



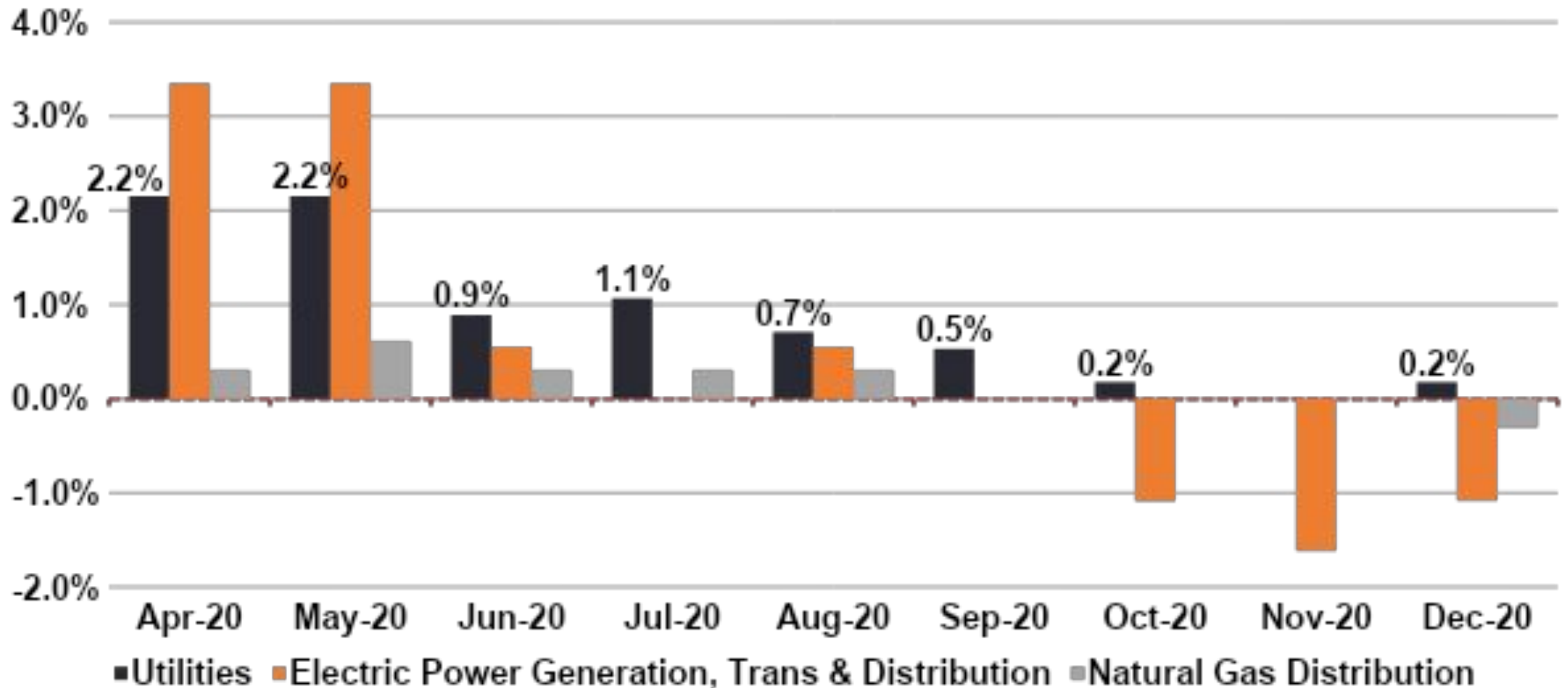
Construction Employment: Heavy and Government, % Change from the Previous Year, California, April 2020 to Dec 2020



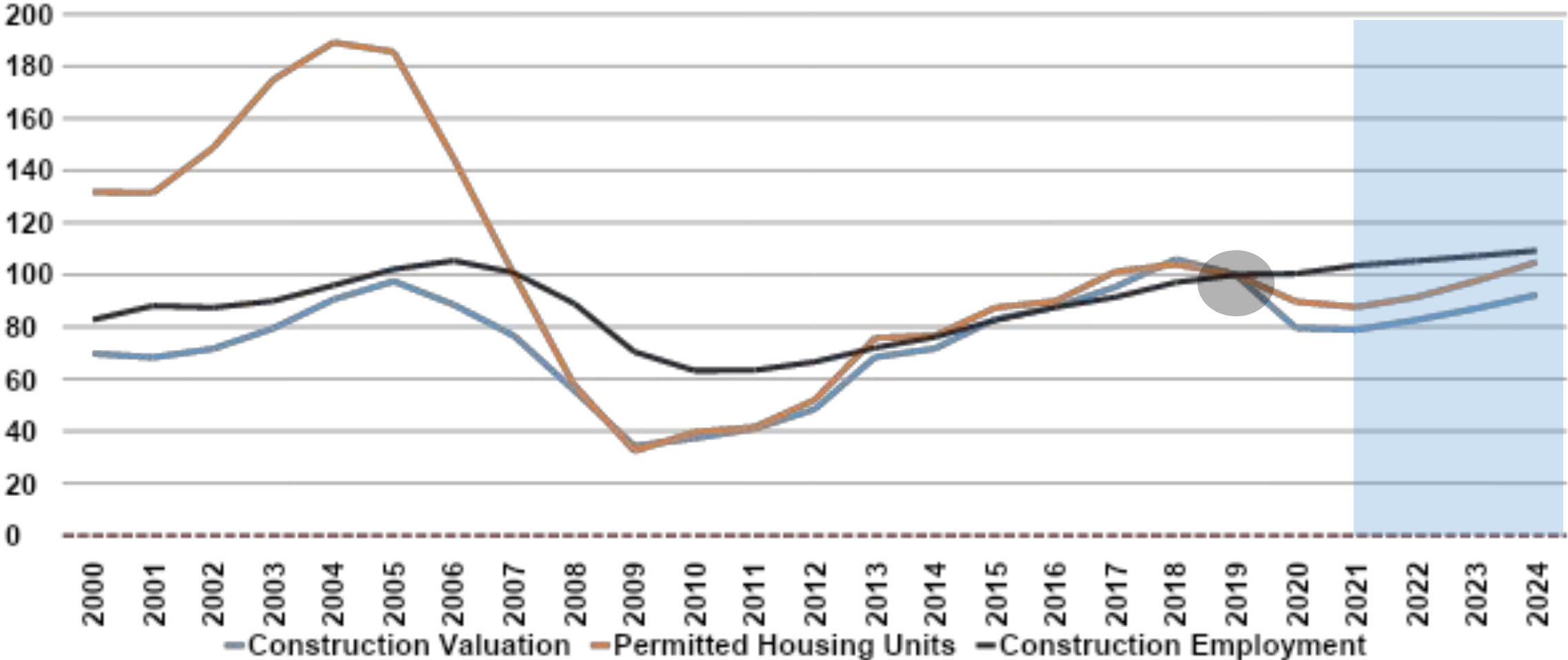
Construction Employment: Contractors, % Change from the Previous Year, California, April 2020 to Dec 2020



Utilities: After Installation, % Change from the Previous Year, California, April 2020 to Dec 2020



The Forecast: Employment, Permitted Units and Valuations, Index 2019 = 100



Source: California Department of Finance and EFA

A Longer View: What is and is not in the Forecasts

- “Green New Deal”?
 - Will the Biden Administration get fiscal investment on clean energy and broadband?
 - Will the emphasis be in commercial or residential production?
 - Will electric vehicles be a focus?
 - How large will the investment be and will entrepreneurship utilize it?
- Wide array of trades, retail, customer service opportunities
 - Occupations better define the precise types of jobs, these data define the industries
- Aging contractor workforce to younger one
 - Will the idea of being outside, building something (think Maker here) and generating clean energy attract a younger audience?
 - Project management, construction management: new majors?
- Learning from disasters
 - Utilities have been the focus of recent disasters: will they become the saviors of future ones?
 - Is the age of the microgrid coming? Lessons from Texas

Thanks!
Questions?
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@bobby7007

Labor Market Trends & Occupations



Ebony Benzing
Research Manager
North Far North Center
of Excellence



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH



Energy, Construction, and Utilities (ECU) Regional Advisory

Friday, February 19, 2021



Who is the Center of Excellence?



