

# The Role of Biomass in RCEA's Power Portfolio

Comprehensive Action Plan  
for Energy 2019 Update





# Topics

- History of inclusion of biomass power in RCEA's Community Choice Energy (CCE) program
- Community perspectives on biomass
- Environmental issues and plant performance

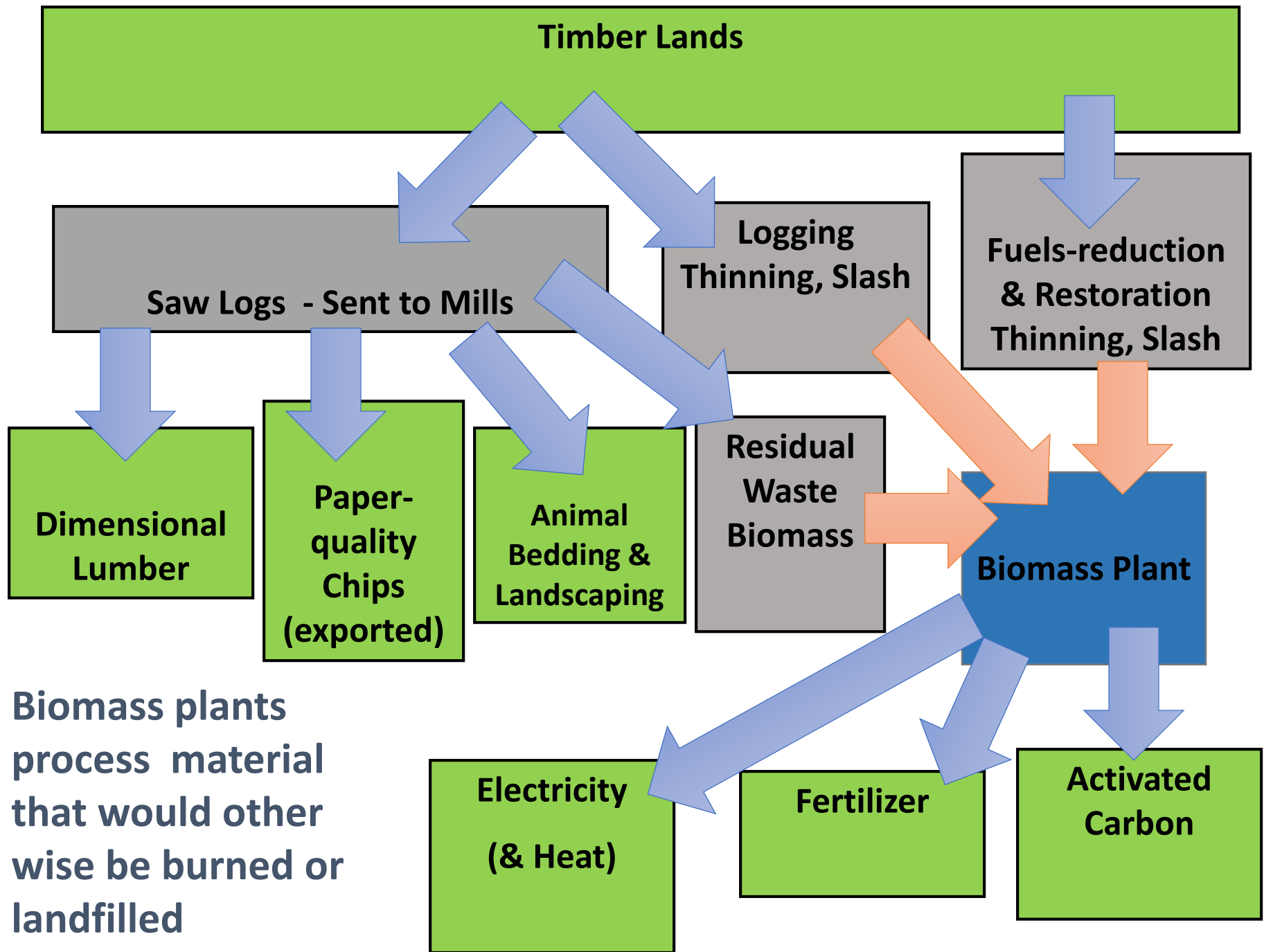


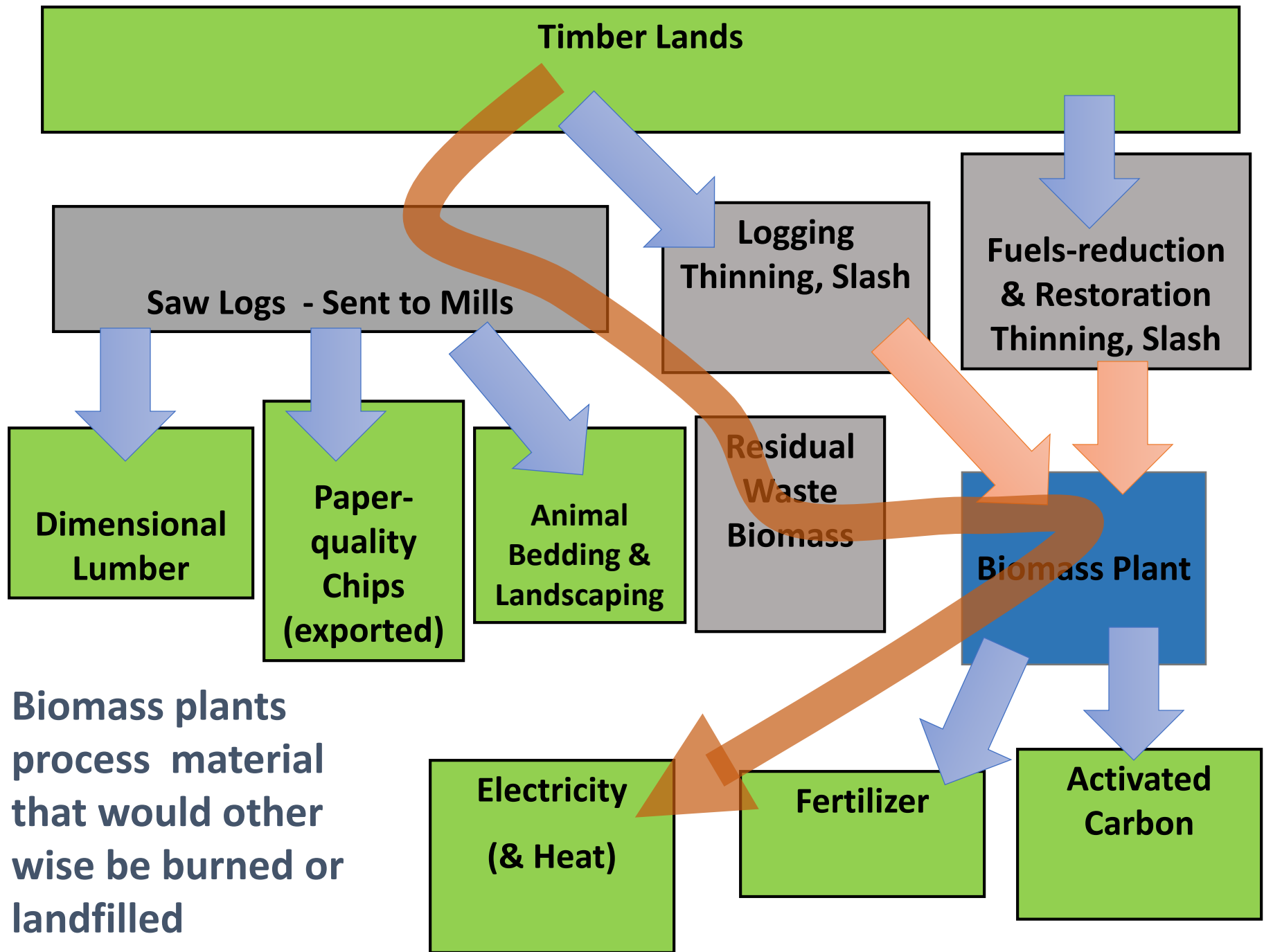
Our CCE Goal: Maximize the use of  
local renewable energy  
while providing competitive rates



