

Community Choice Aggregators, Biomass Energy, and California’s Just Transition: A Case Study of AB 843 and Responsible Biomass Procurement Principles

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INTRODUCTION

On September 23, 2021, California Governor Gavin Newsom signed twenty-four historic bills focused on climate and clean energy efforts, drought, and wildfire preparedness.¹ Included within that slate of bills was Assembly Bill (“AB”) 843, which allows Community Choice Aggregators (“CCAs”) to submit eligible bioenergy projects to the California Public Utilities Commission (“CPUC”) for cost recovery.² This article explores the potential benefits and issues that could impact California’s energy market as CCAs begin to develop biomass energy projects under AB 843. It also details background information on the development of CCAs in California, the regulatory framework that prompted the passage of AB 843, and it provides an explanation of Marin Clean Energy’s (“MCE’s”) *Principles of Responsible Biomass Electricity Development*, which have been designed to support a just transition away from fossil fuels and toward renewable energy sources.

¹ *Governor Newsom Signs Climate Action Bills, Outlines Historic \$15 Billion Package to Tackle the Climate Crisis and Protect Vulnerable Communities*, OFF. OF GOVERNOR GAVIN NEWSOM (Sept. 23, 2021), <https://www.gov.ca.gov/2021/09/23/governor-newsom-signs-climate-action-bills-outlines-historic-15-billion-package-to-tackle-the-climate-crisis-and-protect-vulnerable-communities/>.

² A.B. 843, 2021 Assemb., (Cal. 2021).

I. CALIFORNIA COMMUNITY CHOICE AGGREGATORS—GOVERNANCE, ENGAGEMENT, AND BENEFITS

After California’s energy crisis of the early 2000s, CCAs were created by AB 117 (2002), which allowed towns, cities, and counties to aggregate their electric load and select the generation sources of electricity that best serve their communities’ needs.³ Historically in California, electricity customers received their generation, transmission, and distribution services all from the same vertically integrated utility—either an investor-owned utility (“IOU”) or a municipally-owned utility (such as the Los Angeles Department of Water and Power).



Figure 1: HOW MCE WORKS

In contrast to IOUs, which are regulated by the CPUC and have a for-profit, investor-owned model and a guaranteed profit,⁴ CCAs are not-for-profit government agencies, and their operations are overseen by local elected officials who are appointed to serve on CCA boards of directors.⁵ Regarding generation services, CCAs undoubtedly compete with the

³ A.B. 117, 2002 Assemb., (Cal. 2002).

⁴ CAL. PUB. UTIL. CODE § 701 (1951).

⁵ *Community Choice Aggregation*, CALCCA, <https://cal-cca.org/wp-content/uploads/2019/10/What-are-CCAs.pdf> (last visited Jan. 19, 2022).

incumbent IOU.⁶ However, for transmission, distribution, meter reading, customer service, and some programs, the IOUs and the CCAs are partners in providing services to their shared customers. In this way, CCA customers still have the transmission and distribution line items of their bill subject to CPUC regulation because they are still directly paying the IOU.

CCA formation is governed by a complicated legal, regulatory, and community engagement framework. Pursuant to AB 117, CCAs are only allowed to form within an IOU service area.⁷ AB 117 and CPUC Resolution E-4907 establish the process for a city or jurisdiction to register and implement a CCA and outline CPUC regulatory requirements related to submission of an Implementation Plan, Resource Adequacy requirements, bond payments, and customer notifications.⁸ If a municipality wishes to offer a CCA option to its residents and businesses, its city council or board of supervisors must have a majority vote in a public meeting.⁹ The months leading up to this vote regularly include a period of intensive community engagement, such as sending out mailers to inform residents of the upcoming vote and presenting to important community groups such as local farm bureaus, nonprofits, or Chambers of Commerce. If a majority of elected officials vote to move forward with community choice, then an even deeper community engagement process begins.

MCE is a CCA that currently serves over 1 million people in thirty-seven communities throughout Marin County, Napa County, Contra Costa County, and Solano County.¹⁰ In the case of MCE, a robust community engagement process included the formation of a Community Leader Advisory Group composed of local leaders and representatives from significant businesses and organizations identified by town, city, or county staff. These advisory group members are educated about the CCA structure,

⁶ *Community Choice Aggregation*, GREEN POWER P'SHIP (Feb. 24, 2021, 9:34 AM), https://p1cdn4static.civillive.com/UserFiles/Servers/Server_6435726/File/Government/Departments/Public%20Works/Environmental%20Services%20Division/Community%20Choice%20Aggregation%20_%20Green%20Power%20Partnership%20_%20US%20EPA.pdf (noting that some of the advantages associated with CCA, according to the U.S. Environmental Protection Agency's Green Power Partnership (GPP), are a potential reduction in retail electric rates; the capacity to rapidly shift to greener power resources; local control of electricity generation; expanded consumer choices; and the potential to spur local jobs and renewable energy development); see also ERIC O'SHAUGHNESSY ET AL., NAT'L RENEWABLE ENERGY LAB'Y, COMMUNITY CHOICE AGGREGATION: CHALLENGES, OPPORTUNITIES, AND IMPACTS ON RENEWABLE ENERGY MARKETS 2 (2019), <https://www.nrel.gov/docs/fy19osti/72195.pdf>.

⁷ CAL. PUB. UTIL. CODE § 366.2(c)(1) (2019).

⁸ CAL. PUB. UTIL. COMM. Res. E-4907 (Cal. 2018).

⁹ PUB. UTIL. § 366.2(c)(12)(A).

¹⁰ *About Us*, MCE, <https://www.mcecleanenergy.org/about-us/> (last visited Jan. 20, 2022).

energy options, and related customer programs. They are asked to spread the word about the upcoming change in electric service to their networks and are given the tools to do so, such as program pamphlets and language to include in their newsletters and social media. In parallel, MCE staff will attend various events, schedule many presentations, and make themselves available to answer community questions. At least four additional mailers (often in multiple languages) are sent out to all electric account holders, informing them of their electric options and how they can learn more about the forthcoming changes to their electric bills.

Once a jurisdiction votes to form or join a CCA, customers are automatically opted-in to receive electricity generation services from the CCA, essentially changing the community's default supply from the IOU's existing generation portfolio to the CCA's portfolio. Customers have the option to opt out and return back to their traditional bundled service, which means that they will return to the local IOU to continue receiving generation as well as transmission and distribution services.¹¹

The first California CCA was formed in 2006 in the San Joaquin Valley. Often referred to as the "Central Valley," this region of California is typically associated with large-scale farming and working-class families.¹² The Central Valley is where Cesar Chavez and Dolores Huerta organized Latino farmworkers into a union, creating the National Farmworkers Association (a predecessor to the United Farm Workers) and gaining national attention to improve their working conditions.¹³ The San Joaquin Valley Power Authority was the first CCA to be certified by the CPUC,¹⁴ encompassing parts of Fresno County, Kings County, and Tulare County.¹⁵ These counties consistently rank among the lowest in per capita income,

¹¹ PUB. UTIL. § 366.2(a)(2)–(3).

¹² Alexandra McGee & Shalini Swaroop, *The Power of Power: Democratizing California's Energy Economy to Align with Environmental Justice Principles through Community Choice Aggregation*, ECOLOGY L. Q. 985, 993 (Aug. 21, 2020), <https://www.ecologylawquarterly.org/wp-content/uploads/2020/08/The-Power-of-Power.pdf>.

¹³ Library of Congress Research Guides: *A Latinx Resource Guide: Civil Rights Cases and Events in the United States, 1962: United Farm Workers Union*, <https://guides.loc.gov/latinx-civil-rights/united-farm-workers-union> (Accessed on Feb. 7, 2022).

¹⁴ *10 Years of CCA in California!*, CALCCA, <https://cal-cca.org/celebrating-10-years-of-cca-in-california/> (last visited Feb. 7, 2022).