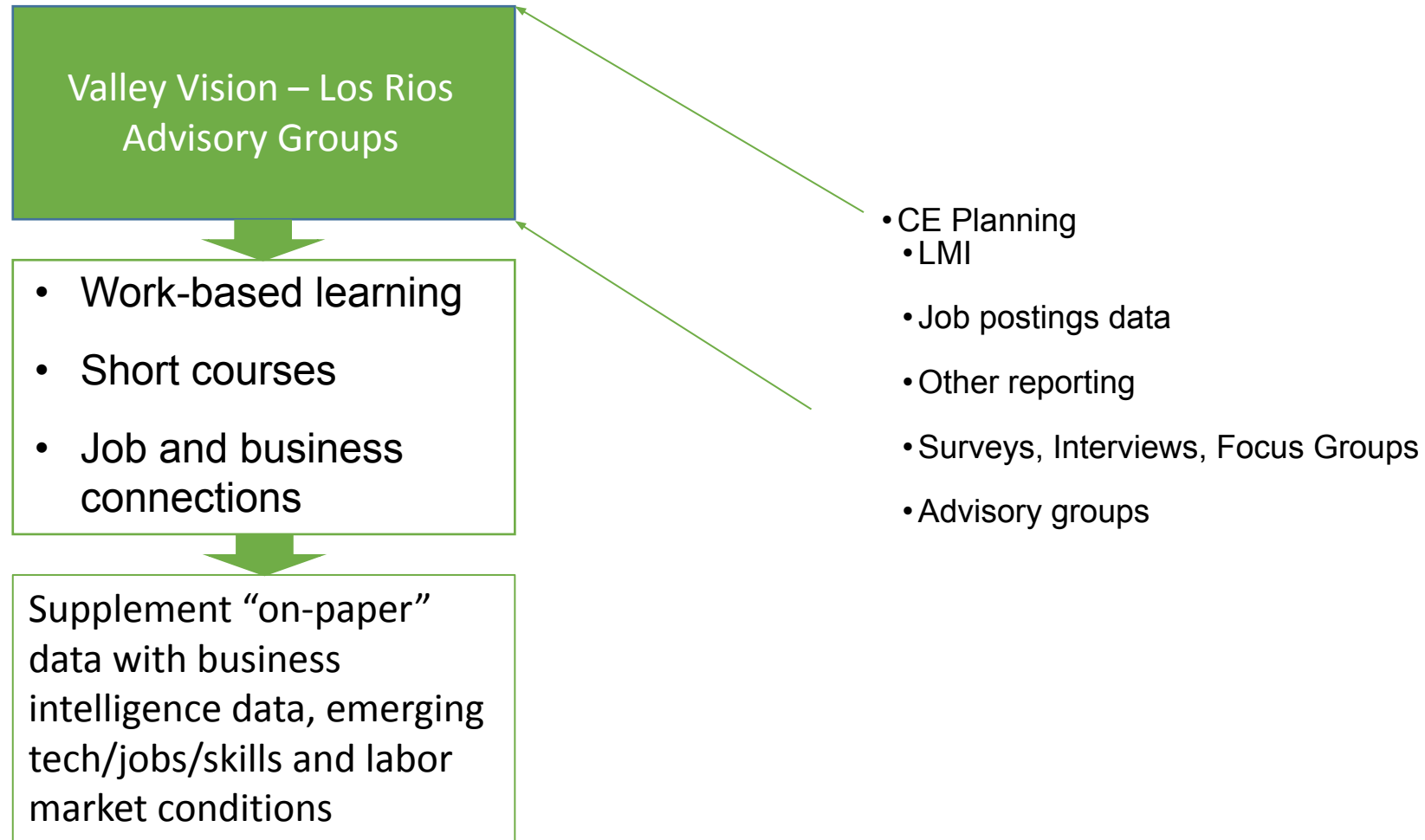
Region	Director
North/ Far North	Aaron Wilcher (North)
	Sara Phillips (Far North)
Bay Area	John Carrese
Central	Nora Seronello
South Central	Adele Hermann
Los Angeles	Luke Meyer
Orange County	Jesse Crete
Inland Empire/Desert	Michael Goss
San Diego/Imperial	Tina Ngo Bartel
Statewide	Laura Coleman

Typical COE Research Questions



- What is the employment **outlook** for students?
- What **skills** and **credentials** are needed?
- What **programs** look ripe for investment?

“Mixed Methods Process” for planning



Presentation Overview

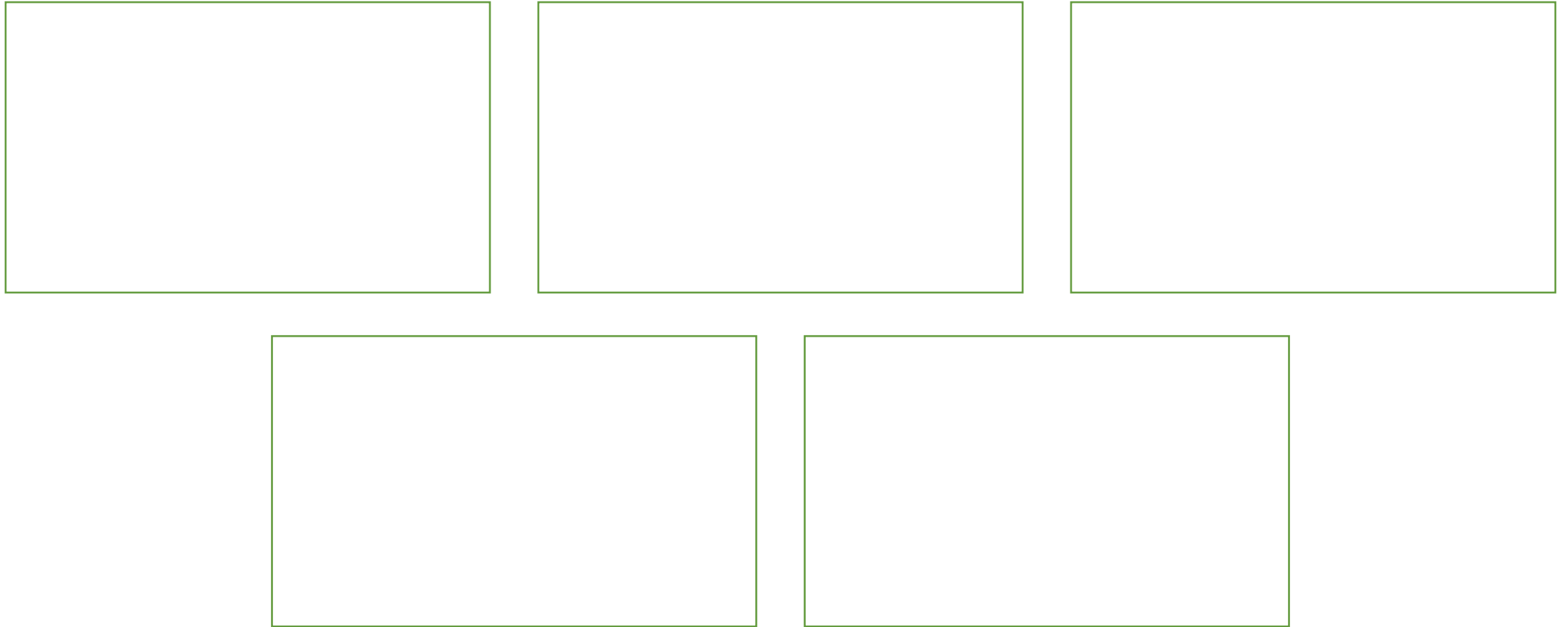
- Sector definition and overview
- Occupational overview
- Job postings data
- College programs and awards



ECU Industry Sector and Occupational Overview

- Energy, Construction, and Utilities
 - 57 specific industries
- 260 Occupations
- 24 TOP Code Programs

