

Community Choice Aggregation



REDWOOD COAST
EnergyAuthority



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Energy Authority

What is CCA?
Why CCA?
Where we're at locally



What is CCA?

Community choice

aggregation is a system that enables local governments to:

- offer electricity procurement service to customers within their boundaries
- while maintaining the existing electricity provider for transmission and distribution services.





IOU
Investor-Owned
Utility

**IOU Procures
Power**

**IOU Maintains
Transmission &
Distribution System**

**IOU Provides
Customer Service**



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**Municipal/
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(also Co-ops)

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**Community
Choice
Aggregation**

**Local Gvt.(s)
Procures Power**

**IOU Maintains
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**IOU Provides
Customer Service**

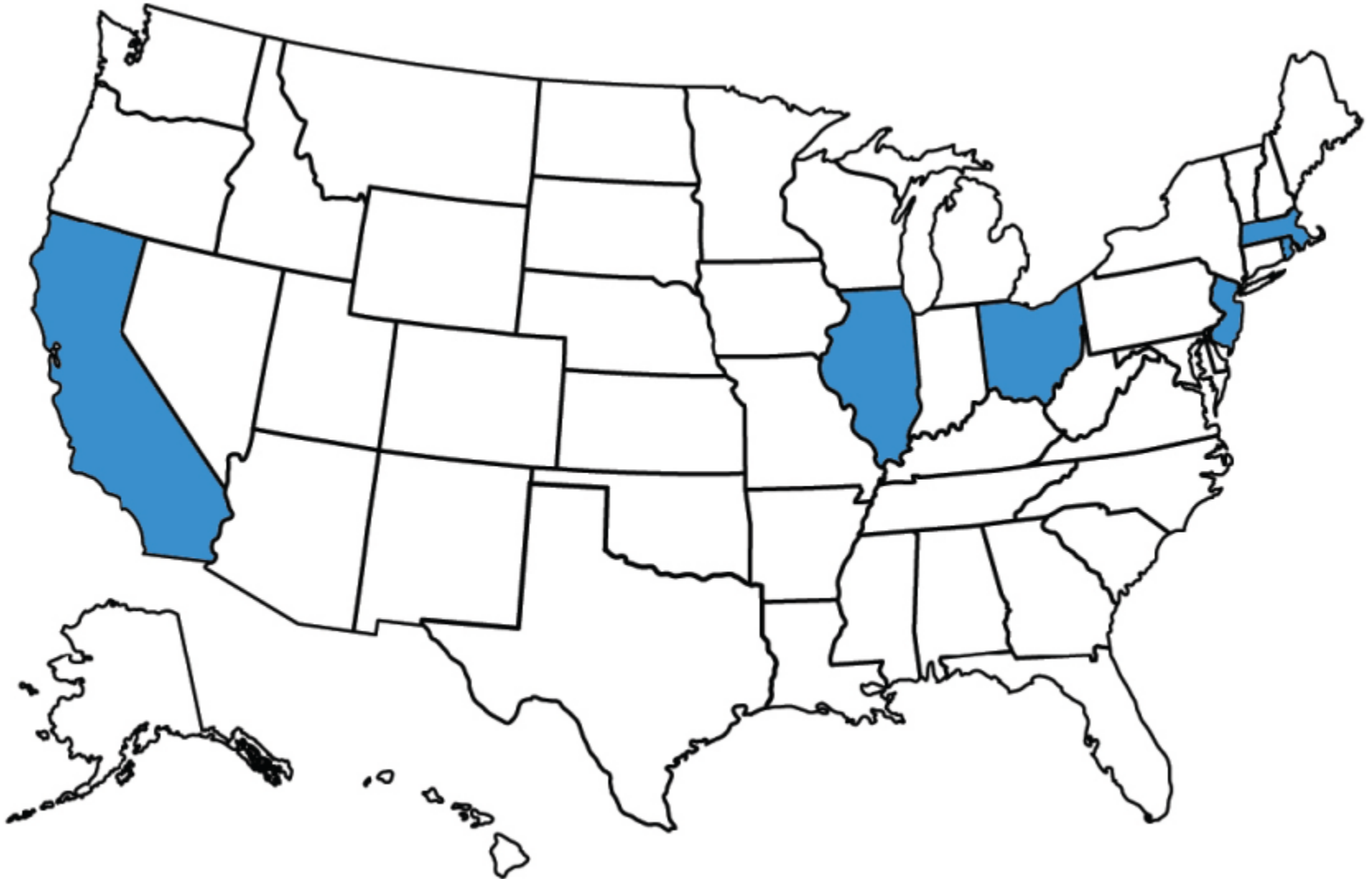
**Municipal/
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(also Co-ops)

**Muni Procures
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**Muni Provides
Customer Service**

Over 1,000 CCAs in operation



Why CCA?