¹⁵ Communities in the joint powers agreement included: Kings County and the cities of Clovis, Corcoran, Dinuba, Fresno, Kerman, Kingsburg, Lemoore, Hanford, Parlier, Reedley, Selma, and Sanger. CAL. ENERGY COMM'N, CEC-200-2007-016-SF, PROGRESS REPORT ON RESOURCE ADEQUACY AMONG PUBLICLY OWNED LOAD-SERVING ENTITIES IN CALIFORNIA 82 (2008).

median household income, and median family income in California.¹⁶ Unfortunately, despite being the first CCA to have its implementation plan certified by the CPUC, the nascent program was shuttered due to aggressive IOU opposition.¹⁷

California's next CCA, MCE, was formed in Marin County in 2010.¹⁸ Marin County is considered one of the wealthiest counties in the United States—the unemployment rate in Marin County stands at around 2.1 percent,¹⁹ which is lower than the national average that currently sits at around 3.6 percent.²⁰ The median household income in Marin County is \$115,246,²¹ which is significantly more than the national median annual income of \$67,521.²²

In 2013, MCE expanded beyond Marin County with the addition of the city of Richmond.²³ Geographically, Richmond is very close to Marin—only five miles away, separated by the San Francisco Bay. However, it is very distant from Marin economically, with a median income of \$68,472, and roughly 14.7 percent of the population lives in poverty.²⁴ Since its first expansion, MCE has continued to grow, and by spring 2022, the MCE service territory will include thirty-seven jurisdictions across four Bay Area counties—Marin, Napa, Solano, and Contra Costa—encompassing a population of over 1 million people in the San Francisco Bay

¹⁶ See U.S. DEP'T OF COMMERCE, CENSUS BUREAU, Review of *American Community Survey*, https://data.census.gov/cedsci/table?q=Income%20%28Households,%20Families,%20Individuals%29&g=0400000US06_0500000US06019,06031,06107&tid=ACSST1Y2019.S1901 (last visited Feb. 28, 2022).

¹⁷ CCA staff in discussion with Shalini Swaroop, MCE (2022).

¹⁸ *History of CCAs in California*, CAL. CHOICE ENERGY AUTH., <https://california-choiceenergyauthority.com/cca-history/> (last visited Jan. 19, 2022).

¹⁹ *Marin County Profile*, CAL. EMP. DEV. DEP'T (Apr. 2022), <https://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProQSSelection.asp?menuChoice=localAreaPro> (select "Marin County" from the "Select a County" dropdown menu and click "View Local Area Profile." Under the "Unemployment Rate and Labor Force (Not Seasonally Adjusted)" table, click "Historical Data." Click "Next" to view the April 2022 unemployment data).

²⁰ *Civilian Unemployment Rate*, U.S. BUREAU OF LAB. STAT. (Apr. 2022), <https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm>.

²¹ *QuickFacts: Marin County, California*, U.S. CENSUS BUREAU, <https://www.census.gov/quickfacts/marincountycalifornia> (last updated July 1, 2021).

²² EMILY A. SHRIDER ET AL., U.S. CENSUS BUREAU, P60-273, INCOME AND POVERTY IN THE UNITED STATES: 2020 (2021).

²³ *MCE Clean Energy Program*, CITY OF RICHMOND, CAL., <https://www.ci.richmond.ca.us/2523/MCE-Clean-Energy> (last visited Jan. 20, 2022).

²⁴ *QuickFacts: Richmond City, California*, U.S. CENSUS BUREAU, <https://www.census.gov/quickfacts/richmondcitycalifornia> (last updated July 1, 2021).

Area.²⁵

What began in the Central Valley and was fostered by Marin has swiftly grown into a bona fide movement in California. Today, more than twenty CCAs serve over 10 million people, or a quarter of the population of the state.²⁶ These CCAs serve several community goals, from developing renewable electricity and lowering the cost of electricity, to fostering electric bus fleets and installing self-sufficient microgrids in remote areas.²⁷

In California, CCAs have typically selected sources of electricity that are more renewable than the incumbent utility. A 2020 University of California, Los Angeles study indicated that CCAs reduce electricity-related greenhouse gas (“GHG”) emissions compared to the forecasted decarbonization scenario without CCAs.²⁸ As not-for-profit agencies, CCAs are also well-positioned to reinvest net revenues in local energy programs that are tailored to the needs of their communities, such as energy efficiency incentives or electric vehicle rebate and charging programs.²⁹ These programs reduce GHG emissions and customers’ energy bills, and support California jobs.³⁰

For example, MCE has:

- Eliminated almost 500,000 metric tons of carbon dioxide equivalent,
- Invested \$2.1 billion in new California renewables,
- Created 49 megawatts of new local renewable generation within its four-county service area,
- Received ninety-nine percent of its power supply from clean resources,
- Launched solar discount programs for low-income customers and customers in disadvantaged communities,

²⁵ *About Us*, MCE, <https://www.mcecleanenergy.org/about-us/> (last visited Jan. 20, 2022).

²⁶ *Powered by Community Choice*, CALCCA, <https://cal-cca.org/powered/> (last visited Jan. 19, 2022).

²⁷ JR DESHAZO, JULIEN GATTACIECCA & KELLY TRUMBULL, UCLA LUSKIN CENTER FOR INNOVATION, *THE GROWTH IN COMMUNITY CHOICE AGGREGATION: IMPACTS TO CALIFORNIA’S GRID* 14–16, 33 (2018).

²⁸ KELLY TRUMBULL, JULIEN GATTACIECCA & J.R. DESHAZO, UCLA LUSKIN CENTER FOR INNOVATION, *THE ROLE OF COMMUNITY CHOICE AGGREGATORS IN ADVANCING CLEAN ENERGY TRANSITIONS: LESSONS FROM CALIFORNIA* 6, 32–33 (2020).

²⁹ *Id.* at 7.

³⁰ *Id.*

- Offered new resources to support customers during the COVID-19 pandemic,
- Contributed to a cumulative reinvestment of \$180 million in MCE communities,
- Saved 10,810 megawatt hours through its energy efficiency programs, and
- Supported over 2 million labor hours.³¹

Many of the above priorities are in alignment with the state's larger goals. For example, in 2018, Senate Bill ("SB") 100 was passed, which mandates that: (1) California achieve carbon-free electricity by 2045; and (2) at least sixty percent of the state's electricity be generated from "eligible renewable energy resources" by 2030. These resources include solar, wind, geothermal, biomass, small hydroelectric, renewable methane, ocean wave or thermal, and fuel cells using renewable fuels.³² With California's legislative goals moving toward a diversified vision of renewable energy, CCAs have a strong role to play in corresponding local investment, customer programs, and community-led decision making.

II. CLIMATE CHANGE AND CALIFORNIA'S BIOMASS ENERGY POLICY

A. California Climate Change Challenges

California is home to nearly 40 million people³³ and is the fifth largest economy in the world.³⁴ However, despite its incredible resources, it has no shortage of challenges brought on by climate change. Those discussed here do not account for the full multitude of intersecting and compounding issues brought on by climate change that the state faces, but rather are meant to be illustrative of some of the issues that California is currently grappling with.

³¹ MCE, 2021 IMPACT REPORT 4, 6–7, 11–12, 15 (2021), <https://www.mcecleanenergy.org/wp-content/uploads/2020/09/MCE-Impact-Report-2010-2020.pdf>.

³² CAL. PUB. RES. CODE § 25741 (West 2022).

³³ *Quick Facts: California*, U.S. CENSUS BUREAU, <https://www.census.gov/quick-facts/CA> (last updated July 1, 2021); *California now has the world's 5th largest economy*, CBS NEWS (May 4, 2018), <https://www.cbsnews.com/news/california-now-has-the-worlds-5th-largest-economy/>.

³⁴ BUREAU OF ECON. ANALYSIS, BEA 20-18, GROSS DOMESTIC PRODUCT BY STATE, 4TH QUARTER AND ANNUAL 2019, 8 (2020).