ECU Employment at a Glance

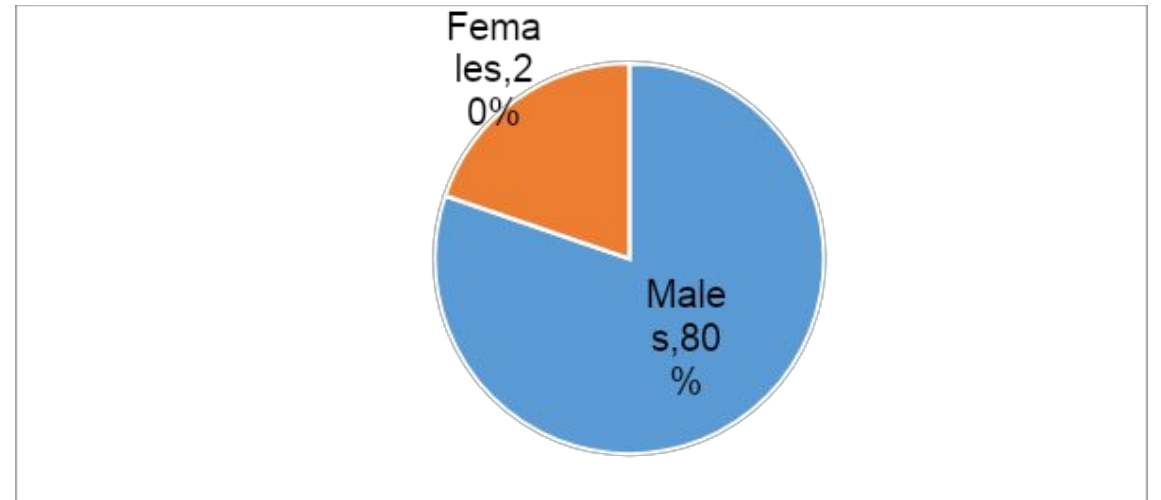
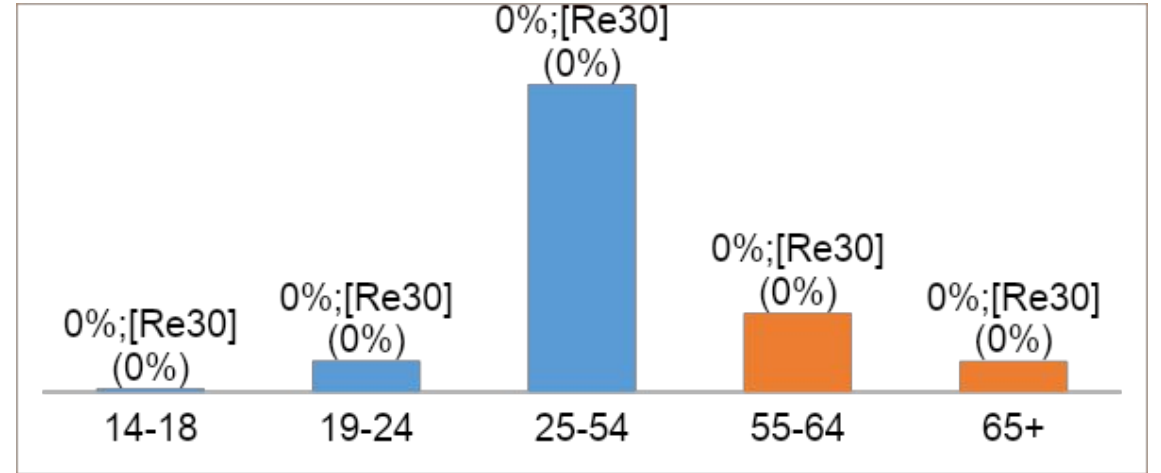
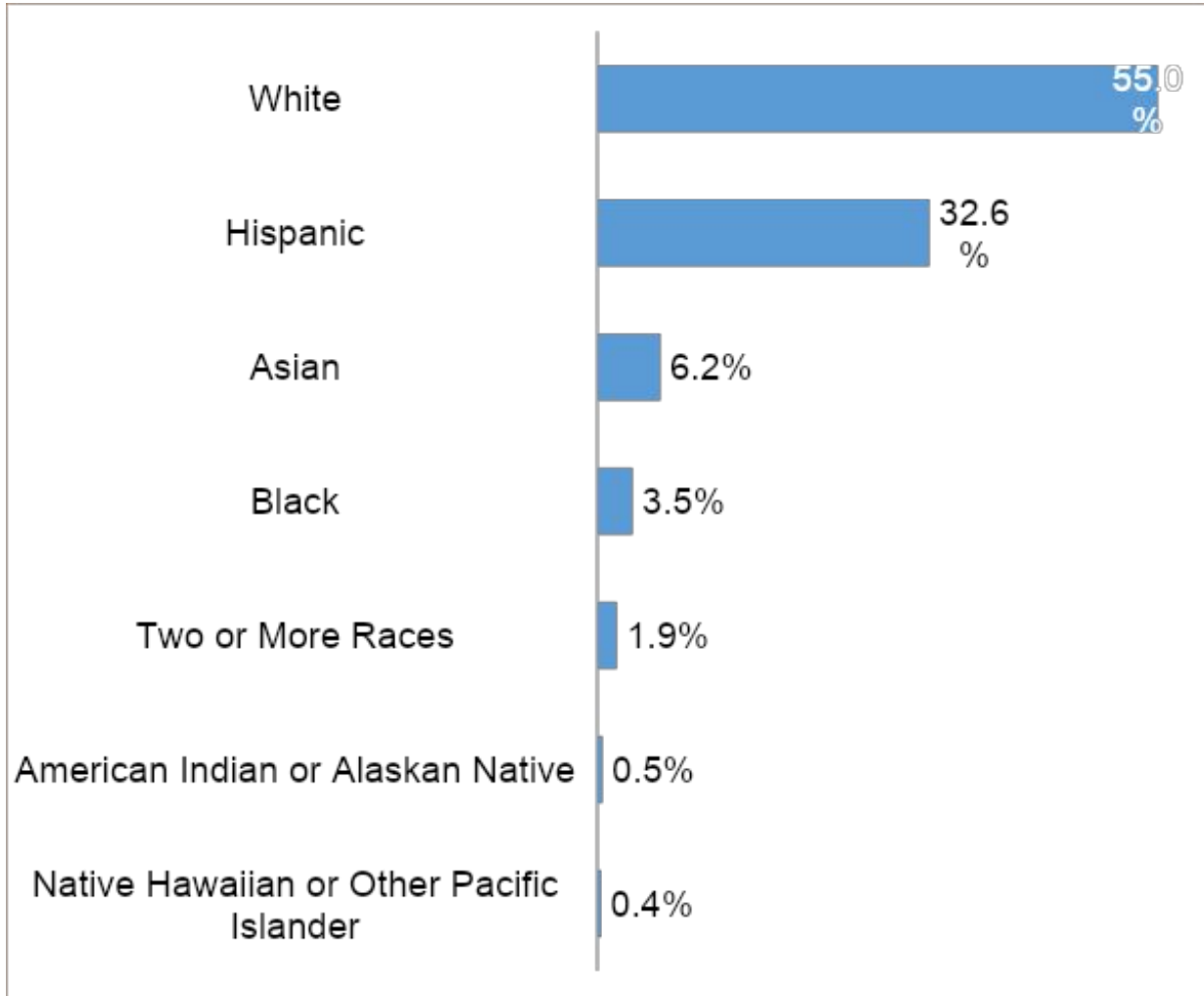


Source: Emsi 2021.1; QCEW Employees, Non-QCEW Employees, and Self-Employed in the seven-county North (Greater Sacramento) region, which includes El Dorado, Nevada, Placer, Sacramento, Sutter, Yolo, and Yuba.