Local control

Potential rate savings

Choice



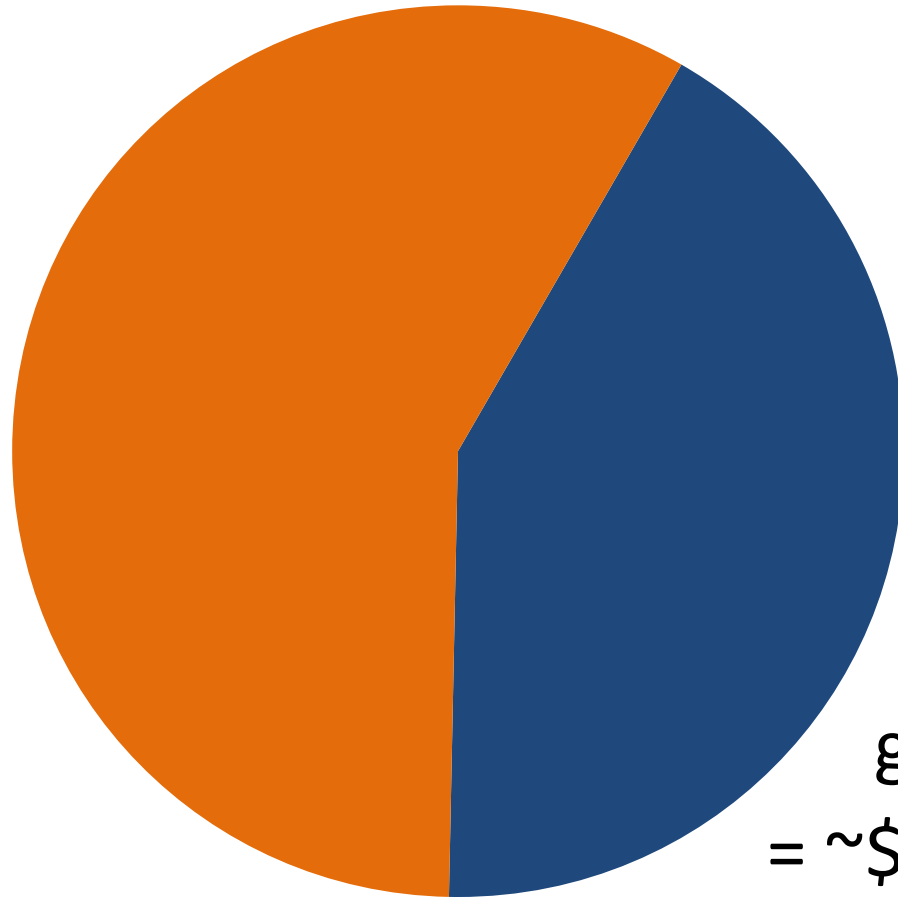


- Began serving customers in 2010
- 50% Renewable energy base option
- Rates 2%-5% lower than PG&E