Catastrophic wildfires—one of California’s most urgent crises—are a powerful example of the state’s climate concerns. In 2021, there were 9,280 wildfires in California, which burned 2,233,666 acres³⁵—a dramatic increase when compared to California’s 2010 fire season in which wildland fire agencies responded to only 6,394 fires that burned 134,462 acres.³⁶ The Dixie fire alone, which ignited on July 13, 2021 in northeastern California, burned approximately 963,309 acres and is the second largest fire on record in the state, trailing only behind the August Complex “Gigafire”³⁷ of 2020, which burned over a million acres.³⁸

There are a number of issues contributing to and resulting from these fires. First and foremost is the loss of life and property as fires sweep across the state. These problems are compounded by California’s affordability and housing crises, which push many working- and middle-class families to live in locations that are more remote from traditional urban population centers, increasingly into more forested or rural areas.³⁹ Additionally, wildfires have an enormous air quality emissions impact, with smoke from the fires affecting places as far away as the East Coast.⁴⁰ In 2020 alone, emissions associated with California’s wildfires were responsible for approximately 106.7 million metric tons of CO₂, 1,394,000 tons of Particulate Matter (“PM₁₀”), and 1,181,000 short tons of dangerous Fine Particles (“PM_{2.5}”), which can lodge deep into the lungs or bloodstream due to their size.⁴¹ Unfortunately, the California Independent System Operator has also shown that the PM_{2.5} in the smoke from the September 2020 wildfires reduced solar production by thirty percent of what those systems produced in July of the same year, before the fire season began in

³⁵ NAT’L INTERAGENCY COORDINATION CTR., WILDLAND FIRE SUMMARY AND STATISTICS ANNUAL REPORT 2021, 38 (2021).

³⁶ CAL. DEP’T OF FORESTRY AND FIRE PROT., 2010 WILDFIRE ACTIVITY STATISTICS 1.

³⁷ Harmeet Kaur, *California fire is now a ‘gigafire,’ a rare designation for a blaze that burns at least a million acres*, CNN (Oct. 6, 2020, 5:29 PM), <https://edition.cnn.com/2020/10/06/us/gigafire-california-august-complex-trnd/index.html>.

³⁸ CAL. DEP’T OF FORESTRY AND FIRE PROT., TOP 20 LARGEST CALIFORNIA WILDFIRES 1 (2022).

³⁹ CAL. COMM’N ON ACCESS TO JUST., CALIFORNIA’S RURAL HOUSING CRISIS: THE ACCESS TO JUSTICE IMPLICATIONS 1, 15 (2019); see also Thomas Fuller, Kirk Johnson & Conor Dougherty, *California Fires Only Add to Acute Housing Crisis*, N.Y. TIMES (Nov. 18, 2018), <https://www.nytimes.com/2018/11/15/us/homeless-california-wildfires-evacuees.html>. “With each disaster—wildfire, mudslide or earthquake—there are thousands of people who cannot find homes in a market that for years has had very little vacancy.” *Id.*

⁴⁰ Oliver Milman, *New York air quality among worst in world as haze from western wildfires shrouds city*, GUARDIAN (July 21, 2021, 9:03 AM), <https://www.theguardian.com/us-news/2021/jul/21/new-york-air-quality-plunges-smoke-west-coast-wildfires>.

⁴¹ CAL. AIR RES. BD., WILDFIRE EMISSIONS ESTIMATES FOR 2020, 1.

earnest.⁴² California's wildfire problem is not new, but it has intensified in recent years as eight of the state's ten largest fires on record—and twelve of the top twenty—have occurred within the past five years alone.⁴³ Thus, responsible forest management and the removal of potential fuels from forests have become some of California's chief priorities in order to reduce the risk of these catastrophic fires.⁴⁴

A second challenge that California faces as a result of increased climate chaos is power outages. In 2012, in the wake of the Witch Fire in San Diego County, the CPUC ruled that "California Public Utilities Code Sections 451 and 399.2(a) give electric utilities authority to shut off electric power to protect public safety."⁴⁵ In the case of fires, utilities typically de-energize affected power lines either: (1) proactively during risky weather conditions to reduce the chances of their equipment starting a fire; or (2) after a fire has begun, for those lines that go through the affected areas.⁴⁶ However, power outages are also occurring because of climate-related heat waves. On August 14 and 15 of 2020, 800,000 homes and businesses in California were without power because of massive usage spikes due to a historic heat wave throughout the western United States.⁴⁷ During such power outages, people often turn to gas-powered or diesel generators for their community needs and residences, which rely on flammable fuels, emit additional GHGs, contribute localized particulate matter pollution, and exacerbate the problem of global warming.⁴⁸

This leads to a third climate challenge for California, which is

⁴² *Smoke from California wildfires decreases solar generation in CAISO*, U.S. ENERGY INFO. ADMIN. (Sept. 30, 2020), <https://www.eia.gov/todayinenergy/detail.php?id=45336>.

⁴³ CAL. DEP'T OF FORESTRY AND FIRE PROT., TOP 20 LARGEST CALIFORNIA WILDFIRES 1 (2022).

⁴⁴ GOVERNOR'S FOREST MGMT. TASK FORCE, CALIFORNIA'S WILDFIRE AND FOREST RESILIENCE ACTION PLAN 18, 34–35 (2021).

⁴⁵ *Utility Public Safety Power Shutoff Plans (De-Energization)*, CAL. PUB. UTIL. COMM'N (2021), <https://foresthistry.org/wp-content/uploads/2020/03/Technology-and-Culture-Mittlefehldt.pdf>.

⁴⁶ See *Public Safety Power Shutoffs*, S. CAL. EDISON (2022), <https://www.sce.com/wildfire/psps>; ("When weather conditions create a high risk for a wildfire, we may temporarily shut off power to your neighborhood to prevent our electric system from becoming the source of ignition."); see also *Public Safety Power Shutoff Overview*, PAC. GAS AND ELEC. CO. (2022), https://www.pge.com/en_US/residential/outages/public-safety-power-shutoff/learn-about-psps.page.

⁴⁷ Cal. Indep. Sys. Operator, Cal. Pub. Util. Comm'n, Cal. Energy Comm'n, *Final Root Cause Analysis: Mid-August 2020 Extreme Heat Wave*, 35 tbls. 3.1 & 3.2 (2021).

⁴⁸ Rick Theis, *Choking on fumes: Diesel generators are booming with state funding*, CLIMATE CTR. (Mar. 10, 2021), <https://theclimatecenter.org/archaic-mindset-leaves-californians-choking-on-fumes/>.

emissions reductions writ large. Although forest fires produce massive amounts of GHG emissions, electricity and transportation are the largest source of GHG emissions from human activities in California.⁴⁹ In response, California has passed laws such as SB 100 (2018) to mitigate power sector emissions through increased adoption of renewable energy.⁵⁰ However, the increase in renewable energy also comes with its own challenges. The majority of renewable energy in California is intermittent in nature because the sun is not always shining and the wind is not always blowing.⁵¹ Therefore, it is important to balance out intermittent resources with a clean, dispatchable source of power that can offset the fluctuations in solar and wind generation—this stable source is called baseload power. Baseload power has often been generated from fossil fuel sources, including coal and natural gas.⁵² However, there are renewable options for baseload power, such as biomass, which is accompanied by a different set of concerns that will be discussed in the next section.

B. Biomass Energy Technology and Environmental Justice Concerns

A potential renewable source of baseload power is biomass energy. The burning of specific organic fuel types can produce electricity through a variety of means, primarily through the direct combustion of organic materials to create heat, which in turn creates high-pressure steam that turns a turbine to drive a generator that produces electricity.⁵³ The most common fuel types are wood and agricultural waste like forest debris,

⁴⁹ See CAL. AIR RES. BD., CALIFORNIA GREENHOUSE GAS EMISSIONS FOR 2000 TO 2019: TRENDS OF EMISSIONS AND OTHER INDICATORS 9, 12 (2021) (“The transportation sector remains the largest source of GHG emissions in 2019, accounting for 40 percent of California’s GHG inventory. . . . Emissions from the electric power sector comprise 14 percent of 2019 statewide GHG emissions.”) (internal citations omitted).

⁵⁰ CAL. PUB. UTIL. CODE § 399.11(b)(1)–(4) (West 2002) (amended 2018).