# Rationale for Inclusion of Biomass in RCEA Power Portfolio

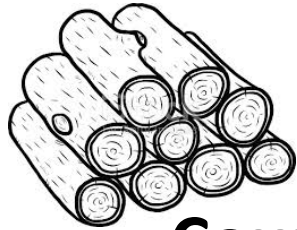
- Represented sole opportunity to include local, utility-scale renewable energy at CCE program launch
- RePower Humboldt study (2013) that recommended creating CCE program identified biomass as a regionally appropriate renewable power option
- Community benefits seen in waste management, preservation of skilled local jobs
- Program launch period guidelines adopted by RCEA Board (2016) called for contracts with 1-2 existing facilities for “around 20 MW of local biomass energy”



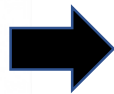


# What volume are we talking about?

*(1 truckload = 120 cubic yards)*



**County Sawmills**



Produce 140  
Truckloads/day  
5 days/wk



40% goes to other local  
uses or leaves Humboldt

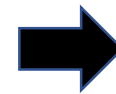


Consumes 50  
Truckloads/day  
7 days/wk

**HSC Scotia**



**DG Fairhaven**



Consumes 35  
Truckloads/day  
7 days/wk





# Biomass Procurement History

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- Issued Request for Offers for local biomass power October 2016
- Received offers from all three local plants
- Selected Humboldt Redwood Co. (now Humboldt Sawmill Co.), began taking deliveries at program launch in 2017
- Added contract with DG Fairhaven in 2018 to fulfill RCEA Board's biomass procurement objective





# Biomass in RCEA's Current Portfolio

- 13.25 MW from Humboldt Sawmill Co. (5-yr contract)
- 10 MW from DG Fairhaven (1-yr contract)
- Both currently @ \$65/MWh where resource adequacy included