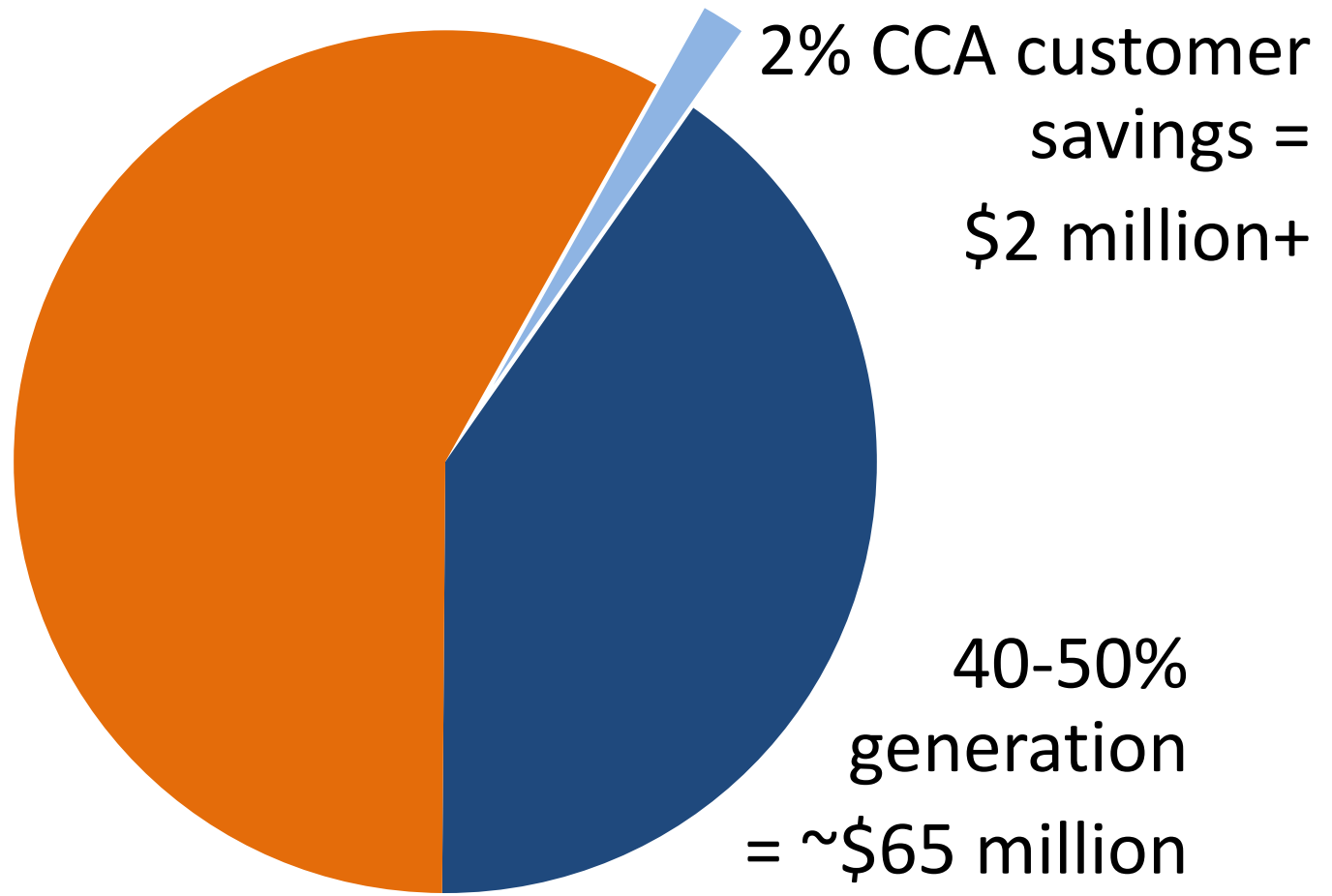
- Began serving customers in 2014
- 33% Renewable energy base option
- Rates ~7% lower than PG&E
- \$36 million reserve fund after 2 years

Humboldt County Electricity Costs: ~\$143 million per year



40-50%
generation
= ~\$65 million

Humboldt County Electricity Costs: ~\$143 million per year



RePower Humboldt

A Strategic Plan for Renewable Energy
Security and Prosperity



March 2013

Priorities

1. Rate savings to the community
2. Local Renewable Energy
3. Economic Development



Local Existing Renewable Generation



Near-term Generation Potential



Future Local Generation Potential



Preliminary Analysis

- First pass at examining biomass economics
- Base Assumptions
 - 1% load growth, 10% opt out
 - Initial launch communities of Arcata, Eureka, Fortuna, Trinidad, Unincorporated
 - 2% average customer rate discount (\$3 Million+ per year)
 - 5% GHG reduction below PG&E (large hydro)

Assumptions – Supply

- 20 MW of small hydro and new solar in Humboldt
- -5% GHG relative to PG&E
- Renewable Portfolio Standard (RPS)
 - 33% RPS until 2020 → 43% by 2026
- \$5.44/MWh Total Overhead (5 Year Avg, Base Case Load)