ECU Subsector	2019 Jobs	2024 Jobs	2019-2024 Projected % Change	Avg. Earnings Per Job	2019 Location Quotient	2020 Establishments
Utilities	4,141	4,888	18%	\$189,969	0.99	61
Construction	94,109	103,622	10%	\$76,147	1.33	6,765
Telecommunications	3,442	2,791	(19%)	\$113,090	0.63	165
Architectural, Engineering, and Related Services	12,333	12,857	4%	\$104,736	1.02	977
Waste Management and Remediation	3,448	3,711	8%	\$69,671	0.98	181
North (Greater Sacramento) Totals	117,474	127,870	9%	\$84,066	--	8,148

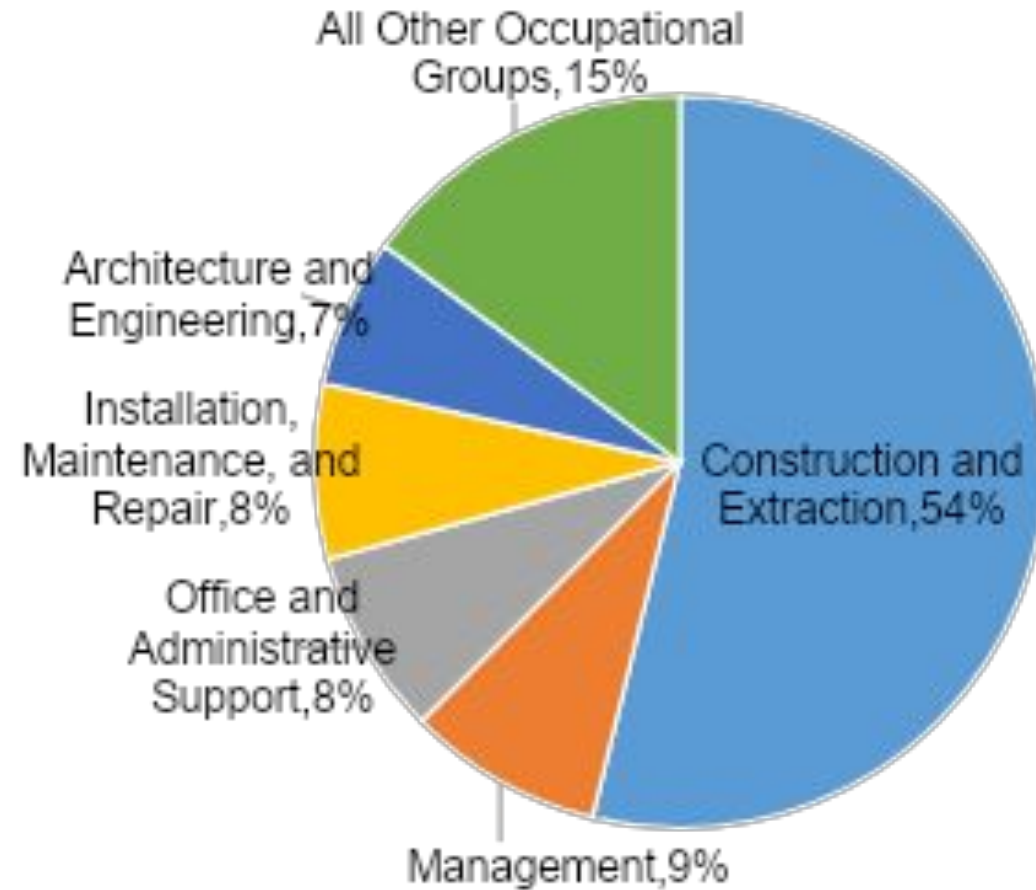
Source: Emsi 2021.1; QCEW Employees, Non-QCEW Employees, and Self-Employed in the seven-county North (Greater Sacramento) region, which includes El Dorado, Nevada, Placer, Sacramento, Sutter, Yolo, and Yuba.

ECU Workforce Demographics (2019)



Source: Emsi 2021.1; QCEW Employees, Non-QCEW Employees, and Self-Employed. 7-county North (Greater Sacramento) region.

85% of sector employment is found in five major occupational groups



Critical Occupations and Projected Employment

Occupational Group	Industry Group		Greater Sacramento			
	Employment (2019)	Share of Region's Jobs (2019)	2019 Jobs	2024 Jobs	Projected Growth	Avg. Annual Openings
Construction Trades Workers	54,608	90%	60,702	66,414	9%	6,949
Other Management Occupations	6,590	19%	33,921	35,764	5%	2,932
Other Installation, Maintenance, and Repair Occupations	5,945	29%	20,196	21,461	6%	2,107
Engineers	4,301	32%	13,461	13,991	4%	974
Business Operations Specialists	4,169	7%	63,000	65,791	4%	6,066
Other Office and Administrative Support Workers	4,046	9%	42,882	42,473	(1%)	4,649
Supervisors of Construction and Extraction Workers	4,010	82%	4,887	5,343	9%	560
Top Executives	2,391	12%	20,033	20,905	4%	1,679
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	2,173	41%	5,257	5,191	(1%)	532
Material Moving Workers	2,170	4%	55,419	56,478	2%	6,994
Drafters, Engineering Technicians, and Mapping Technicians	2,007	42%	4,777	4,924	3%	464
Other Construction and Related Workers	1,856	51%	3,632	3,882	7%	437
Totals	94,268	29%	328,168	342,617	4%	34,344

Source: Emsi 2021.1; QCEW Employees, Non-QCEW Employees, and Self-Employed in the seven-county North (Greater Sacramento) region, which includes El Dorado, Nevada, Placer, Sacramento, Sutter, Yolo, and Yuba.

Burning Glass Job Postings

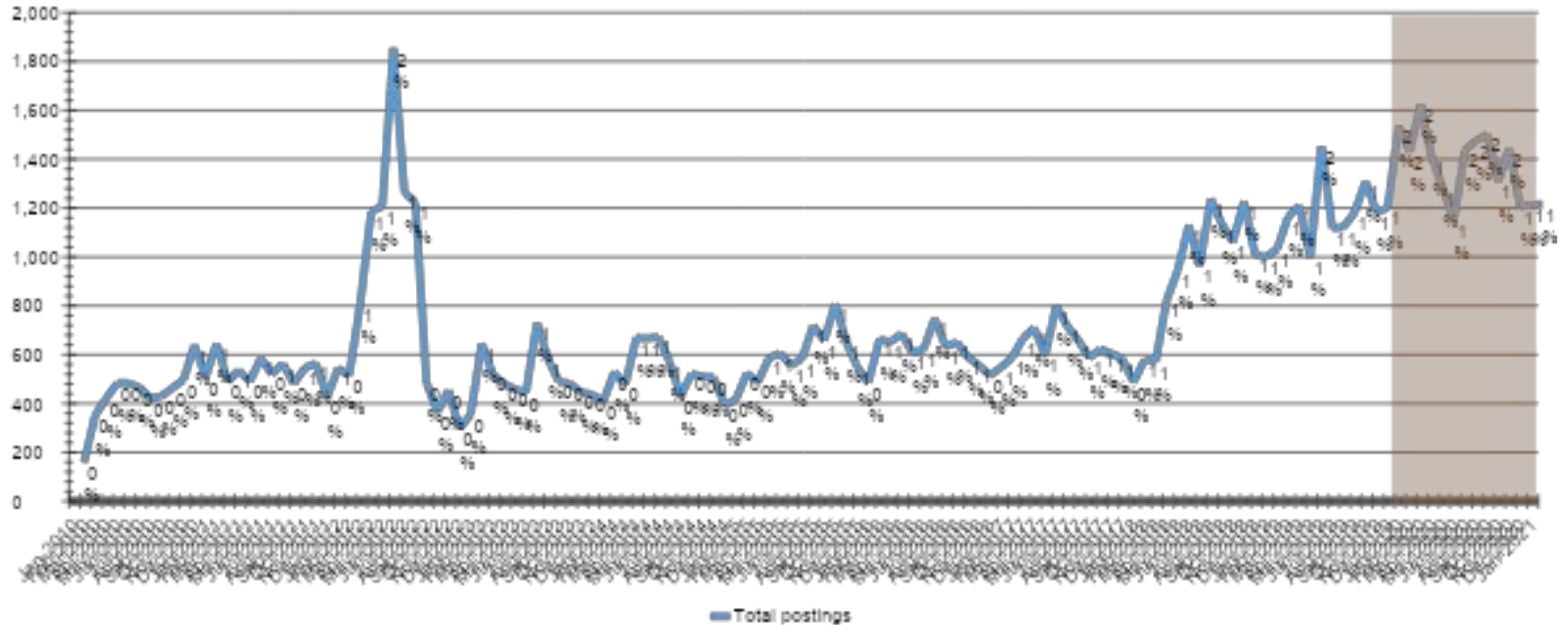
About Burning Glass Labor Insights

- Online job posting aggregator
- Searched for postings using ECU industry definitions
- Job postings are not the same as numbers of hiring positions