⁵¹ In 2020, solar PV and solar thermal power plants produced 29,456 gigawatt-hours (GWh) of energy or 15.43 percent of California’s in-state generation portfolio; wind energy generated within California totaled 13,708 gigawatt-hours (GWh) or 7.18 percent of California’s in-state generation portfolio; hydro-produced electricity used by California totaled nearly 21,414 gigawatt-hours (GWh), or 11.22 percent of California’s in-state generation portfolio. *2020 Total System Electric Generation*, CAL. ENERGY COMM’N, <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation> (last visited on Feb. 8, 2022).

⁵² Benjamin Matek & Karl Gawell, *The Benefits of Baseload Renewables: A Misunderstood Energy Technology*, 28 ELEC. J. 101, 102 (2015).

⁵³ *Biomass Explained*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/energyexplained/biomass/> (last updated June 8, 2021).

woody plants, rice hulls, switchgrass, and other crop residue.⁵⁴ Many of these fuels would otherwise be dumped in landfills, openly burned, or left as fodder for future forest fires.⁵⁵

However, even if not burned in a wildfire, local biomass still emits carbon and methane emissions in its natural decomposition process.⁵⁶ If not left to decompose naturally, it remains a common practice for local agricultural processes and natural resource management to openly burn these in burn piles.⁵⁷ This type of open burning of biomass, such as is done to dispose of crop residues and for forest thinning, produces three to 100 times more emissions of conventional air pollutants than controlled combustion in a biomass power plant; pile burns release five times the PM_{2.5}, two times the NO_x, sixty times the CO₂, and 1.4 times the volatile organic compounds as they would have in a biomass facility.⁵⁸

Biomass energy has the potential to reduce our dependence on fossil fuels while also contributing to responsible forest management and emissions reductions.⁵⁹ Therefore, biomass energy is included as a qualifying energy type in California's Renewable Portfolio Standards ("RPS") program.⁶⁰ This program requires retail sellers of electricity to procure increasing amounts of renewable energy over time to displace fossil fuels

⁵⁴ *Id.*

⁵⁵ Nimisha Tripathi et al., *Biomass waste utilization in low-carbon products: harnessing a major potential resource*, 2 NPJ CLIMATE AND ATMOSPHERIC SCI. 35, at 3 (Oct. 14, 2019), <https://doi.org/10.1038/s41612-019-0093-5>.

⁵⁶ Bruce Springsteen et al., *Forest biomass diversion in the Sierra Nevada: Energy, economics and emissions*, 69 CAL. AGRIC. 142, 142 (2015).

⁵⁷ *Open Burn Information*, BAY AREA AIR QUALITY MGMT. DIST., <https://www.baaqmd.gov/permits/open-burn/open-burn-information> (last updated June 30, 2020); see also *Sources of Greenhouse Gas Emissions*, EPA, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> (last updated July 27, 2021) ("Landfill gas is the natural byproduct of the decomposition of solid waste in landfills. It primarily consists of CO₂ and CH₄. Well established, low-cost methods to reduce greenhouse gases from consumer waste exist, including recycling programs, waste reduction programs, and landfill methane capture programs.").

⁵⁸ *Biomass Provides Air Quality benefits*, CAL. BIOMASS ENERGY ALL., <http://www.calbiomass.org/air-quality/> (last visited Feb. 28, 2022); see Springsteen et al., *supra* note 56.

⁵⁹ See *Enforcement of the Renewables Portfolio Standard*, CAL. AIR RES. BD., <https://ww2.arb.ca.gov/enforcement-renewables-portfolio-standard> (last visited Feb. 28, 2022) ("In 2002, a State law established the basic policy framework for the increased use of renewable energy resources in California, known as the Renewables Portfolio Standard (RPS). RPS requires renewable energy resources serve a certain percentage of electricity sales by all electricity utilities in the state[.] . . . Major eligible renewable energy resources, as defined by the California Energy Commission (CEC), include biomass . . .").

⁶⁰ *Renewables Portfolio Standard (RPS) Program*, CAL. UTIL. COMM'N, <https://www.cpuc.ca.gov/rps/> (last visited Feb. 8, 2022).

and increase clean energy used by California customers.⁶¹

As of 2020, biomass-produced electricity in California totaled 5,628 gigawatt-hours (“GWh”) or 2.95 percent of California’s in-state generation portfolio, with eighty-seven operating biomass power plants totaling roughly 1,259 megawatts.⁶² However, like so many other instances of environmental injustice, the burdens of industrial-scale biomass power systems tend to fall on poor, nonwhite communities.⁶³ The historical concentration of industrialization, toxins, and pollution near or within non-white communities—both domestically and internationally—is what is commonly referred to as environmental racism.⁶⁴ As explained below, case studies have demonstrated that in areas already experiencing deeply entrenched environmental racism, industrial-scale renewable energy technologies have often only worked to maintain, and in some cases even exacerbate, racial injustices.⁶⁵ For example, one case study from 2018 found that the siting of wood pellet production facilities (a type of manufacturing plant that produces biomass feedstocks from wood) in the southeastern United States demonstrated that facilities with significant impacts on air and water quality were fifty percent more likely to be located in environmental justice-designated communities.⁶⁶

Depending on the source of biomass being used and the methods used to convert it into energy, burning woody biomass can result in substantial net GHG emissions⁶⁷ as well as airborne emissions dangerous to public health and California’s biomass industry is no exception. In the San Joaquin Valley, eighty percent of active and inactive biomass plants are

⁶¹ RPS Program Overview, CAL. UTIL. COMM’N, https://www.cpuc.ca.gov/RPS_Overview/ (last visited Jan. 20, 2022).

⁶² *California Biomass and Waste-To-Energy Statistics and Data*, CAL. UTIL. COMM’N, https://ww2.energy.ca.gov/almanac/renewables_data/biomass/index_cms.php (last visited Feb. 28, 2022).

⁶³ Sarah Mittlefehldt, *Wood Waste and Race: The Industrialization of Biomass Energy Technologies and Environmental Justice*, 59 *TECH & CULTURE* 875, 878 (2018).

⁶⁴ See Kelly Michele Colquette & Elizabeth A. Henry Robertson, *Environmental Racism: The Causes, Consequences, and Commendations*, 5 *TUL. ENV’T L. J.* 153 (1991), <http://www.jstor.org/stable/43291103>.

⁶⁵ Mittlefehldt, *supra* note 63, at 876.

⁶⁶ Stefan Koester & Sam Davis, *Siting of Wood Pellet Production Facilities in Environmental Justice Communities in the Southeastern United States*, 11 *ENV’T JUST.* 64, 64 (2018) (defining an “EJ community as a county where the poverty level is above the state median and at least 25% of the population is nonwhite.”)

⁶⁷ KELSIE BRACMORT, CONG. RSCH. SERV., R41603, IS BIOWEED CARBON NEUTRAL? 10 (2016).

located in disadvantaged communities.⁶⁸ Already-poor air quality conditions can be heightened by biomass generation, especially if the facility is in violation of federal, state, or local air quality regulations. In 2011, the U.S. Environmental Protection Agency and the San Joaquin Valley Air Pollution Control District lodged consent decrees against two biomass power plants in Chowchilla and El Nido, California, resulting in a combined civil penalty of \$835,000 to resolve alleged violations of the federal Clean Air Act, including excess emissions of toxic air pollutants.⁶⁹ In 2016, the Blue Lake Power plant, located near Blue Lake Rancheria Indian Tribal lands in Northern California, was cited and fined for multiple air pollution violations.⁷⁰ And in a two-year stretch from 2008–2010, twenty-three notices of violation were filed against Merced Power LLC and fifteen were filed against Ampersand Chowchilla Biomass LLC.⁷¹ In California's Central Valley, three of the Valley's larger cities—Bakersfield, Fresno, and Visalia⁷²—top the American Lung Association's list of the most polluted cities for year-round particulate pollution levels in the United States.⁷³ Biomass incinerators themselves are considered contributing

⁶⁸ *Biomass Energy is Polluting: Biomass Power Plant Pollution Harms Vulnerable Communities, Worsening Environmental Injustice*, CTR. FOR BIOLOGICAL DIVERSITY, https://www.biologicaldiversity.org/campaigns/debunking_the_biomass_myth/pdfs/Forest-Bioenergy-Briefing-March-2021-Book-3-Polluting-Communities.pdf (last updated Mar. 2021) (“Four active biomass plants (Rio Bravo Fresno, DTE Stockton, Merced Power, and Ampersand Chowchilla) and four idle biomass plants (Community Recycling Madera Power, Covanta Mendota, Dinuba Energy, and Covanta Delano) are in census tracts designated as disadvantaged under SB 535[.]”).

