Community Choice Aggregation: Opportunities for Local Governments

Green Cities CALIFORNIA

Accelerating the adoption of sustainability policies and practices

What is Community Choice?

- CCA allows cities and counties to pool their residential, business and municipal electricity loads – and purchase/generate power on their behalf.
- Energy transmission, distribution, repair and customer service functions remain with the incumbent utility.
- This means communities can select the provider of their electricity – through third parties and/or through local resources.

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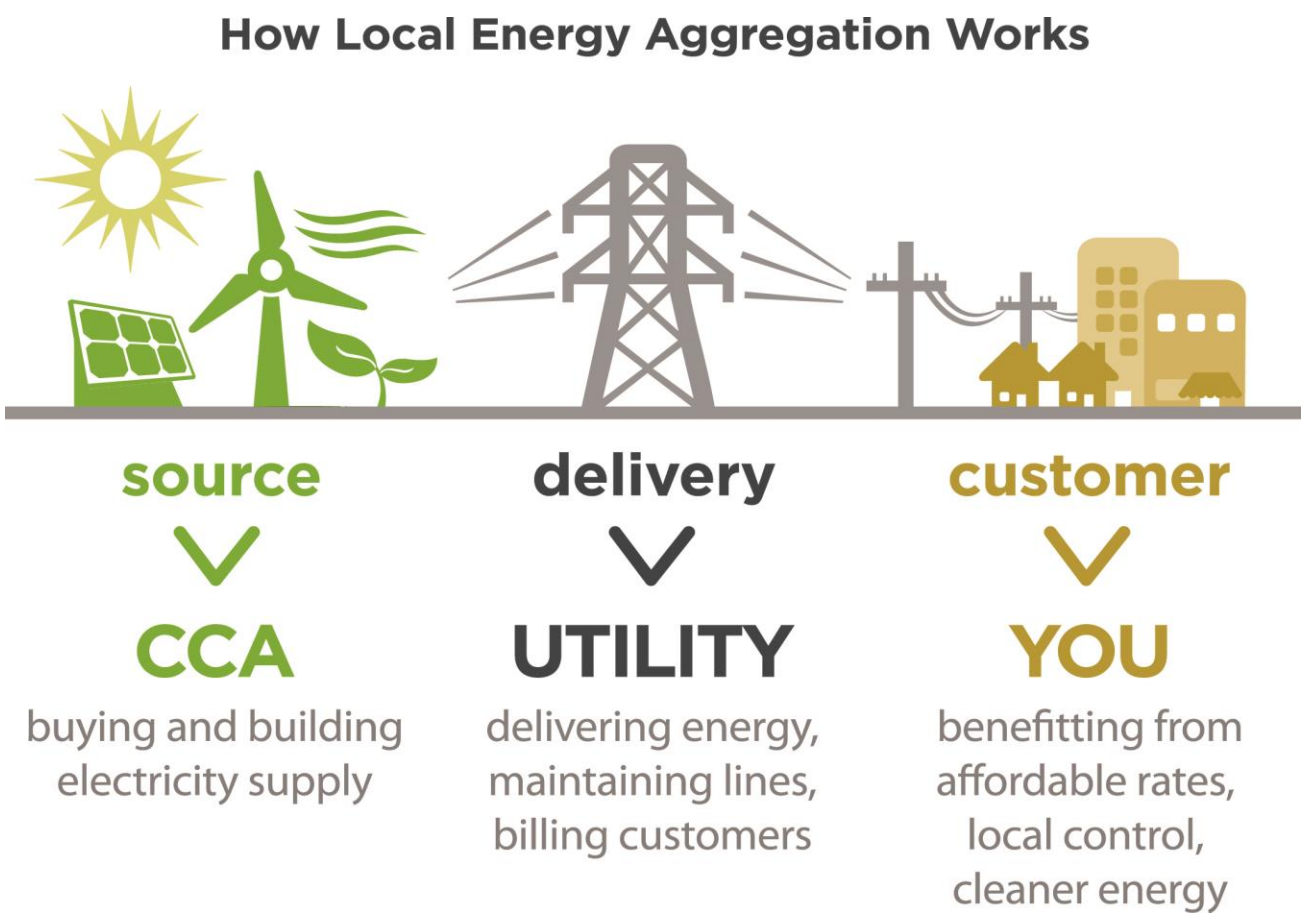
How It Works


