

The Future of Oil Extraction in California

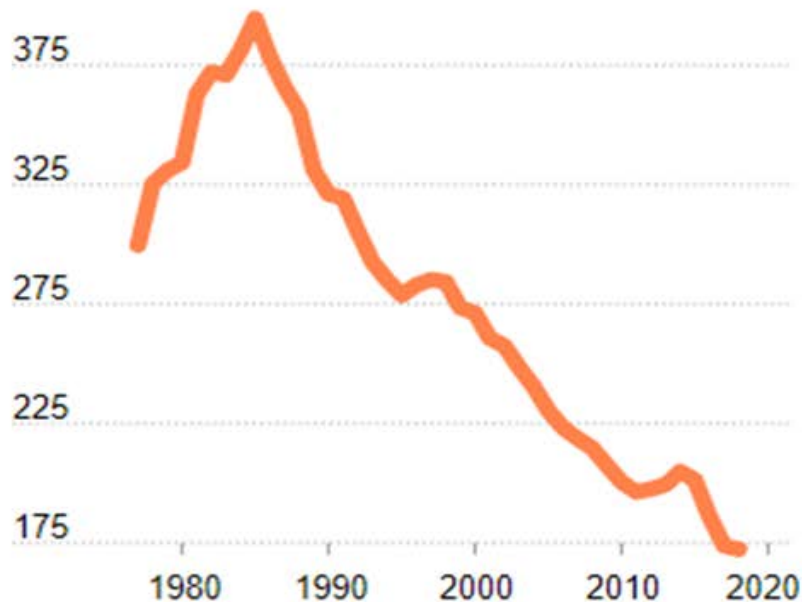
An EJ Perspective on Transitioning Workforce,
Environment & Economy

Shared Goals?

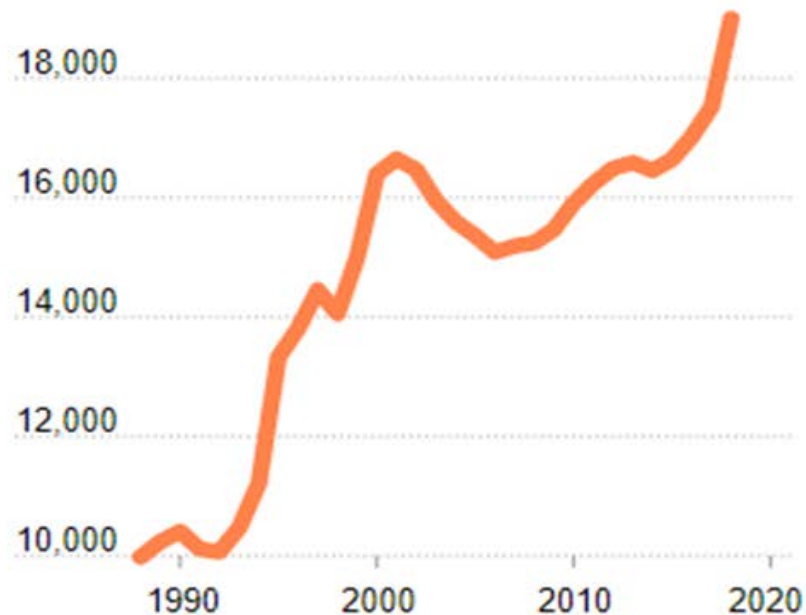
- Thriving and prosperous local economy, sufficient tax base to pay for all necessary local and social services
- Good, well-paying, safe jobs
- Healthy places to live, work and play
- Increased investment, prioritizing areas that have historically been harmed by environmental hazards

Oilfield Trends in California

Oil produced (millions of barrels)



Wells idle for eight years or more



California Geologic Energy Management Division, Times/Public Integrity analysis

Why the Decline?