⁶⁹ Margo Perez-Sullivan, *Central Valley Biomass Power Plants Fined More Than \$830,000 For Clean Air Act Violations*, EPA (Feb. 15, 2011), https://archive.epa.gov/epa-pages/newsroom_archive/newsreleases/8a0b1b18223656cd85257838005db1eb.html.

⁷⁰ *U.S. v. Blue Lake Power, LLC*, No. 16-CV-00961-JD, 2017 WL 713145 (N.D. Cal. Feb. 23, 2017).

⁷¹ Ronnie Greene, *'Green' biomass isn't always so clean*, CTR. FOR PUB. INTEGRITY (Apr. 26, 2011), <https://publicintegrity.org/environment/green-biomass-isnt-always-so-clean/> (under consent decrees, Merced Power paid fines of \$492,000, and Ampersand Chowchilla \$343,000).

⁷² Currently, the Rio Bravo Biomass facility is active and located in Fresno, CA, and Mt. Poso Cogeneration Company biomass facility is active and located in Bakersfield. *Biomass Operations in California*, CAL. BIOMASS ENERGY ALL., <http://www.calbiomass.org/facilities-map/> (last visited Feb. 21, 2022). In Visalia, CA, the County of Tulare Resource Management Agency has proposed to add a compost and Biomass Conversion Facility on the existing Visalia Landfill site. *Visalia Landfill – Compost and Biomass Conversion Facility*, CAL. ENV'T QUALITY ACT, <https://ceqanet.opr.ca.gov/2021020054/2> (last visited Mar. 2, 2022).

⁷³ *Most Polluted Cities*, AM. LUNG ASSOC., <https://www.lung.org/research/sota/city-rankings/most-polluted-cities> (last visited Feb. 21, 2022); see also the ALA's “F” rating for both the counties of Fresno and Kern, *California: Fresno*, AM. LUNG ASSOC.,

sources of pollution in the Central Valley as “[b]iomass plants emit three times as much carbon as natural gas (methane) and 1.5 times as much as coal.”⁷⁴

Additionally, there are racial equity and environmental justice concerns regarding the placement of biomass facilities throughout the United States. A 2019 report found that roughly seventy-nine percent of biomass incinerators in the United States are located in environmental justice communities, noting that the “siting of incinerators and other polluting facilities in environmental justice communities is not a coincidence, but rather it is a product of historic residential, racial segregation and expulsive zoning laws that allowed whiter, wealthier communities to exclude industrial uses and people of color from their boundaries.”⁷⁵ Additionally, according to the California Environmental Protection Agency’s Environmental Health Screening Tool (“CES”), eighty-nine percent of people living in the top ten percent of census tracts most overburdened by pollution are people of color.⁷⁶

It is precisely because of these potentially dangerous and systemically racist impacts that a community-based approach to the development of biomass projects is necessary in California’s transition away from fossil fuels. A key environmental justice principle is ensuring that community stakeholders have a say in the decisions made in and around their community and this is relevant to the siting and type of biomass technology selected for local production. While biomass combustion, feedstock, production facilities, and byproducts can be harmful to local air quality, there are cleaner and more modern biomass technologies to reduce these impacts. For example, at the Sierra Energy Research Park in Davis, California, new technology allows for systems to use heat, steam, and oxygen to break down waste at the molecular level—allowing waste to undergo a complete conversion with zero emissions or toxic byproduct.⁷⁷ In the San Francisco

<https://www.lung.org/research/sota/city-rankings/states/california/fresno> (last visited Feb. 21, 2022); *California: Kern*, AM. LUNG ASSOC., <https://www.lung.org/research/sota/city-rankings/states/california/kern> (last visited Feb. 21, 2022).

⁷⁴ Shoshanna Hebshi, *Biomass Industry in CA inefficient, expensive and highly polluting*, SIERRA CLUB (Oct. 10, 2019), <https://www.sierraclub.org/redwood/blog/2019/10/biomass-industry-ca-inefficient-expensive-and-highly-polluting>.

⁷⁵ ANA ISABEL BAPTISTA & ADRIENNE PEROVICH, U.S. MUNICIPAL SOLID WASTE INCINERATORS: AN INDUSTRY IN DECLINE 13 (The New School eds., 2019) (internal citations omitted).

⁷⁶ *Defining Environmental Justice Communities: Using CalEnviroScreen in State Policy*, CAL. ENV’T JUST. ALL., <https://caleja.org/2016/09/defining-environmental-justice-communities-using-calenviroscreen-in-state-policy/> (last visited Feb. 22, 2022).

⁷⁷ The FastOx gasifier has zero direct emissions. It is a closed loop system that converts waste into syngas, which is processed at the back end of the system into useful energy.

Bay Area, a renewable fuels company, Raven SR, plans to build “Hydrogen Hubs” that convert mixed and multiple organic wastes into locally produced, renewable hydrogen to power zero-emission commercial vehicles.⁷⁸ These are just some examples of the potential for the development of cleaner biomass technology in California. Thus, it is imperative that biomass projects intentionally and proactively engage with local decision makers and the public in their development process in order to mitigate potential harms from biomass projects, invest in cleaner technology for processing biomass, and increase public understanding of the possible benefits of biomass energy.

The public discourse of environmental racism in the United States emerged at the same time as the civil rights movement.⁷⁹ Both movements resisted institutionalized harm targeting people of color through policy, regulation, or lack thereof. Addressing and dislodging these historical legacies is complex, iterative, and evolving. Community participation in the decision-making processes of new developments is essential in ensuring these harms are not replicated. The nexus of innovative renewable technology and democratized, community-sensitive leadership makes CCAs well positioned to take on a leadership role in the development of responsible biomass facilities in California.

C. Organic Waste Diversion

California produced 77.5 million tons of waste in 2019, and fifty-five percent of that waste went to landfills while twelve percent was diverted into secondary biomass production through compost, mulch, and anaerobic digestion.⁸⁰ Diverting organic materials from landfills can reduce the polluting and warming-intensive methane emissions that would otherwise be produced in an anaerobic environment.⁸¹

To this end, in 2016 California passed SB 1383, which established statewide targets to reduce the amount of organic waste disposed of in

The next generation of waste gasification, SIERRA ENERGY, <https://sierraenergy.com/technology/fastox-gasification/> (last visited Mar. 2, 2022).

⁷⁸ *Raven SR & Hyzon Motors to build up to 100 waste-to-hydrogen hubs*, GREEN CAR CONG. (Apr. 28, 2021), <https://www.greencarcongress.com/2021/04/20210428-raven.html>.

⁷⁹ Robert D. Bullard, *Environmental Justice in the 21st Century: Race Still Matters*, 49 *PHYLON* 151, 151 (2001), <https://doi.org/10.2307/3132626>.

⁸⁰ This figure represents organic and non-organic waste materials generated in California. KNOWLEDGE INTEGRATION SECTION, CALRECYCLE, STATE OF DISPOSAL AND RECYCLING FOR CALENDAR YEAR 3, 8 (2019), <https://www2.calrecycle.ca.gov/PublicNotices/Documents/12791>.