16,532
new jobs posted online,
January 1, 2019 through January 31,
2021
in the
ECU Sector

ECU Sector Job Posting Trends

16% decline in job postings,
Jan 1, 2020 through Jan 31, 2021
BUT
activity is up over last decade



Top 10s

•Employers

- Tjg Civil Engineers And Land Planners
- Pacific Gas and Electric Company
- HD Supply
- Northstar Incorporated
- Tjg Commercial Construction
- Villara Building Systems
- Yuba City Unified School District
- Waste Management
- Loanpal
- T Mobile Usa Incorporated

•Occupations

- Construction Managers
- Civil Engineers
- Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
- Electricians
- Managers, All Other
- Cost Estimators
- Retail Salespersons
- Heating, Air Conditioning, and Refrigeration Mechanics and Installers
- Construction Laborers
- Laborers and Freight, Stock, and Material Movers, Hand

•Job Titles

- Project Manager
- Construction Project Manager
- Construction Superintendent
- Construction Estimator
- Journeyman Electrician
- Construction Project Engineer
- Electrician
- HVAC Service Technician
- Superintendent

16,532

new jobs posted online,
January 1, 2019 through January 31, 2021

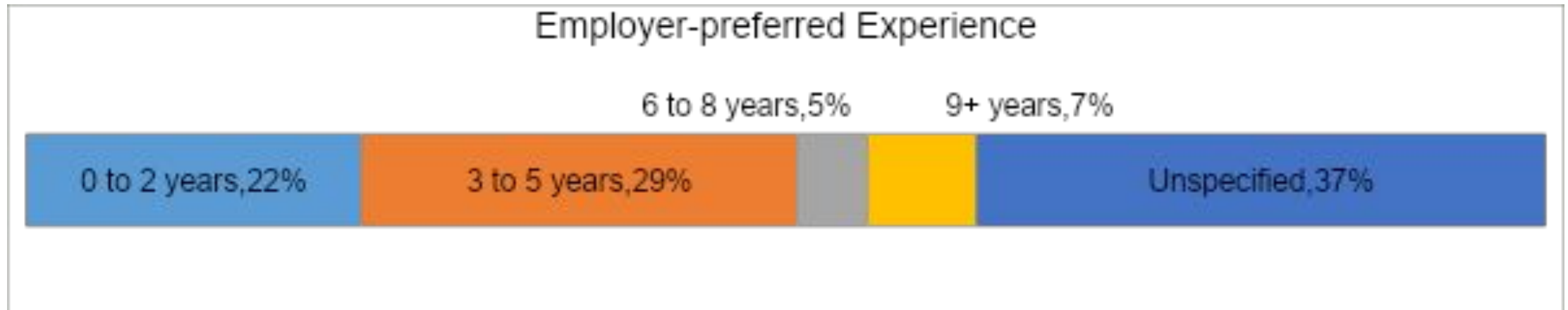
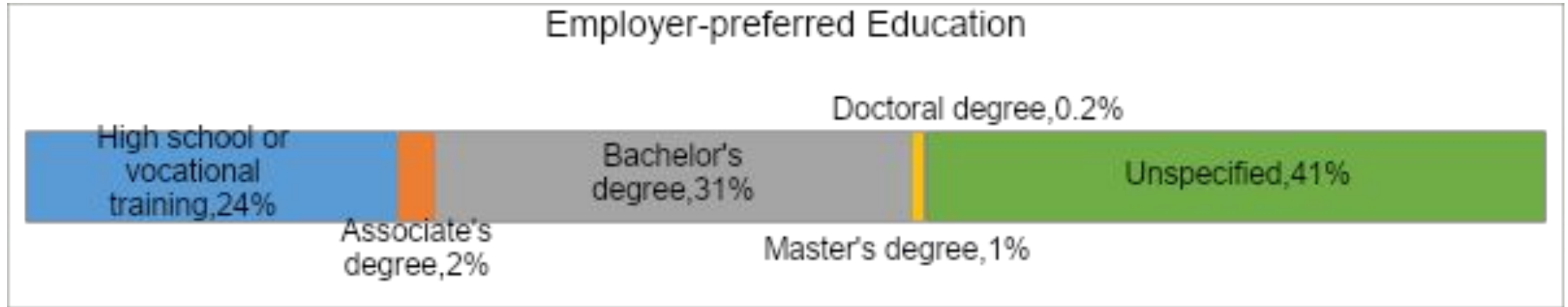
Most Desired Skills

- Specialized Skills
 - Scheduling
 - Project Management
 - Budgeting
 - Civil Engineering
 - Construction Management
 - Customer Service
 - Repair
 - Plumbing
 - AutoCAD
 - Sales
- Foundational Skills
 - Communication Skills
 - Detail-Oriented
 - Microsoft Excel
 - Organizational Skills
 - Microsoft Office
 - Teamwork / Collaboration
 - Planning
 - Physical Abilities
 - Writing
 - Problem Solving
- Technology Skills
 - Microsoft Excel
 - Microsoft Office
 - AutoCAD
 - Microsoft Word
 - Microsoft Project
 - Microsoft PowerPoint
 - Civil 3D
 - Revit
 - Microsoft Outlook

16,532

new jobs posted online,
January 1, 2019 through January 31, 2021

Most Requested Education and Experience



Hard-to-fill ECU Jobs

Occupation	Number of Job Postings	Time to Fill
Solar PV Installers	45 (Medium)	57 Days
Solar Sales Representatives and Assessors	38 (Medium)	54 Days
Electrical Power-Line Installers and Repairers	21 (Low)	61 Days

Employers - Solar

- Solar Postings
 - Villara Building Systems (13)
 - Infinity Energy, Inc. (10)
 - Cascade Power (5)
 - Semper Solis Construction (3)
 - Green Planet Solutions (3)
 - Canopy Energy (3)

Employers – Electrical Power-Line

- Pacific Gas and Electric Company (5)
- Mastec Incorporated (5)
- Psomas & Associates (3)
- Qualtek Wireless (2)
- KO Underground Construction, Inc. (2)