Together these resources  
made up 23% of our power  
supply in 2018

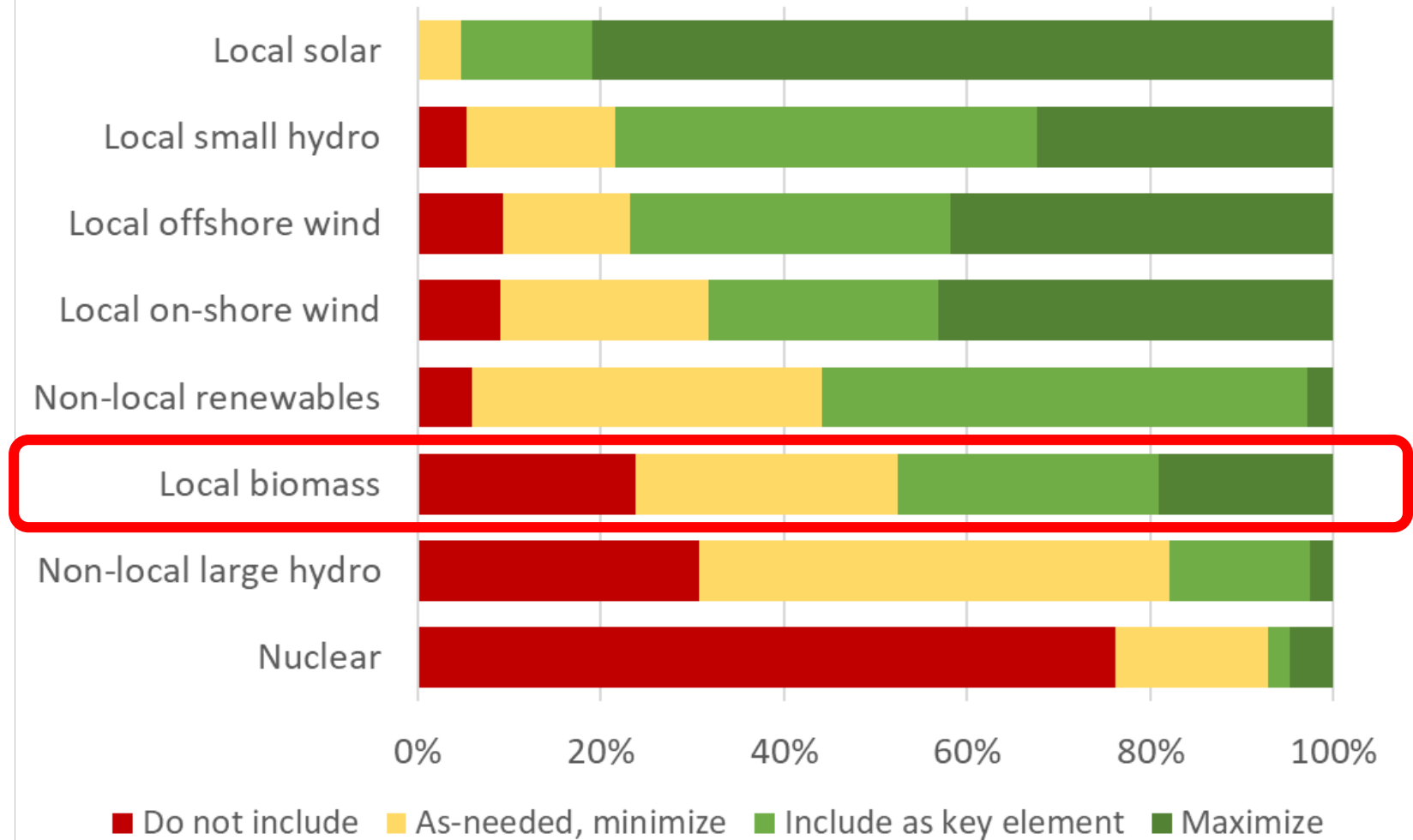
# Community Perspectives



- A small but vocal set of community members persistently address our Board with concerns about greenhouse gas emissions, criteria pollutants, and public health impacts associated with biomass power
- Local climate action organization 350 Humboldt has elected to be neutral on RCEA biomass after much internal discussion
- At our recent community workshops, opinion in Eureka was mixed on biomass, while participants at the smaller Orleans and Redway workshops were unanimously supportive of biomass



