

Juneau's Energy Picture and Climate Action Where Are We? What's Next?

Assembly Committee of the Whole

June 5, 2023

Gretchen Keiser, Chair, Juneau Commission on Sustainability

Steve Behnke, Chair, JCOS Energy Committee

Overview

- I. Juneau's Climate Action and Energy Policies
 - I. 2021 Energy and GHG Inventory
 - I. Where Are We? What Juneau's Been Doing
 - I. What's Next? JCOS Recommendations



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National
Weather
Service

JUNE 30



Tuesday Record Heat

May 31, 2022

Juneau
78°

Old Record:
76° in 1982

Yakutat
74°

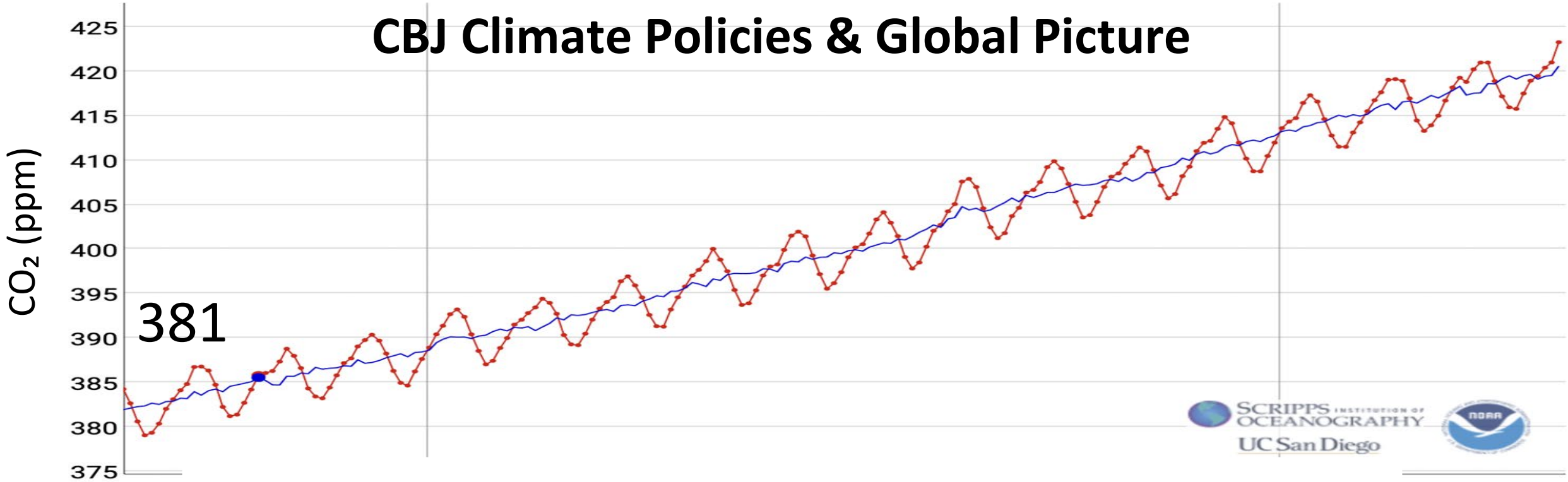
Old Record:
67° in 1964

Feel Hot Tuesday? It Certainly Was!