Community College Training Programs

North Community College Program Inventory

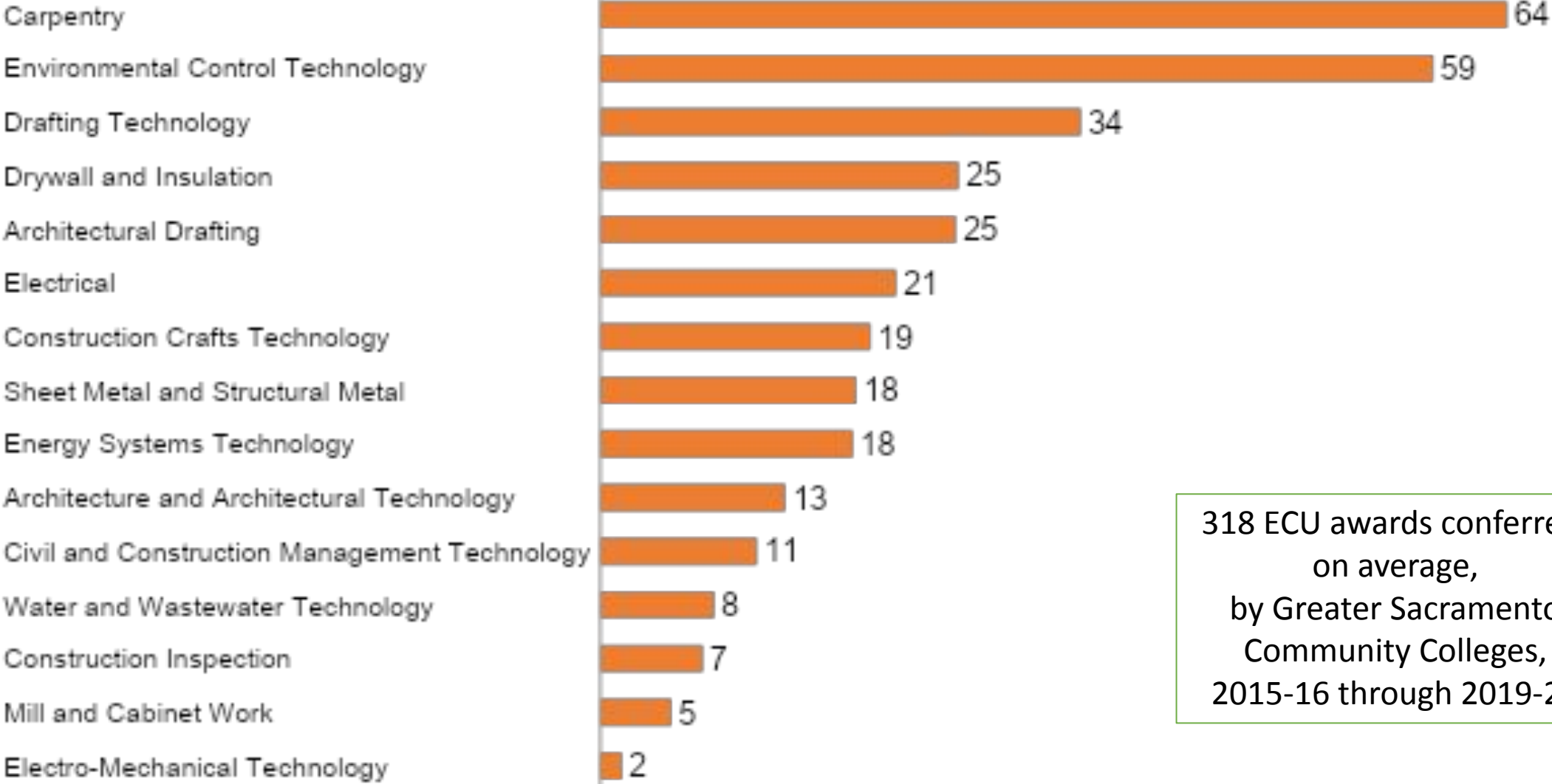
College	Architectural Drafting	Architecture and Architectural Technology	Carpentry	Civil and Construction Management Technology	Construction Crafts Technology	Construction Inspection	Drafting Technology	Drywall and Insulation
American River			C/D		C		C/D	C/D
Cosumnes River		C/D		C/D	C/D	C/D		
Folsom Lake								
Sacramento City	D						C/D	
Sierra	C/D		C	D	C/D		C	

Woodland

College	Electrical	Electro-Mechanical Technology	Energy Systems Technology	Environmental Control Technology	Mill and Cabinet Work	Sheet Metal and Structural Metal	Water and Wastewater Technology	
American River	C/D	C			C	C/D		
Cosumnes River								
Folsom Lake							C	
Sacramento City				C/D			C	
Sierra			C/D*					
Woodland							C	

Sources: Chancellor’s Office of Curriculum Inventory (COCI) and CCCC DataMart

5-Year Avg. of ECU Awards



318 ECU awards conferred,
on average,
by Greater Sacramento
Community Colleges,
2015-16 through 2019-20

Program	Awards 2015-2016	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	2019-2020 Awards	5-Year Average
Carpentry	29	26	50	37	177	64
Environmental Control Technology	38	28	38	93	96	59
Drafting Technology	29	28	34	51	27	34
Drywall and Insulation	7	12	39	18	50	25
Architectural Drafting	19	33	25	25	23	25
Electrical	1	13	40	11	39	21
Construction Crafts Technology	71	7	6	7	4	19
Sheet Metal and Structural Metal	9	13	14	37	17	18
Energy Systems Technology	37	25	2	--	7	18
Architecture and Architectural Technology	13	5	16	16	15	13
Civil and Construction Management Technology	6	8	16	14	11	11
Water and Wastewater Technology	6	9	6	--	11	8
Construction Inspection	3	4	6	11	12	7
Mill and Cabinet Work	--	--	--	--	5	5
Electro-Mechanical Technology	--	--	2	1		2
Grand Total	268	211	294	321	494	318

Source: Management Information Systems (MIS) Data Mart, California Community Colleges Chancellor's Office, <https://datamart.cccco.edu/>.

Other Considerations

- 1. Who's at risk?
- 2. What skills offer protective benefit?
 - A.I.
 - Automation
 - COVID-19
 - Pandemic

- Emerging occupations
 - Facilities management
 - Project Managers
- Future of Work will require both Upskilling and Reskilling
- State and Federal Policies for Green Jobs and Economy
- Equity Gaps
 - Who's missing from programs?
 - Where is there opportunity to bridge the gap?

Thank you!

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Research Manager

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916-563-3215

coecc.net



C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

ECU Aligned TOP Codes

TOP Code	TOP Title	TOP Code	TOP Title
210210	Public Works	095250	Mill and Cabinet Work
020100	Architecture and Architectural Technology	095260	Masonry, Tile, Cement, Lath and Plaster
029900	Other Architecture and Environmental Design	095270	Painting, Decorating, and Flooring
093440	Electrical Systems and Power Transmission	095280	Drywall and Insulation
093500	Electro-Mechanical Technology	095290	Roofing
094600	Environmental Control Technology	095300	Drafting Technology
094610	Energy Systems Technology	095310	Architectural Drafting
095200	Construction Crafts Technology	095320	Civil Drafting
095210	Carpentry	095640	Sheet Metal and Structural Metal
095220	Electrical	095700	Civil and Construction Management Technology
095230	Plumbing, Pipefitting and Steamfitting	095720	Construction Inspection
095240	Glazing	095800	Water and Wastewater Technology

ECU Industry Definitions (2017 NAICS)

NAICS Code	Industry Definition	NAICS Code	Industry Definition	NAICS Code	Industry Definition
221111	Hydroelectric Power Generation	221122	Electric Power Distribution	237110	Water and Sewer Line and Related Structures Construction
221112	Fossil Fuel Electric Power Generation	221320	Sewage Treatment Facilities	237120	Oil and Gas Pipeline and Related Structures Construction
221113	Nuclear Electric Power Generation	221330	Steam and Air-Conditioning Supply	237130	Power and Communication Line and Related Structures Construction
221114	Solar Electric Power Generation	236115	New Single-Family Housing Construction (except For-Sale Builders)	237210	Land Subdivision
221115	Wind Electric Power Generation	236116	New Multifamily Housing Construction (except For-Sale Builders)	237310	Highway, Street, and Bridge Construction
221116	Geothermal Electric Power Generation	236117	New Housing For-Sale Builders	237990	Other Heavy and Civil Engineering Construction
221117	Biomass Electric Power Generation	236118	Residential Remodelers	238110	Poured Concrete Foundation and Structure Contractors
221118	Other Electric Power Generation	236210	Industrial Building Construction	238120	Structural Steel and Precast Concrete Contractors
221121	Electric Bulk Power Transmission and Control	236220	Commercial and Institutional Building Construction	238130	Framing Contractors

ECU Industry Definitions (2017 NAICS)

NAICS Code	Industry Definition	NAICS Code	Industry Definition	NAICS Code	Industry Definition
238140	Masonry Contractors	238340	Tile and Terrazzo Contractors	562111	Solid Waste Collection
238150	Glass and Glazing Contractors	238350	Finish Carpentry Contractors	562112	Hazardous Waste Collection
238160	Roofing Contractors	238390	Other Building Finishing Contractors	562119	Other Waste Collection
238170	Siding Contractors	238910	Site Preparation Contractors	562211	Hazardous Waste Treatment and Disposal
238190	Other Foundation, Structure, and Building Exterior Contractors	238990	All Other Specialty Trade Contractors	562213	Solid Waste Combustors and Incinerators
238210	Electrical Contractors and Other Wiring Installation Contractors	517311	Wired Telecommunications Carriers	562219	Other Nonhazardous Waste Treatment and Disposal
238220	Plumbing, Heating, and Air-Conditioning Contractors	541310	Architectural Services	562910	Remediation Services
238290	Other Building Equipment Contractors	541330	Engineering Services	562920	Materials Recovery Facilities
238310	Drywall and Insulation Contractors	541340	Drafting Services	562991	Septic Tank and Related Services
238330	Flooring Contractors	541350	Building Inspection Services	562998	All Other Miscellaneous Waste Management Services