## Aug-Sep 2019 RCEA Public Meeting Voting (Eureka, Orleans, and Redway)



Biomass: 24% no; 29% as-needed, minimize; 48% support



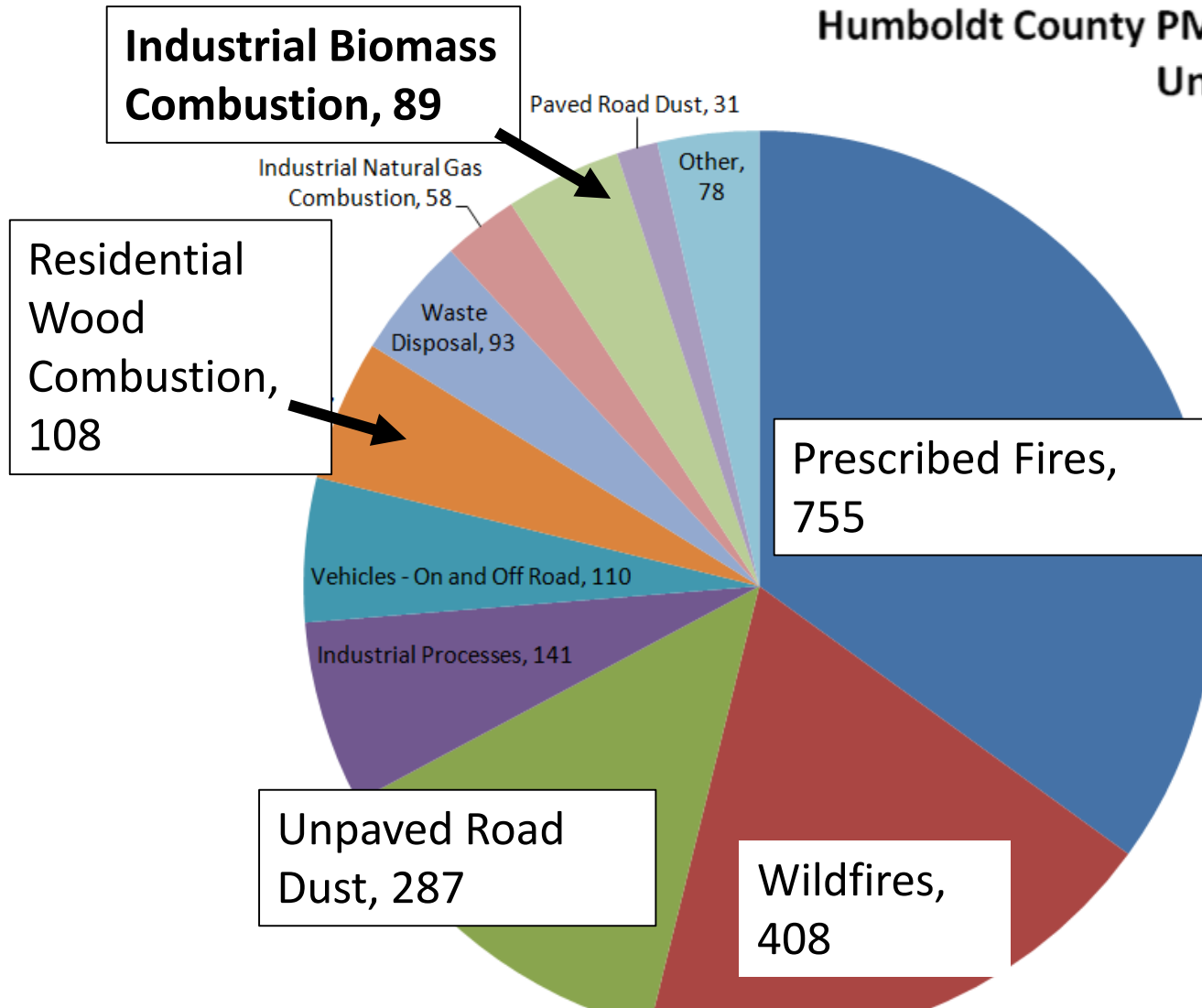
# Biomass and Greenhouse Gas Emissions

- Carbon neutrality of biomass power is much debated
- State and international (IPCC) conventions consider biogenic and non-biogenic emissions from biomass plants separately
- For state GHG compliance purposes, only non-biogenic emissions (e.g. fossil fuels used for equipment startup) are counted
- These data are publicly available via CA Air Resources Board's Pollution Mapping Tool\*
- For local plants in 2016, biogenic emissions were 13x (DG Fairhaven) and 36x (HRC) greater than non-biogenic emissions in MTCO<sub>2</sub>e

\* [https://ww3.arb.ca.gov/ei/tools/pollution\\_map/](https://ww3.arb.ca.gov/ei/tools/pollution_map/)