Emissions

TOTAL GREENHOUSE GAS EMISSIONS PER BARREL

kg CO₂ eq./barrel crude

725 (-1%)

U.S. California Midway Sunset

736

Canada Athabasca DC
S00

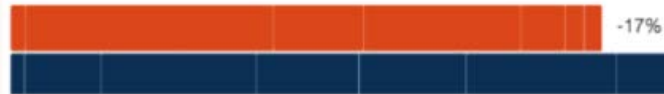
UPSTREAM EMISSIONS



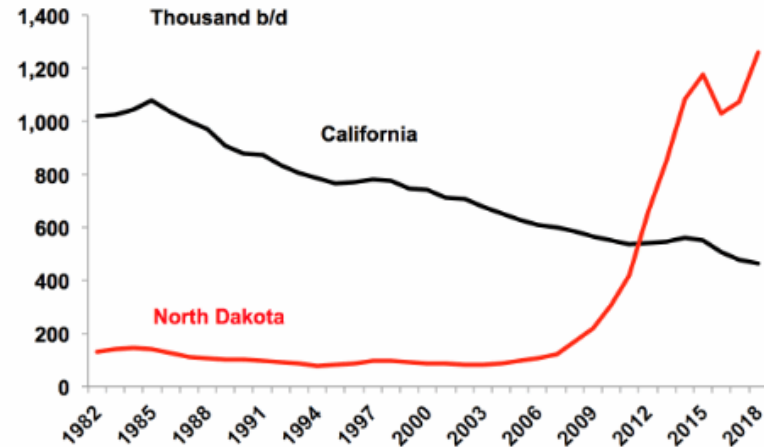
MIDSTREAM EMISSIONS



DOWNSTREAM EMISSIONS



Crude Oil Production: North Dakota vs. California



Employment Figures

	TF Supply Sector	non-TF Supply Sector	TF Share of Total	TF Employment by Segment:		
				Extraction	Distribution	Refining
A. Employment:						
Los Angeles	8,713	4,204,601	0.002	328	3,717	4,669
Kern	7,372	262,334	0.027	3,388	3,262	722
Contra Costa	5,926	308,615	0.019	0	1,556	4,370
Orange	3,489	1,499,262	0.002	146	3,234	108
San Bernardino	653	656,037	0.001	0	653	0
 Total for "top 5" counties	26,153	6,930,849	---	3,862	12,422	9,868
Total for state (county-level data)	29,818	14,696,562	---	3,956	15,580	9,868
Total for state (state-level data)	38,710	16,714,366	---	7,696	19,771	11,243

What they are saying...

“The oil and gas industry directly employs 152,000 people in California.”

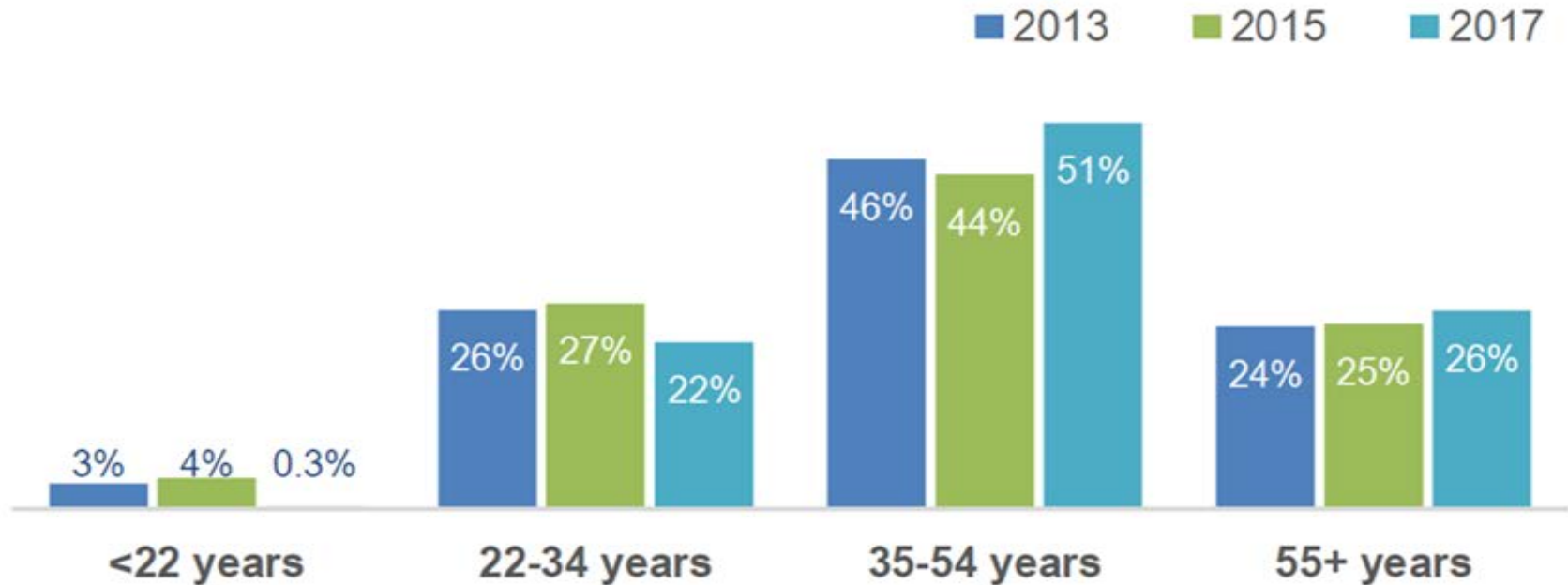
- Cathy Reheis-Boyd, President
Western States Petroleum Association