⁸¹ *Organic Materials Management and Climate Change*, CALRECYCLE, <https://www.calrecycle.ca.gov/climate/organics> (last updated Jan. 14, 2022).

landfills, aiming for a fifty percent reduction by 2020 and seventy-five percent by 2025.⁸² Many municipalities have already begun progressing toward these objectives, largely through the creation and purchase of agricultural and landscaping products such as mulch and compost.⁸³ However, with SB 1383's increasing diversion requirements, municipalities are looking at alternative and more complex ways to maximize their organic waste stream diversions. In an effort to reduce emissions under SB 1383, MCE's local waste facilities all have different strategies for diverting and disposing of organic wastes. Given limitations in infrastructure, some local waste facilities transport woody biomass waste via diesel trucks for incineration at facilities in the Central Valley and elsewhere.⁸⁴ The community need for alternative uses of biomass creates an opportunity for CCAs to engage in and explore partnerships to generate local renewable baseload energy from varying supplies of organic material that would otherwise enter the waste stream. In the next section, we will provide a brief background of biomass energy policy in California before discussing how CCAs may be able to take advantage of policy mechanisms to support biomass energy projects, some of which may fulfill the SB 1383 requirements.

III. CALIFORNIA BIOMASS MARKETS AND MECHANISMS

Established in 2008,⁸⁵ California's Feed-in Tariff ("FIT") program is a policy mechanism that sets electricity prices that are paid to energy producers for each unit of energy produced and delivered to the grid. By offering a fixed price that is higher than one traditionally offered in the market, FITs are designed to accelerate long-term financing investments in small, distributed renewable energy technologies.⁸⁶ The FIT Program is separate from California's RPS program and is used to support the goals of the RPS.

In 2012, SB 1122 created an IOU bioenergy FIT to support RPS

⁸² S.B. 1383, 2016 Leg. Reg. Sess. (Cal. 2016).

⁸³ James Rainy, *California goes to war with food waste. Composting is its next climate crusade*, L.A. TIMES (Dec. 9, 2021), <https://www.latimes.com/california/story/2021-12-09/trash-compost-california-climate-change-law>.

⁸⁴ CCA staff in discussion with Shalini Swaroop, MCE (2022).

⁸⁵ Press Release, Cal. Pub. Util. Comm'n, CPUC Approves Feed-In Tariffs to Support Development of Onsite Renewable Generation (Feb. 14, 2008), https://docs.cpuc.ca.gov/published/News_release/78824.htm.

⁸⁶ Friedemann Polzin et al., *How do policies mobilize private finance for renewable energy?—A systematic review with an investor perspective*, 236 APPLIED ENERGY 1249, 1253 (2019).

requirements, establishing a procurement program that would subsidize costs for up to 250 MW of eligible small bioenergy resources, including biomass projects aimed to reduce fire threats.⁸⁷ In implementing SB 1122, the CPUC created the Bioenergy Market Adjusting Tariff (“BioMAT” or “BioMAT program”) through Decision 14-12-081, Decision 15-09-004, and Decision 20-08-043. The first two decisions established program parameters, allocations, and timelines.⁸⁸ To pay for the fixed price under the tariff, fees would be collected from IOU customers in order to subsidize costs for bioenergy projects approved under the BioMAT program.⁸⁹

Decision 20-08-043 made some significant changes to the BioMAT program. First, prior to this decision, BioMAT program costs were recovered from IOU customers and only IOUs could access the BioMAT program to subsidize their bioenergy project costs.⁹⁰ However, Decision 20-08-043 changed the BioMAT cost recovery structure so that all customers, including CCA customers, have to pay fees associated with IOU BioMAT procurement activities.⁹¹ With this change, CCA customers were not only paying their CCA program for their electricity generation, but were also paying their former generation services provider, the IOU, for bioenergy projects that they would never benefit from. In addition, this had an anti-competitive impact on CCAs because IOUs could access funds to subsidize their procurement of electricity produced by bioenergy and CCAs could not. In effect, IOUs were able to have CCA customers subsidize their own generation costs.

Given this change, the CPUC’s Energy Division staff recommended that non-IOU load-serving entities, like CCAs, should also be permitted to procure and recover costs from the BioMAT program.⁹² In effect, if a

⁸⁷ S.B. 1122, 2012 Leg., Reg. Sess. (Cal. 2012) (requiring IOUs to procure an additional 250 MW from then-new small-scale bioenergy projects, including generation from byproducts of sustainable forest management); *see also* S.D. 14-12-081, 2014 Leg., Reg. Sess. at 26–30 (Cal. 2014) (indicating four sub-categories of biomass energy that would satisfy S.B. 1122’s requirement for byproducts of sustainable forest management: (1) fire threat reduction, (2) fire safe clearance activities, (3) infrastructure clearance projects, and (4) other sustainable forest management).

⁸⁸ S.D. 14-12-081, 2014 Leg., Reg. Sess. at 2 (Cal. 2014); S.D. 15-09-004, 2015 Leg., Reg. Sess. at 2–3 (Cal. 2015).

⁸⁹ Decision 15-09-004 largely focused on the terms of the draft tariff and draft standard contract for agreements to qualify for BioMAT. S.D. 15-09-004, 2015 Leg., Reg. Sess. (Cal. 2015).

⁹⁰ Current CCA were also charged for IOU BioMAT fees if they had departed IOU service after the BioMAT contracts were signed on their behalf. This is typical of other exit fees charged by IOUs to customers departing bundled service for a CCA.

⁹¹ S.D. 20-08-043, 2020 Leg., Reg. Sess. at 50 (Cal. 2020).

⁹² 18-07-003, Cal. Regul. Notice, Regul. at 2 (2020) (listing recommended changes to the BioMAT program rules, contract terms, process, as well as recommended clarifications to the BioMAT program).

customer was paying the BioMAT fees, they should have been able to take advantage of the program through their generation provider. The CPUC rejected this recommendation on the grounds that: (1) SB 1122 expressly directed only the IOUs to offer BioMAT; and (2) the CPUC has limited jurisdiction over the generation decisions for non-IOU load serving entities and therefore cannot compel a review of the contracts to ensure that ratepayer funds are being properly spent.⁹³ Although there have been other instances in which the CPUC expanded access to CCAs of IOU programs authorized in statute, this was not the case with BioMAT.⁹⁴

Unfortunately, uptake for the BioMAT program has moved slowly. In October 2018 the CPUC staff noted that “if [BioMAT program] contract executions were to continue at the current rate, it could take approximately 20 years to reach the BioMAT program procurement goal of 250 MW.”⁹⁵ More recently, in the CPUC’s 2020 California RPS Annual Report, the Commission noted that of the 250 MW mandated by SB 1122, only 41 MW had been contracted, which left 204 MW still in the program.⁹⁶ Specifically, 39 MW remained in the biomass program for projects to reduce fire threats.⁹⁷ Given the significant impact of recent forest fires, the underutilization of BioMAT subsidies, the requirements of organic waste diversion, and the inequity for CCA customers paying into the BioMAT program, the program clearly needed adjustment.

IV. ASSEMBLY BILL 843 (2021)

MCE and Pioneer Community Energy, the CCA serving Placer County,⁹⁸ hoped to co-sponsor a bill to allow CCAs to access the BioMAT

⁹³ S.D. 20-08-043, 2020 Leg., Reg. Sess. at 16–17 (Cal. 2020).

⁹⁴ D.18-06-027 allowed CCAs to offer their own low-income solar programs using funds from a several statewide programs meant to benefit all customers throughout the state. This included the Greenhouse Gas allowance proceeds as well as Public Purpose Program charges, which are levied upon both IOU and CCA customers. CAL. PUB. UTIL. COMM’N., ALTERNATE DECISION ADOPTING ALTERNATIVES TO PROMOTE SOLAR DISTRIBUTED GENERATION IN DISADVANTAGED COMMUNITIES, DECISION NO. 18-06-027, at 3 (2018), <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M216/K789/216789285.PDF>.

⁹⁵ BIO-MAT, BIOENERGY MARKET ADJUSTING TARIFF (BIOMAT) PROGRAM REVIEW AND STAFF PROPOSAL 8 (2018) <https://www.bioenergyca.org/wp-content/uploads/2018/11/BioMAT-Program-Review-Staff-Proposal.pdf>.

⁹⁶ CAL. PUB. UTIL. COMM’N., 2020 CALIFORNIA RENEWABLES PORTFOLIO STANDARD: ANNUAL REPORT 45 (2020).