# Biomass and Regulated Air Pollutants

Humboldt County PM 2.5 Emissions by Source  
Units: Tons, Data Year: 2014



## Important Caveats:

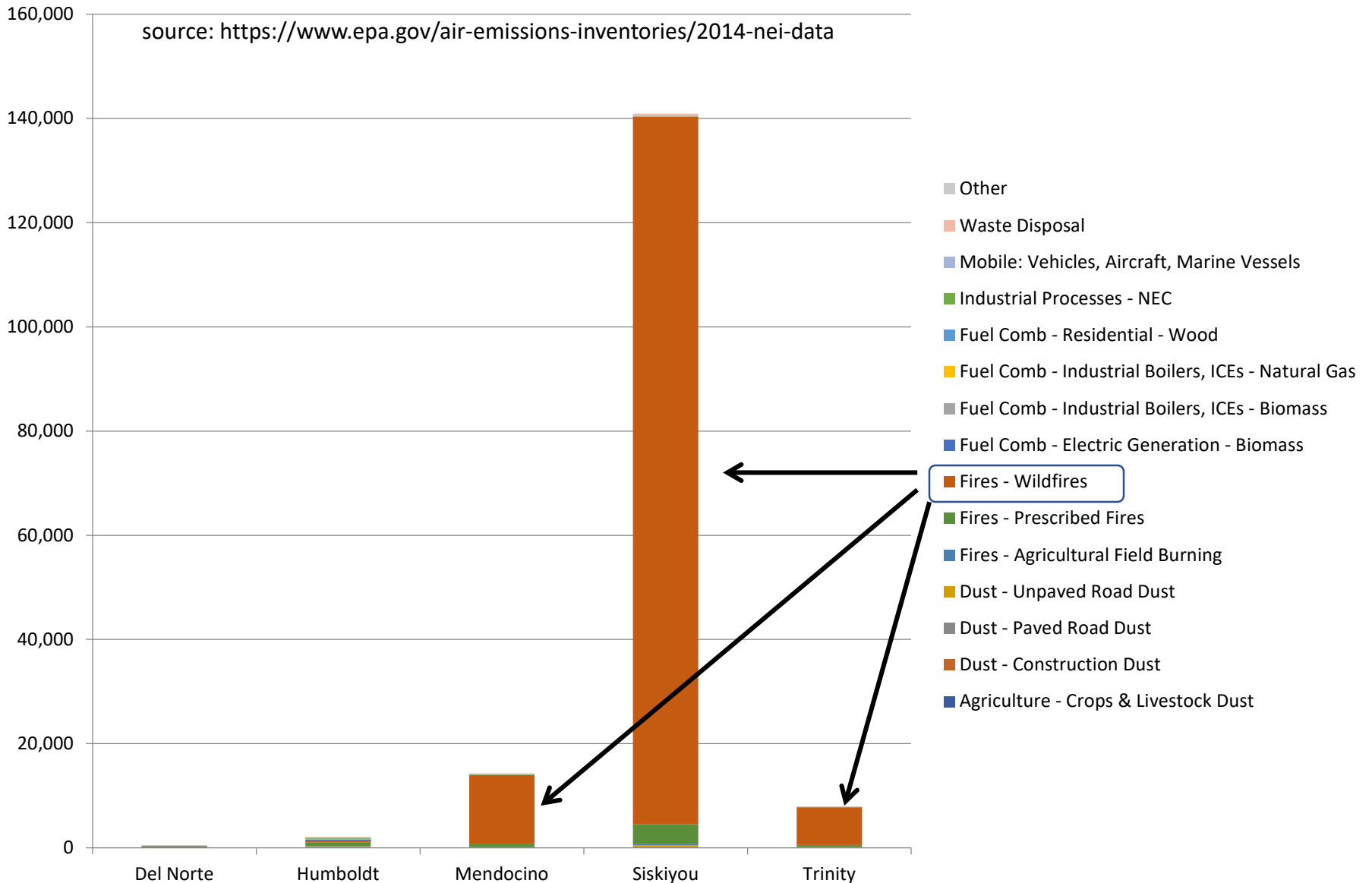
- Emissions that occur near to where people live may have greater health impact
- Not all PM2.5 particle types have same health impact; e.g. combustion products vs road dust

Source: <https://www.epa.gov/air-emissions-inventories/2014-nei-data>

Note per NCUAQMD staff: some sources such as waste disposal are actually statewide emissions ascribed to counties by population

## Units = Tons, Year = 2014

## Del Norte





**Thank you**