Base Case Load Scenario

Launch Bundled; No DA; 10% Opt-Out

| <u>Five Year Reserve Accumulation</u> | | | | | |
|---------------------------------------|---------------|---------------|----------------|-----------------|-----------------|
| | \$75 | \$80 | \$85 | \$90 | \$95 |
| 10 | \$ 86,450,315 | \$ 84,290,701 | \$ 82,131,087 | \$ 79,971,473 | \$ 77,811,859 |
| 20 | \$ 74,950,853 | \$ 70,631,624 | \$ 66,312,396 | \$ 61,993,168 | \$ 57,673,940 |
| 30 | \$ 60,602,722 | \$ 54,123,880 | \$ 47,645,037 | \$ 41,166,195 | \$ 34,687,352 |
| 40 | \$ 45,815,581 | \$ 37,177,124 | \$ 28,538,667 | \$ 19,900,211 | \$ 11,261,754 |
| 50 | \$ 31,028,439 | \$ 20,230,368 | \$ 9,432,297 | \$ (1,365,773) | \$ (12,163,844) |
| 60 | \$ 16,132,664 | \$ 3,174,979 | \$ (9,782,705) | \$ (22,740,390) | \$ (35,698,075) |

| <u>Five Year Cumulative Reserves as Percent of Retail Revenue</u> | | | | | |
|---|------|------|------|------|------|
| | \$75 | \$80 | \$85 | \$90 | \$95 |
| 10 | 27% | 27% | 26% | 25% | 25% |
| 20 | 24% | 22% | 21% | 20% | 18% |
| 30 | 19% | 17% | 15% | 13% | 11% |
| 40 | 15% | 12% | 9% | 6% | 4% |
| 50 | 10% | 6% | 3% | 0% | -4% |
| 60 | 5% | 1% | -3% | -7% | -11% |

Best Case Load Scenario

All Bundled; No DA; 5% Opt-Out (of Bundled)

| <u>Five Year Reserve Accumulation</u> | | | | | |
|---------------------------------------|---------------|---------------|---------------|-----------------|-----------------|
| | \$75 | \$80 | \$85 | \$90 | \$95 |
| 10 | \$ 97,232,404 | \$ 95,072,789 | \$ 92,913,175 | \$ 90,753,561 | \$ 88,593,947 |
| 20 | \$ 86,080,387 | \$ 81,761,159 | \$ 77,441,930 | \$ 73,122,702 | \$ 68,803,474 |
| 30 | \$ 72,183,640 | \$ 65,704,798 | \$ 59,225,955 | \$ 52,747,113 | \$ 46,268,271 |
| 40 | \$ 57,425,350 | \$ 48,786,893 | \$ 40,148,436 | \$ 31,509,980 | \$ 22,871,523 |
| 50 | \$ 42,638,208 | \$ 31,840,137 | \$ 21,042,066 | \$ 10,243,996 | \$ (554,075) |
| 60 | \$ 27,851,066 | \$ 14,893,381 | \$ 1,935,697 | \$ (11,021,988) | \$ (23,979,673) |

| <u>Five Year Cumulative Reserves as Percent of Retail Revenue</u> | | | | | |
|---|------|------|------|------|------|
| | \$75 | \$80 | \$85 | \$90 | \$95 |
| 10 | 28% | 27% | 27% | 26% | 26% |
| 20 | 25% | 24% | 22% | 21% | 20% |
| 30 | 21% | 19% | 17% | 15% | 13% |
| 40 | 17% | 14% | 12% | 9% | 7% |
| 50 | 12% | 9% | 6% | 3% | 0% |
| 60 | 8% | 4% | 1% | -3% | -7% |

Bad Case Load Scenario

Launch Bundled; No DA; 20% Opt-Out

| <u>Five Year Reserve Accumulation</u> | | | | | |
|---------------------------------------|---------------|-----------------|-----------------|-----------------|-----------------|
| | \$75 | \$80 | \$85 | \$90 | \$95 |
| 10 | \$ 74,285,608 | \$ 72,125,994 | \$ 69,966,380 | \$ 67,806,766 | \$ 65,647,152 |
| 20 | \$ 62,086,321 | \$ 57,767,093 | \$ 53,447,864 | \$ 49,128,636 | \$ 44,809,408 |
| 30 | \$ 47,490,951 | \$ 41,012,108 | \$ 34,533,266 | \$ 28,054,423 | \$ 21,575,581 |
| 40 | \$ 32,703,809 | \$ 24,065,353 | \$ 15,426,896 | \$ 6,788,439 | \$ (1,850,017) |
| 50 | \$ 17,916,668 | \$ 7,118,597 | \$ (3,679,474) | \$ (14,477,545) | \$ (25,275,616) |
| 60 | \$ 2,318,366 | \$ (10,639,319) | \$ (23,597,004) | \$ (36,554,689) | \$ (49,512,374) |

| <u>Five Year Cumulative Reserves as Percent of Retail Revenue</u> | | | | | |
|---|------|------|------|------|------|
| | \$75 | \$80 | \$85 | \$90 | \$95 |
| 10 | 26% | 26% | 25% | 24% | 23% |
| 20 | 22% | 21% | 19% | 18% | 16% |
| 30 | 17% | 15% | 12% | 10% | 8% |
| 40 | 12% | 9% | 6% | 2% | -1% |
| 50 | 6% | 3% | -1% | -5% | -9% |
| 60 | 1% | -4% | -8% | -13% | -18% |