How Local Energy Aggregation Works
source
CCA
buying and building electricity supply
delivery
UTILITY
delivering energy, maintaining lines, billing customers
customer
YOU
benefitting from affordable rates, local control, cleaner energy

The CCA Approach

IOU Investor-Owned Utility	CCA Community Choice Aggregation	Municipal/ Public Utility/Co-ops
IOU Procures Power	Local Gvt.(s) Procure Power	Muni Procure Power
IOU Maintains Transmission Lines	IOU Maintains Transmission Lines	Muni Maintains Transmission Lines
IOU Provides Customer Service	IOU Provides Customer Service	Muni Provides Customer Service

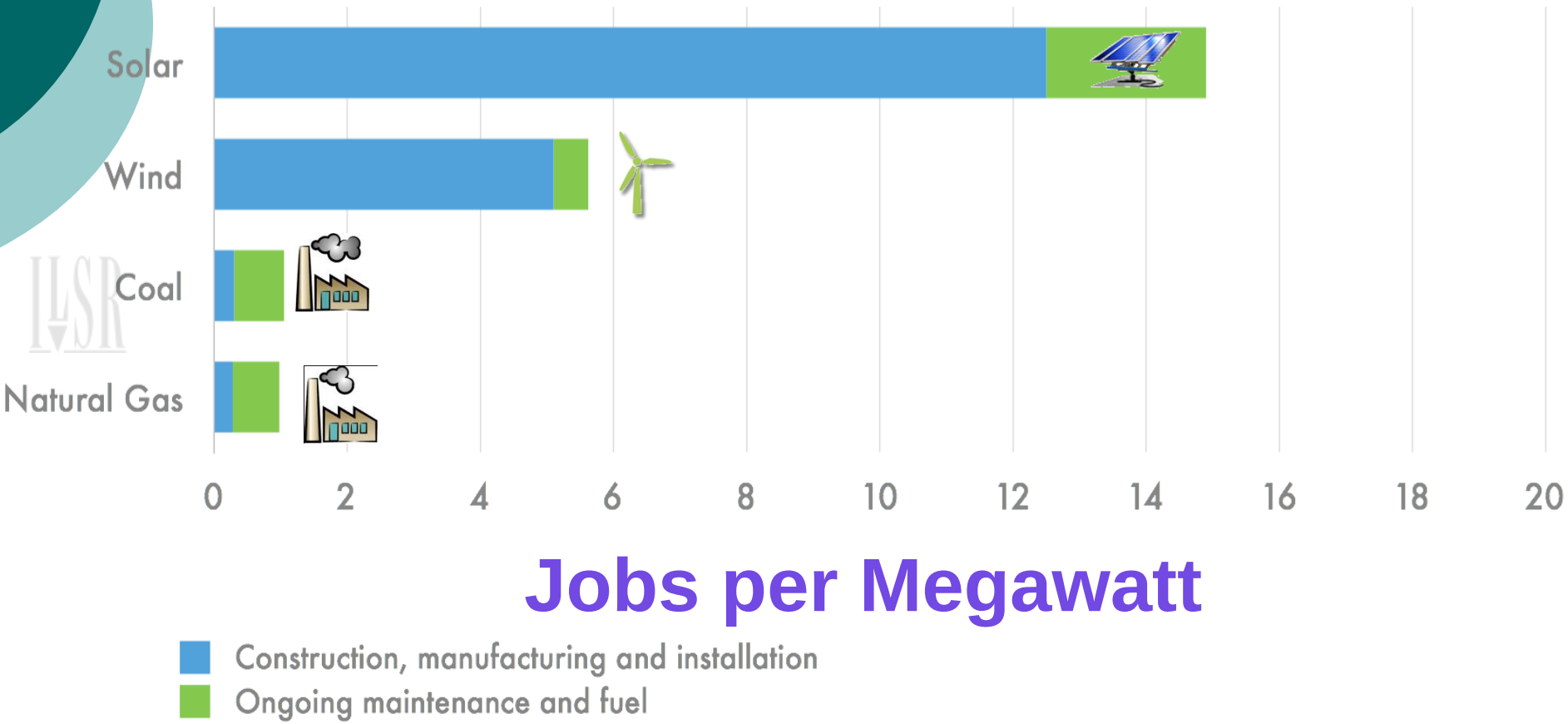
Why CCA?