⁹⁷ *Id.*

⁹⁸ Placer County includes over 550,000 acres of heavily forested landscapes in the central Sierra Nevada foothills and mountains. Thus, the county has been active in

program, in alignment with the CPUC recommendation from Energy Division staff.⁹⁹ However, they first needed to find a supportive author.

A. AB 843: Authorship Background

Assembly member Cecilia Aguiar-Curry was elected to the California Assembly in 2016 to represent the 4th District, which includes all or parts of Napa, Lake, Yolo, Sonoma, Colusa, and Solano counties.¹⁰⁰ Assembly member Aguiar-Curry is a strong advocate for rural communities and has long been engaged in energy issues, particularly in helping advocate for biomass and biomethane resource procurement, given her predominantly agricultural and wildfire-ravaged district. Her district has been extremely impacted by wildfires and public safety power shutoffs. She represents areas impacted by the deadly 2015 Valley Fire, which was at the time the third-most destructive fire in California history and has been referenced as the beginning of California's regularly escalating wildfire season.¹⁰¹ Her jurisdiction has been severely impacted by other wildfires every year since then.¹⁰²

During her tenure in the state Legislature, Assembly member Aguiar-Curry has introduced several wildfire and biomass related bills including:

- AB 1572, to support the streamlining of sustainable waste management,¹⁰³

sponsoring projects to cost-effectively collect, process, transport, and utilize woody forest biomass wastes for renewable energy as an alternative to disposal by open pile burning or mastication (shred and scatter). *Biomass*, PLACER CNTY. AIR POLLUTION CONTROL DIST., <https://www.placer.ca.gov/1810/Biomass> (last visited Mar. 2, 2022).

⁹⁹ Cal. Pub. Util. Comm'n, Reply Comments of the Joint Community Choice Aggregators on the Bioenergy Market Adjusting Tariff Staff Proposal (Apr. 15, 2020), <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M334/K592/334592350.PDF> (hereinafter "Second Staff Proposal").

¹⁰⁰ *District Map*, OFF. OF ASSEMB. MEMBER CECILIA AGUIAR-CURRY, <https://a04.asmdc.org/district-map> (last visited Feb. 22, 2022).

¹⁰¹ Brian Kahn, *The 2015 Wildfire Season Set an Ominous Record*, CLIMATE CENT. (Jan. 6, 2016), <https://www.climatecentral.org/news/2015-wildfire-season-sets-ominous-record-19879>.

¹⁰² Notable examples of fires the 4th District has endured are the Clayton Fire (Lake County) in 2016, the Atlas Fire (Napa/Solano County) in 2017, the County Fire (Napa/Yolo County) of 2018, the Kinkade Fire (Sonoma County) of 2019, the LNU Lightning Complex Fire (Colusa, Lake, Napa, Sonoma, Solano, and Yolo county) of 2020, and most recently the Coyote Fire (Lake County) in 2021. *Incidents*, CAL FIRE, <https://www.fire.ca.gov/incidents/2021/> (last visited Feb. 22, 2022).

¹⁰³ Assemb. B. 1572, 2017 Assemb., Reg. Sess. (Cal. 2017).

- AB 920, which would have supported renewable energy resources like biomass and biogas to generate workforce development opportunities,¹⁰⁴
- AB 1772, which extends the time that wildfire victims have to rebuild their homes to collect on their insurance reimbursements,¹⁰⁵
- AB 2380, which requires California to develop regulations for private fire personnel,¹⁰⁶ and
- AB 2518, which requires the Department of Forestry and Fire Protection to find clean and climate-aligned markets for forest products and timber.¹⁰⁷

Importantly, Assembly member Aguiar-Curry has also been a key ally for CCAs during her time in the legislature. The first two California CCAs to successfully launch operations—MCE and Sonoma Clean Power—are within her district.¹⁰⁸ Assembly member Aguiar-Curry agreed to author AB 843, aiming to address job creation in her district, reduce fire feedstock, contribute to greater electric reliability, and support CCA consumer advocacy.¹⁰⁹

B. Ratepayer Equity: CCA Customers' Access to Biomass Funds

AB 843 allows CCAs to participate in BioMAT and recover above-market costs associated with eligible procurement, including forest biomass generation. AB 843 has the potential to remedy the fairness concerns caused by the Commission's allowing CCA customers to pay for BioMAT programs while excluding those same customers from receiving the benefits of participation. It could also reduce the cost of BioMAT procurement by expanding the market of prospective buyers beyond the IOUs. Currently, the only siting restrictions in the BioMAT tariff require IOUs

¹⁰⁴ Assemb. B. 920, 2017 Assemb., Reg. Sess. (Cal. 2017).

¹⁰⁵ Assemb. B. 1722, 2017 Assemb., Reg. Sess. (Cal. 2017).

¹⁰⁶ Assemb. B. 2380, 2017 Assemb., Reg. Sess. (Cal. 2018).

¹⁰⁷ Assemb. B. 2518, 2017 Assemb., Reg. Sess. (Cal. 2018).

¹⁰⁸ MCE provides electricity service and innovate programs in Napa County and Solano County, while Sonoma Clean Power provides services in Sonoma County—all three counties are within Assembly member Aguiar-Curry's district.

¹⁰⁹ Press Release, Cecilia Aguiar-Curry, Assembly Member, Cal. State Assemb., Assembly member Aguiar-Curry Bill Offers Green Energy Funds to Community Choice Aggregators, Passes State Legislature (Sept. 10, 2021), <https://a04.asmdc.org/press-releases/20210910-assemblymember-aguiar-curry-bill-offers-green-energy-funds-community-choice>.

receiving funds to build the projects in their service territories, which cover large swaths of the state. Allowing different entities to fund these types of projects could also prioritize project siting outside of the historically environmentally impacted communities where they have been traditionally located.

As noted in the Senate Energy and Utilities Committee's analysis of the bill:

When the BioMAT program was first established in 2012, there was only one CCA serving customers. There are now over 20 CCAs that serve more than 11 million customers in the state. If enacted, AB 843 will allow a growing portion of the state's energy sector to participate in BioMAT.¹¹⁰

The bill provides that “community choice aggregator[s] may submit eligible bioenergy projects to the commission for cost recovery if open capacity exists within an allocation category . . . and the community choice aggregator submits an eligible tariff to the commission”¹¹¹

A key provision of the bill addressed whether the CPUC has authority over these particular contracts. CCA power contracts are not typically subject to the CPUC's approval but rather fit the priorities of their own community in accordance with statewide standards. Since BioMAT funds are collected from all ratepayers, including non-CCA ratepayers, it was therefore important for AB 843 to permit some cost oversight by the CPUC, and a compromise was struck that *if* a CCA voluntarily chooses to participate in the BioMAT program, the CPUC shall have oversight authority over *that particular contract*, consistent with its authority over IOU BioMAT contracts.¹¹²

C. Legislative Pathway

Although some opposed the bill in its early days, AB 843 was unanimously supported when it was presented on the California Senate floor.¹¹³ This was a particular victory for CCAs because entrenched electricity interests in California, such as investor-owned utilities or fossil fuel developers, have seen them as controversial.¹¹⁴ The lack of opposition to this

¹¹⁰ S. COMM. ON ENERGY, UTIL., AND COMM'N, BILL ANALYSIS, AB 843, at 5 (2021).

¹¹¹ Assemb. B. 843, 2021 Assemb., Reg. Sess. (Cal. 2021).

¹¹² CCA staff in discussion with Shalini Swaroop, MCE (2022).

¹¹³ Cal. Assemb. B. No. 843.

¹¹⁴ *Should Investor-Owned Utilities Be Worried About Community Choice Aggregation?*, CLEAN POWER EXCHANGE (May 1, 2017), <https://cleanpowerexchange.org/should->

bill may signal that CCAs are now increasingly seen as an intrinsic part of California's electricity services.

On September 23, 2021, Governor Gavin Newsom's office released an unprecedented \$15 billion investment to address the climate crisis. As part of this rollout, the Governor signed twenty-four bills focused on climate and clean energy efforts, drought, and wildfire preparedness.¹¹⁵ AB 843 was one of the twenty-four bills signed by Governor Newsom on that historic day.¹¹⁶ However, the signature from the Governor did not neatly solve many of the challenges raised in this article, such as environmental racism and reducing air pollution. In the next section, we will offer potential solutions to these issues.