Data Sources

- The Chancellor's Office Curriculum Inventory System (COCI 2.0), <https://coci2.ccctechcenter.org/>
- Emsi. <https://www.economicmodeling.com/>. EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors).
- "Labor Insight Real-Time Labor Market Information Tool." Burning Glass Technologies. <http://www.burning-glass.com>.
- "Taxonomy of Programs." California Community Colleges Chancellor's Office. June 2012, 6th Edition. <https://www.cccco.edu/-/media/CCCCO-Website/About-Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx>.
- Management Information Systems (MIS) Data Mart. California Community Colleges Chancellor's Office. <https://datamart.cccco.edu/>.
- Integrated Postsecondary Education Data System (IPEDS). National Center for Education Statistics. U.S. Department of Education. <https://nces.ed.gov/ipeds/>.
- O*NET OnLine. U.S. Department of Labor/Employment and Training Administration (DOLETA). <https://www.onetonline.org/>.



BREAK

10:23am - 10:28am

Policy/Market Drivers, Legislative Review



Gregg D. Ander
FAIA, Managing Director,
Gregg D. Ander, LLC
Senior Fellow - Guidehouse
Consulting

POLICY DRIVEN MARKETS AND OPPORTUNITIES



Gregg D. Ander, FAIA

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Senior Fellow

Navigant Consulting - (A Guidehouse Company)

February 19, 2021



Energy Construction & Utilities

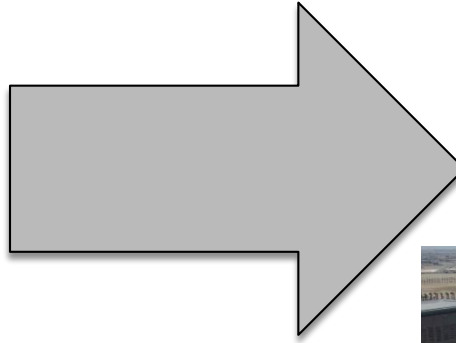
California Community Colleges
Workforce & Economic Development

Engage. Enroll. Employ.

POWERED BY
California Community Colleges

Energy, Construction, & Utilities Regional Industry Advisory
Meeting

Environmental Protection/Climate Change/Social Equity Policies & Market Impacts



- The outcome is game-changing
- The pathway is transformative
- There are winners and losers

Policies Create Markets

Executive Orders/Legislation/Regulations

- Federal/State/Local Gov/Air Quality Dist.
- Legislation/Regulations/Executive Orders
- Climate Action Plans/Codes-Standards/Ordinances



Federal Activities

- Comprehensive Infrastructure Bill(s)
 - Roads, Bridges, Water/Wastewater
- Climate Change and Environmental Protection Interwoven, Jump Start Economy
 - President Biden/Transportation Sec. Buttigieg-Public Charging Assets Powered by Renewables (500K Chargers)



Federal Activities (continued)

- Federal Energy Regulatory Commission (FERC)
 - FERC Order 2222 – Distributed Energy Resources (DER's) Can Support Transmission System



State Activities

Executive Orders/Legislation/Regulations

- SB 100 (De Leon) 100% Ren. Port. Stand.
 - 40% Now
 - Over Generating Nearly every Day
 - Creating Storage Market
- SB 49 (Skinner) Dev. Regulations For Building Assets To Facilitate Flexible Loads
 - Load Management Standards
 - Smarter Buildings
 - Advanced Automation/Artificial Intelligence



State Activities (continued)

Executive Orders/Legislation/Regulations

- Executive Order B-48-18 (Brown) 5M EV's by 2030
- AB 2127 (Ting) EV Charging Infrastructure Assessment
 - 1.5M
- Executive Order N-79-20 (Newsome) All New Cars/Lt Duty Trucks Zero Emissions (ZEV) By 2035



Big, Bold, Aggressive

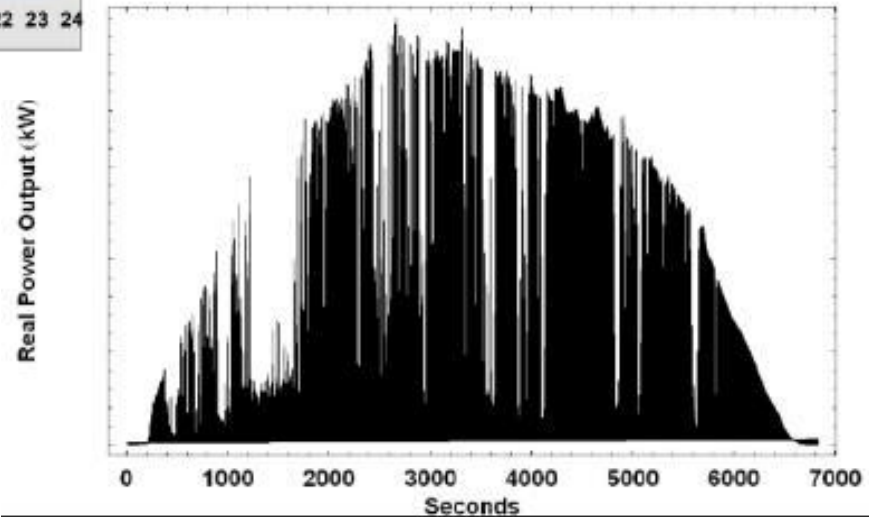
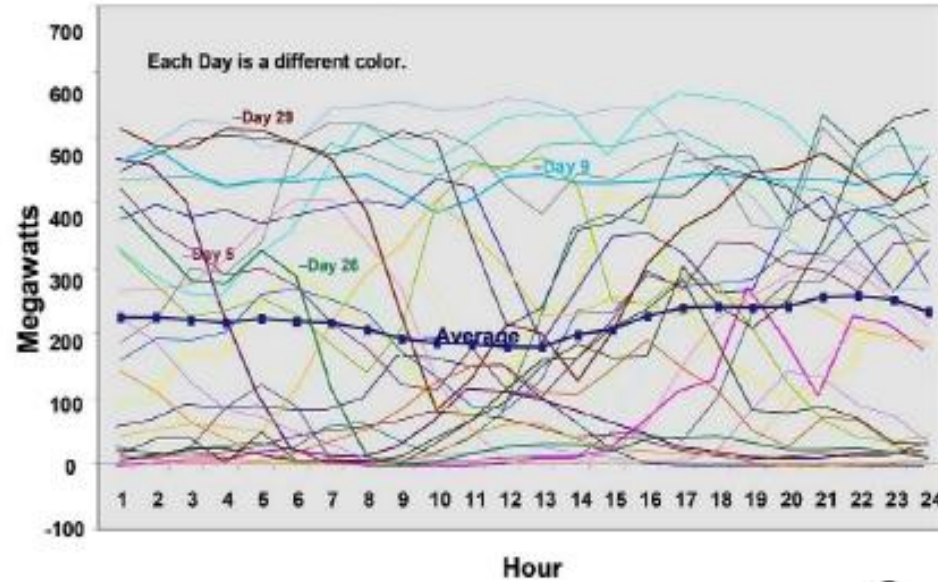
- Advance and accelerate decarbonization buildings/ transportation/ power sectors
- Electrification common strategy