Base Case Load Scenario with +\$10/MWh PCIA

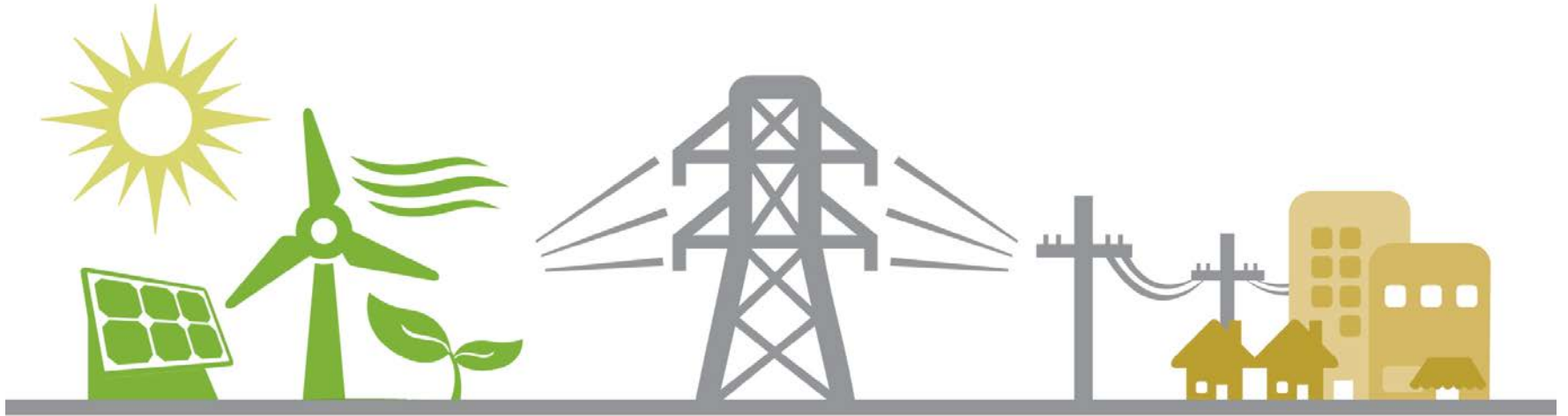
| Five Year Reserve Accumulation with +\$10/MWh PCIA | | | | | | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|--|
| | \$75 | \$80 | \$85 | \$90 | \$95 | |
| 10 | \$ 48,622,604 | \$ 46,462,990 | \$ 44,303,376 | \$ 42,143,761 | \$ 39,984,147 | |
| 20 | \$ 37,123,142 | \$ 32,803,913 | \$ 28,484,685 | \$ 24,165,457 | \$ 19,846,228 | |
| 30 | \$ 22,775,011 | \$ 16,296,168 | \$ 9,817,326 | \$ 3,338,483 | \$ (3,140,359) | |
| 40 | \$ 7,987,869 | \$ (650,587) | \$ (9,289,044) | \$ (17,927,501) | \$ (26,565,957) | |
| 50 | \$ (6,799,272) | \$ (17,597,343) | \$ (28,395,414) | \$ (39,193,485) | \$ (49,991,556) | |
| 60 | \$ (21,695,047) | \$ (34,652,732) | \$ (47,610,417) | \$ (60,568,102) | \$ (73,525,787) | |

| Five Year Cumulative Reserves w/ +\$10/MWh PCIA as Percent of Retail Revenue | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|--|
| | \$75 | \$80 | \$85 | \$90 | \$95 | |
| 10 | 15% | 15% | 14% | 13% | 13% | |
| 20 | 12% | 10% | 9% | 8% | 6% | |
| 30 | 7% | 5% | 3% | 1% | -1% | |
| 40 | 3% | 0% | -3% | -6% | -8% | |
| 50 | -2% | -6% | -9% | -12% | -16% | |
| 60 | -7% | -11% | -15% | -19% | -23% | |