- ***CCA leverages the market power of group purchasing, consumer choice, and local decision-making.***
- CCA has the ability to lower electricity rates and green the grid. CCA creates competition where none previously existed.
- CCAs are market-based and **NOT** subsidized by taxpayers.
- Meet climate goals
- Stimulate new, local renewables development as well as local energy programs and associated job creation.
- Greater reliance on renewables a hedge against variable fuel prices

Quick Summary of the CCA Functions

- Energy Procurement and Integrated Resource Planning
- Rate Setting, including feed in tariffs and net metering
- New Program Development: Energy efficiency, solar shares, demand response, etc.
- Regulatory Compliance: RPS, RAR
- Public Relations and Customer Service

Example of Impacts: Jobs



Source: National Renewable Energy Laboratory

Potential Risks

Rate Competition: Market expertise and well crafted power RFP is essential; Diversified supply portfolio; asset ownership over time

Customer Opt-Out: Competitive rates are a must; Articulate additional consumer and community benefits; Opt-outs in CA typically in 15%-20% range

Political: Align CCA to state and local policy objectives; Appeal to both progressive and conservative minds; Community education and advocacy is key

Regulatory/Legislative: Track influencing statutes and legislation; Participate in the CA regulatory process

“White Paper” for Alameda County

- What the white paper set out to do: <u>not</u> a detailed feasibility study
- Set out the process and steps, much like an implementation plan
- Examined local resource potential in the East Bay
- Set out an ambitious 10 year renewables development target

Alameda Would Be the Largest CCA

Table 1. Alameda County Population (2010 Census)

Incorporated Cities	Population
Alameda	73,812
Albany	18,539
Berkeley	112,580
Dublin	46,036
Emeryville	10,080
Fremont	214,089
Hayward	144,186
Livermore	80,968
Newark	42,573
Oakland	390,724
Piedmont	10,667
Pleasanton	70,285
San Leandro	84,950
Union City	69,516
Unincorporated Communities	**Population**
Ashland	21,925
Castro Valley	61,388
Cherryland	14,728
Fairview	10,003
San Lorenzo	23,452
Sunol	913
All others neighborhoods	8,857[7]
TOTAL	**1,510,271**

The Resources Seem to Be There

Site Name	City	Acres	Distance to Substation (miles)	Max DNI Solar (kWh/m2/day)	Estimated Solar PV Capacity Potential (MW)
Lake Chabot Machine Gun Range (J09CA1017)	Lake Chabot	1,014.00	3.44	4.82	169.00
Oakland Naval Hospital – Suncal -- VCA	Oakland	183.00	2.85	4.73	30.50
Richmond Marina Marsh Site	Richmond	15.00	1.78	4.63	2.50
Livermore Rifle Range	Livermore	50.00	1.17	5.35	8.33
Ohlone College Newark Center	Newark	81.00	1.16	5.11	13.50
Point Isabel	Richmond	50.00	1.10	4.63	8.33
Marina Bay Project	Richmond	360.00	0.86	4.63	60.00
Coliseum Gardens	Oakland	9.00	0.83	4.73	1.50
Southern Pacific-West Oakland Rail Yard	Oakland	53.50	0.79	4.61	8.91
West Oakland Bart Station Site	Oakland	3.50	0.73	4.60	0.58
Oakland Municipal Airport	Oakland	1,168.00	0.66	4.62	194.66
Central Contra Costa Sanitary District	Martinez	22.00	0.65	5.11	3.66
625-659 Hegenberger Rd.	Oakland	12.37	0.57	4.73	2.06
Fulton Shipyard	Antioch	10.40	0.53	5.13	1.73
NAD Concord	Concord	650.00	0.47	4.95	108.33
PG&E/Shell – West Pittsburg	West Pittsburg	26.00	0.44	4.93	4.33
Amtrak Maint. Facility	Oakland	18.00	0.43	4.62	3.00
Pittsburg Marina Expansion Phase III	Pittsburg	80.00	0.41	5.13	13.33
Livermore Sewage Ponds	Livermore	12.17	0.39	5.35	2.02
AC Transit	Emeryville	8.96	0.36	4.60	1.49
Trans Bay Cable Converter Station	Pittsburg	5.00	0.36	5.13	0.83
Richmond Vehicle Facility – BNSF Railway (aka former BNSF Maintenance Shop and Siding	Richmond	36.00	0.32	4.63	6.00

CCA can generate net revenues

Appendix C: Financial Analysis of Resource Development Scenario

The following table shows a financial analysis that corresponds to the resource development scenario presented in Appendix B.