“The oil and gas industry supported 366,000 jobs in California in 2017 — enough people to fill every NFL stadium in the state more than 1.5 times.”

- Aera Energy

Workforce Composition Trajectory

Workforce in the California Oil and Gas Industry



Future Opportunities



Criteria

- “High Road” job growth in impacted regions
 - Local hire
 - Living wage
 - Union representation
 - Preference for fossil fuel workers
- Centering worker and community voices
- Reducing greenhouse gas emissions
- Providing community co-benefits

Orphan Well Liabilities

Table 8: Total potential orphan well costs among active and idle wells

Group	Wells	Cost (M)	Available Bonds (M)	Net Liability¹⁹ (M)
Likely Orphan Wells	2,565	\$308	\$10	\$298
Wells at High Risk of Becoming Orphan Wells	2,975	\$246	\$16	\$230
Other Idle and Marginal Wells	69,425	\$5,287	\$53	\$5,234
Higher-Producing Wells	31,722	\$3,385	\$27	\$3,358
Total	106,687	\$9,226	\$107	\$9,120

Site Remediation

ESTIMATE OF POTENTIAL BROWNFIELD SITES IN CALIFORNIA

[notes] SOURCES

LISTED SITES

UNLISTED SITES

TOTAL SITES

	Lower	Upper	Mean	Lower	Upper	Mean	Lower	Upper	Mean
[1] GAO							54,000	120,000	85,500
[2] Cal-EPA			60,829	60,829	121,658	91,244 [†]			
[3] US Conference of Mayors	59,079	100,808	79,943	59,079	201,616	130,785 [†]			
[4] General Business Statistics							100,000	260,000	180,000
[5] I/L Ratio							75,136	140,686	107,911
[6] Analysis of geographical statistics							65,000	130,000	97,500
AVERAGE ESTIMATES	59,079	100,808	70,386	59,954	161,673	111,015	73,534	162,672	117,727
BLENDED TOTAL ESTIMATES ^{††}							96,285	212,577	149,564*

*CCLR Estimates between 150,000 and over 200,000



H RTP Low Carbon Economy Workforce Program Request for Applications



2021 Awards:

High Road Regional Workforce Strategies – Kern County

High Road Regional Workforce Strategies – Contra Costa

Current Just Transition Efforts

- Los Angeles Just Transition Taskforce
- California Just Transition Roadmap – July 2021
- California Budget
 - \$300 million for remediation of contaminated sites
- SB 467

Key Takeaways

- Oil and gas extraction is on its way out in CA. Will decline be managed or unmanaged?
- Jobs figures are not insignificant, but not insurmountable.
- Oil well site and toxic site remediation are promising avenues for job growth
- Multiple ways to engage on this issue in 2021

Questions

Contact:

Ingrid Brostrom

ibrostrom@crpe-ej.org