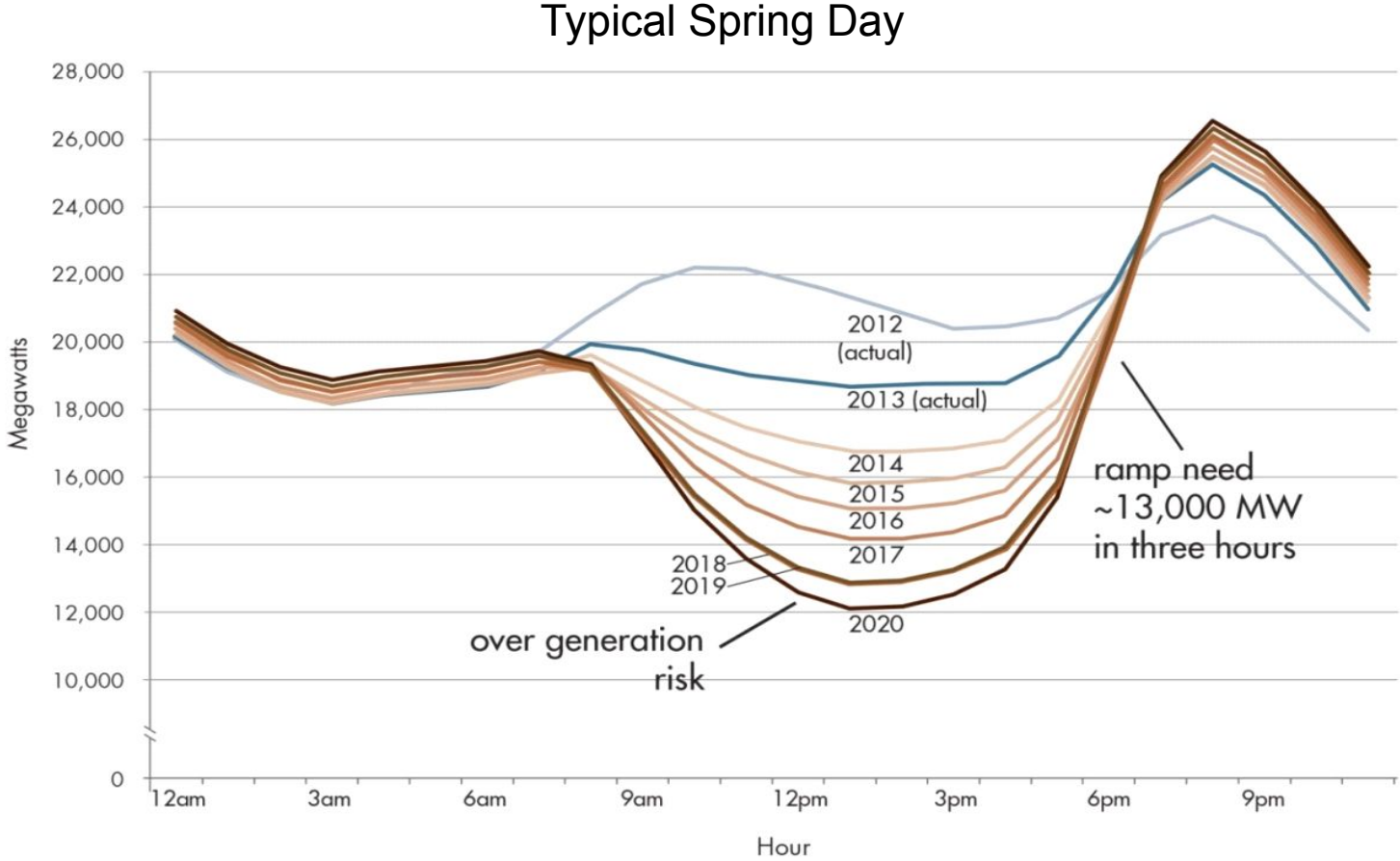
Impacts of Clean Generation

76

Tehachapi – April 2005



Duck Curve/Over Generation/Ramping



Data Points

- California - 5th Largest Economy
- Worlds Largest PV System (17 mW's)
- 13,000 PV BTM Per Month (pre COVID)
- 800,000 EV's (half of all EV's in the US are in CA)
- GM-All ZEV's (2035), Carbon Neutral (2040)
- California – 41 local govts adapted electrification reach codes (60 more in process)
- 56% CA Gas Pipelines 50 Yrs Old (source-Bldng Decarb Coalition)
- Data produced in next 1.5 years exceeds all produced in history of man (Sean Harrington, V.P. Verizon)

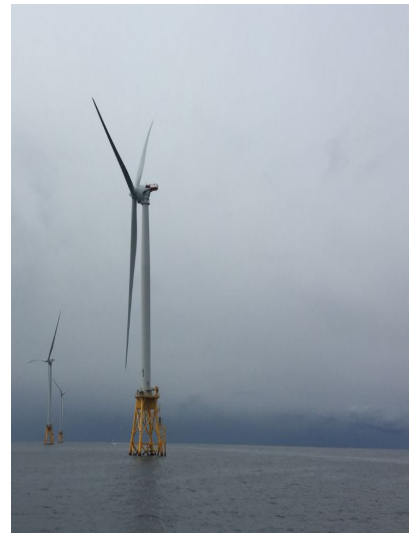


Smart Buildings, Smart Cities, Smart Grid



Going Forward

Envir. Protection/Social Equity/Climate Mitigation



Offshore Wind

Climate Adaptation and Resiliency



Extreme Weather, Precipitation
Temperature, Fires, Floods

POLICIES DRIVE MARKETS AND OPPORTUNITIES

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Workforce Engagement Video

Jenna Dorrough - Carpenter

Industry Insights with Q&A



Moderator:

James Morante

Statewide Director,
Energy, Construction & Utilities

Industry Insights with Q&A



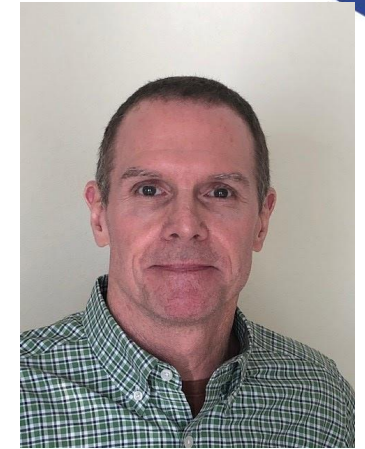
Tony Sciarra
Workforce
Development &
Education Programs,
Tesla



Susan Wheeler
Workforce Development,
Sustainable Communities,
SMUD



Ralph Ahlgren
Founder, President
and Chief
Technical Officer,
Soleeva Energy

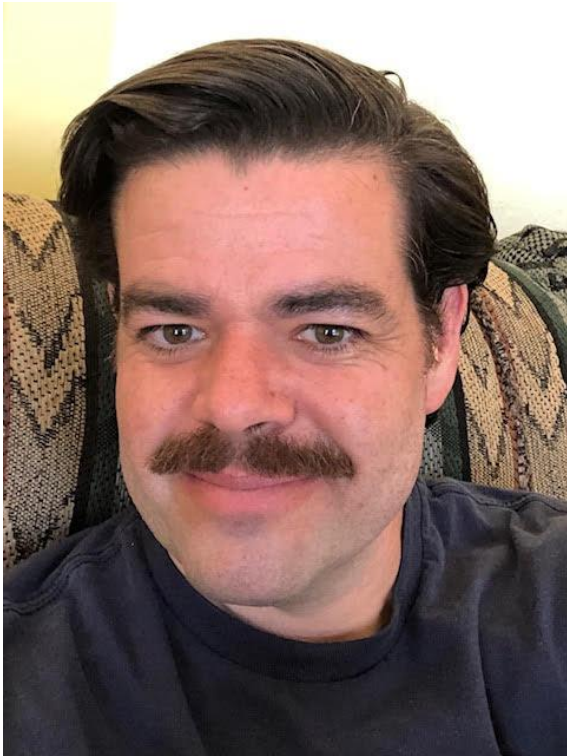


Jeffrey Panasiti
Vice President of
Operations,
Lennar Homes

Workforce Engagement Video

Northern California Construction Career Opportunities

Los Rios ECU Programs and Pathways, Opportunities to Partner



Orion Walker
Regional Director,
Employer Engagement, Energy,
Construction and Utilities, Greater
Sacramento Region

THANK YOU FOR JOINING

For more information contact

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