		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Revenue from the Sale of Electricity		$102,532,108	$259,544,841	$528,052,680	$1,075,743,943	$1,059,547,455	$1,046,463,791	$1,034,003,395	$1,022,152,440	$1,010,897,545	$1,000,225,764
Uncollected bills		$(76,899)	$(194,659)	$ (396,040)	$ (806,808)	$ (794,661)	$ (784,848)	$ (775,503)	$ (766,614)	$(758,173)	$(750,169)
Total Revenue		**$102,455,209**	**$259,350,182**	**$527,656,640**	**$1,074,937,135**	**$1,058,752,795**	**$1,045,678,943**	**$1,033,227,893**	**$1,021,385,826**	**$1,010,139,372**	**$999,475,595**
Cost of Purchasing Electricity		**$88,177,613**	**$223,208,563**	**$454,125,305**	**$925,139,791**	**$911,210,812**	**$899,958,860**	**$889,242,920**	**$879,051,099**	**$869,371,888**	**$860,194,157**
Start-up Costs	$(1,500,000)										
Operational Costs											
Staffing and professional services		$1,657,000	$1,800,500	$3,515,000	$4,305,000	$4,500,500	$4,515,000	$4,550,000	$4,610,000	$4,650,000	$4,710,000
Admin and office space		$350,000	$ 475,000	$1,100,000	$1,200,000	$1,250,000	$1,300,000	$1,375,000	$1,425,000	$1,476,000	$1,501,000
PG&E Fees, such as billing		$617,243	$1,562,460	$3,178,877	$6,475,979	$6,378,476	$6,299,712	$6,224,700	$6,153,358	$6,085,603	$6,021,359
Data management services		$ 1,575,000	$3,050,000	$6,500,000	$9,350,000	$9,400,000	$9,500,000	$9,750,000	$10,000,000	$10,000,000	$ 10,000,000
Communications and marketing		$500,000	$500,000	$750,000	$1,000,000	$1,000,000	$1,000,000	$ 1,000,000	$1,500,000	$1,500,000	$1,500,000
Subtotal of costs		$4,699,243	$7,387,960	$15,043,877	$22,330,979	$22,528,976	$22,614,712	$22,899,700	$23,688,358	$23,711,603	$23,732,359
Debt Service***		$1,000,000	$2,000,000	$5,000,000	$10,000,000	$10,000,000	$10,000,000	$10,000,000	$10,000,000	$10,000,000	$10,000,000
Other Costs											
TOTAL COSTS		**$93,876,857**	**$232,596,523**	**$474,169,182**	**$957,470,770**	**$943,739,787**	**$932,573,572**	**$922,142,621**	**$912,739,456**	**$903,083,492**	**$893,926,516**
Program Surplus/Deficit**	$(1,500,000)	$8,578,353	$26,753,659	$53,487,459	$117,466,366	$115,013,007	$113,105,371	$111,085,272	$108,646,370	$107,055,880	$105,549,079
Cumulative Net Revenue	$(1,500,000)	$7,078,353	$33,832,012	$87,319,471	$204,785,836	$319,798,844	$432,904,214	$543,989,487	$652,635,856	$759,691,736	$865,240,815

Conclusions

- Generate about **$865 million** in net revenue over 10 years, money that stays in the local economy and could be re-invested
- Create more than **24,000 job-years** over 10 years
- Reduce energy demand equal to a medium-sized power plant (1,790 GWH per year, or about **204 MW of combined baseload and peak capacity reductions.**
- Provide about 10,000 GWH in local renewables over 10 years, with an emphasis on local solar and wind development (equivalent to a **capacity of about 1,150 MW by 2025**).
- **Cut 6.3 million tons of GHG emissions by 2025**, equal to taking almost 475,000 cars off the road during that period.

Thank you!

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