V. RESPONSIBLE BIOMASS ELECTRICITY DEVELOPMENT PRINCIPLES

MCE is committed to supporting different strategies for biomass management. These include strategies to keep waste streams localized rather than exporting them to poorer, non-white communities. A parallel strategy is also to enact guidelines to limit the possible carbon dioxide and associated co-pollutant emissions associated with electric generation from biomass, which cause significant harm to human health, such as nitrogen oxides, volatile organic compounds, and particulate matter (PM) 2.5. Minimizing these impacts is especially important for the most impacted communities identified by California's Office of Environmental Health Hazard Assessment's ("OEHHA") CalEnviroScreen mapping tool, which recognizes these environmental justice communities within the state.¹¹⁷

If done thoughtfully, biomass electricity production provides an opportunity for communities to catalyze the benefits of this baseline profile of electricity with minimal air quality and GHG emission impacts. This

investor-owned-utilities-be-worried-about-community-choice-aggregation/ ("In a joint filing . . . Pacific Gas and Electric Co. (PG&E), Southern California Edison, and San Diego Gas & Electric Co. (SDG&E) said that community choice aggregation (CCA) could cause huge amounts of 'load defection.' Without the proper exit fees, the utilities are worried they could suffer big financial losses.").

¹¹⁵ Press Release, Gavin Newsom, Governor, California, Governor Newsom Signs Climate Action Bills, Outlines Historic \$15 Billion Package to Tackle the Climate Crisis and Protect Vulnerable Communities (Sept. 23, 2021), <https://www.gov.ca.gov/2021/09/23/governor-newsom-signs-climate-action-bills-outlines-historic-15-billion-package-to-tackle-the-climate-crisis-and-protect-vulnerable-communities/>.

¹¹⁶ *Id.*

¹¹⁷ *CalEnviroScreen 4.0*, CAL. OFF. OF ENV'T HEALTH HAZARD ASSESSMENT, <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40> (last visited Mar. 2, 2022).

profile complements the more intermittent sources of renewable energy like wind or solar and provides a valuable energy source of electricity during critical evening hours.¹¹⁸ This also decreases traditional reliance on gas peaker plants, which not only pollute, but also tend to be located in disadvantaged communities.¹¹⁹

However, the siting and technology used for biomass projects are left up to the individual developer and load serving entity. To ensure that MCE's participation in this market will follow best practices informed by the local community toward regional and state goals, MCE staff developed the following guiding principles. Feedback was solicited from staff at the Bay Area Air Quality Management District as well as MCE's Community Power Coalition, which is a network of more than fifty local community-based organizations and government representatives, including the Marin Biomass Collaborative Steering Committee.¹²⁰ These entities all differ in focus area and expertise but are generally concerned about climate change and public health.¹²¹

The Principles on Responsible Biomass Electricity Development aim to provide a framework that puts environmental and environmental justice concerns at the forefront of decisions pertaining to the development of local biomass projects. These principles were adopted at the November 11, 2021, meeting of the Technical Committee of MCE's Board of Directors and will be shared via CalCCA, the California CCA trade association, to disseminate these documents through the larger collaborative of CCAs throughout California.¹²²

¹¹⁸ Viktor Johansson, Mariliis Lehtveer & Lisa Göransson, *Biomass in the electricity system: A complement to variable renewables or a source of negative emissions?*, 168 ENERGY 532, 538 (2019), <https://www.sciencedirect.com/science/article/pii/S0360544218323235>.

¹¹⁹ Elena M. Krieger, John A. Casey & Seth B.C. Shonkoff, *A framework for siting and dispatch of emerging energy resources to realize environmental and health benefits: Case study on peaker power plant displacement*, 96 ENERGY 302, 307–08 (2016).

¹²⁰ *MCE's Commitment to Energy Equity: Community Power Coalition*, MCE <https://www.mcecleanenergy.org/energy-equity/#communitypower> (last visited Jan. 19, 2022).

¹²¹ *Id.*

¹²² *Technical Committee Meeting*, MCE, (Nov. 4, 2021) <https://www.mcecleanenergy.org/wp-content/uploads/2021/11/MCE-Technical-Committee-Packet-Thursday-November-4-2021.pdf>.

Principles on Responsible Biomass Electricity Development¹²³

- MCE will prioritize resources that use a source of organic material that has been diverted from landfills and thereby making them compliant with the requirements of Senate Bill 1383.
- MCE will prioritize carbon neutral resources and adaptations wherever possible.
- MCE will prioritize procurement opportunities that proactively minimize local air quality impacts, both from the facility and from the transportation of fuel from its source to the facility.
- MCE will ensure that biomass facilities with which it contracts will have the appropriate California Environmental Quality Act (CEQA) and local air district permits.
- Selected facilities must use BACT (best available control technology) or BARCT (best available retrofit control technology) to reduce emissions to the greatest extent possible.
- MCE will prioritize resources that support sustainable forest management and wildfire reduction strategies to minimize the fuels for uncontrolled wildfire (i.e., no fuel farms).
- Staff will seek to understand if we can catalyze secondary environmental benefits with new technologies at these facilities, such as creating biochar or biocarbon.
- MCE will not procure biomass electricity from resources located in vulnerable communities defined by CalEPA's most current CalEnviroScreen map tool at the time of contract execution. Whenever possible, MCE will strive to procure biomass electricity from facilities that are not located in populated areas.
- MCE will enter into strict agreements pertaining to eligible and prohibited fuels at each facility (i.e., no propane or chemically-treated wood waste when primary feedstock is low).
- MCE will support the developers in their pursuit of expedited licensing and certification by providing relevant staff expertise and guidance.

¹²³ *Principles on Responsible Biomass Electricity Development*, MCE (Feb. 7, 2022) https://www.mcecleanenergy.org/wp-content/uploads/2022/02/07_Attachment-A-Responsible-Biomass-Electricity-Development-Principles.pdf.

- MCE will solicit feedback from the Community Power Coalition and other partners to solicit their input and guidance on project investments.

CONCLUSION

California's CCAs have a wide variety of benefits, but most exist primarily to reduce electricity-related GHG emissions through power procurement that prioritizes renewable energy. Among other benefits of CCAs is robust public engagement before, during, and after CCA program implementation. This includes community-based and grassroots engagement with environmental justice organizations, such as MCE's Community Power Coalition.

Renewable energy is one part of the solution to reduce fossil fuel GHG emissions, but its intermittency remains a challenge. Biomass is one renewable energy solution that provides baseload power that can complement intermittent resources and reduces the likelihood of massive forest fires. However, siting considerations have often disproportionately impacted communities with a history of entrenched inequities.

As the climate emergency worsens, catastrophic wildfires affect more people in states across the American West, including California and Colorado. These fires not only create loss of life and property, but also lead to power outages and massive GHG emissions.

With evolving biomass energy technologies and a state program to incentivize biomass energy resulting from sustainable forest management, California IOUs had the tools to build better biomass plants throughout their service territories. The state funds to build these projects were collected from CCA customers, but those customers were not eligible to participate. Through AB 843, authored by Assembly member Aguiar-Curry, CCAs are now eligible to access those funds to build biomass energy projects closer to the site of energy usage and away from the Central Valley. But there is still more work to be done.

Community input and consideration of environmental justice concerns led to MCE's Responsible Biomass Electricity Development Principles. In following these principles, CCAs and other load serving entities can work to thoughtfully develop biomass energy sources locally, create closed-loop waste stream systems within their communities, invest in local infrastructure, create local jobs, alleviate fire danger, divert organic waste from landfills, contribute baseload power to the grid, and diversify their portfolio of renewable energy resources. This allows for the potential to build biomass projects while minimizing environmental impacts to environmental justice communities, support sustainable forest management and wildfire reduction strategies, further community-driven control in

their development, and support the just transition away from fossil fuels towards a renewable energy future.