Decision Points

- March-July: City and County Ordinances
- June –August : Technical study
- August-October: Implementation plan
- November-January: finalize supply/rates
- February-April: Customer notifications





source



CCA

buying and building
electricity supply

delivery



UTILITY

delivering energy,
maintaining lines,
billing customers

customer



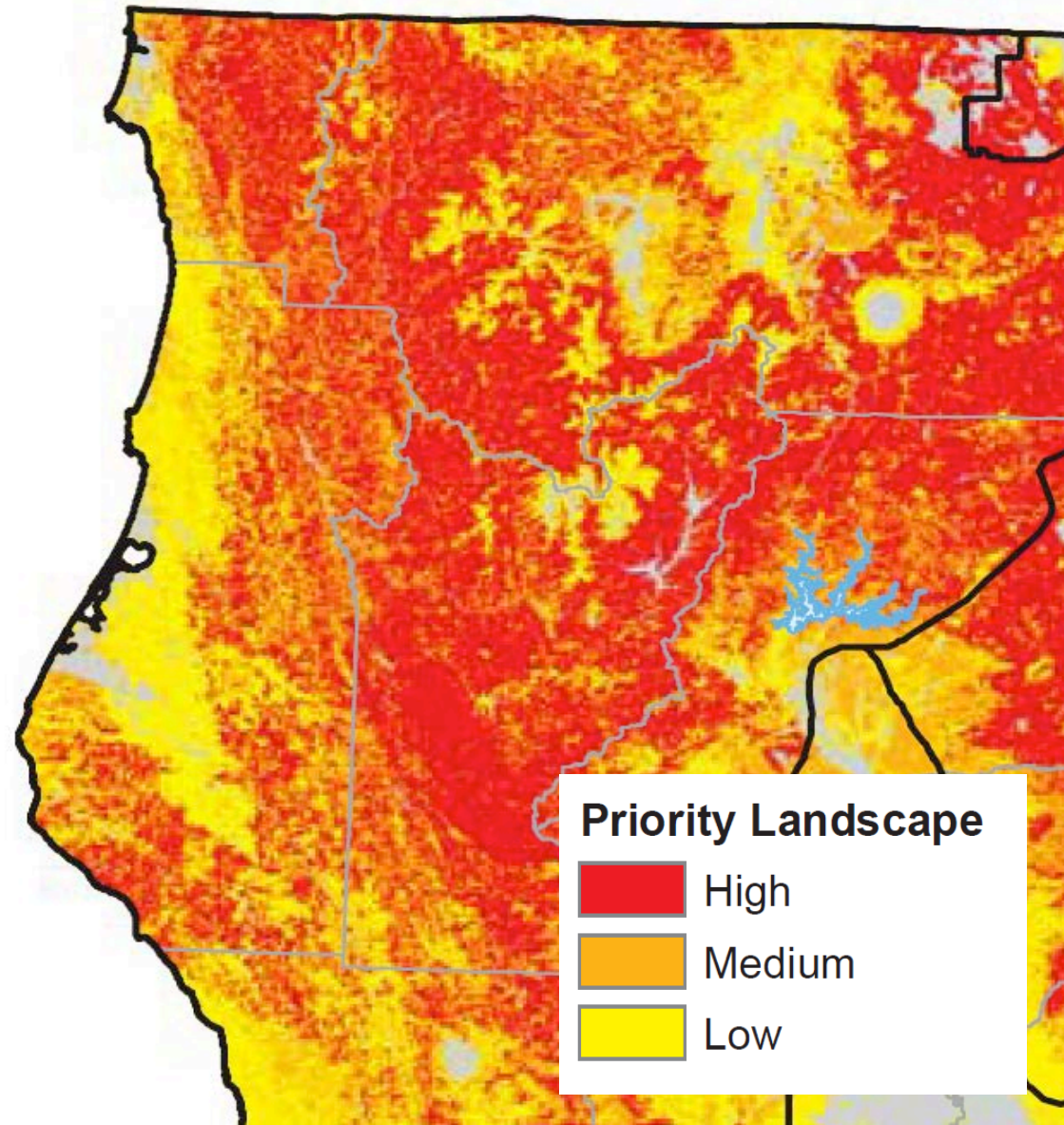
YOU

benefitting from
affordable rates,
local control,
cleaner energy



REDWOOD COAST
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Priority landscapes for fuel reductions



Priority Landscape

- High
- Medium
- Low