Fall, 2020

CBJ Climate Policies & Global Picture

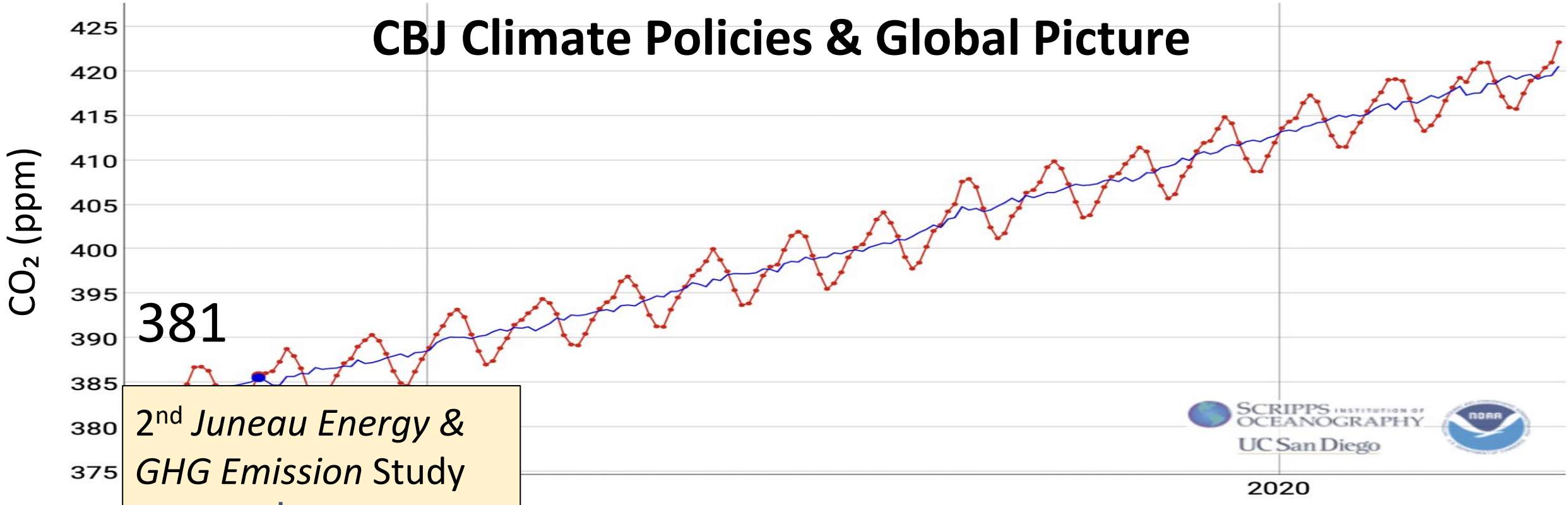


2007 2010 2011 2015 2017 2018 2019 2023

JCOS established.
1st *Juneau Energy & GHG Emissions Study*



CBJ Climate Policies & Global Picture



2007

2010

2011

2015

2017

2018

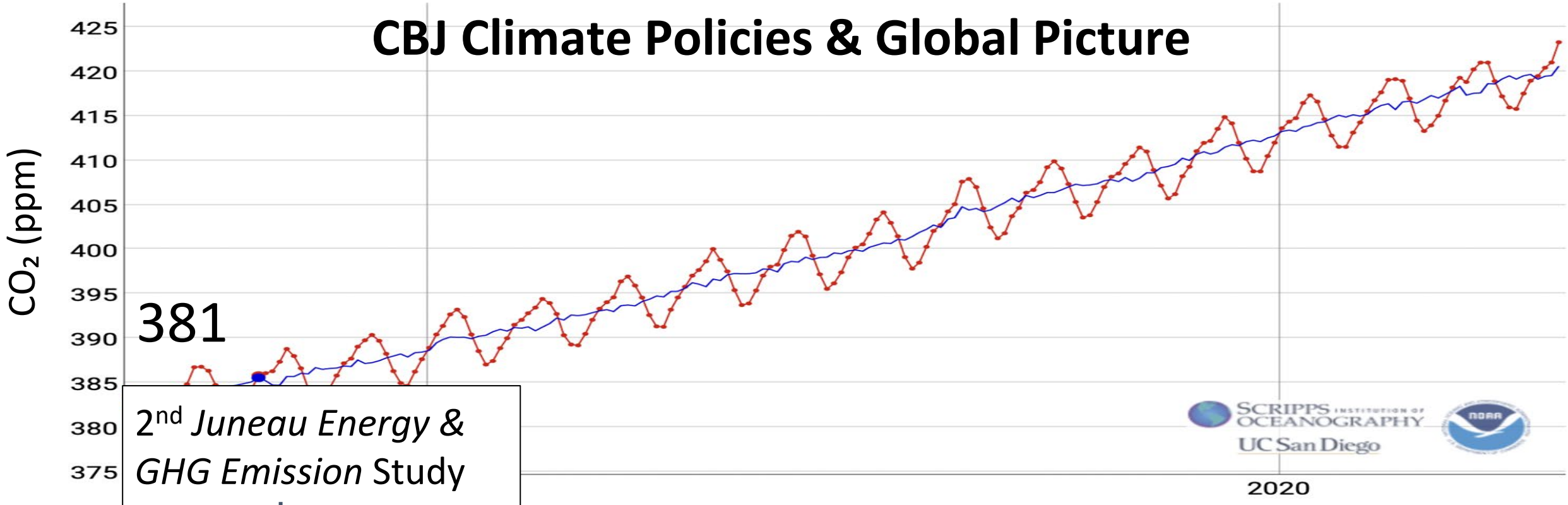
2019

2023

JCOS established.
Res 2401. 1st
Juneau Energy &
GHG Emissions
Study



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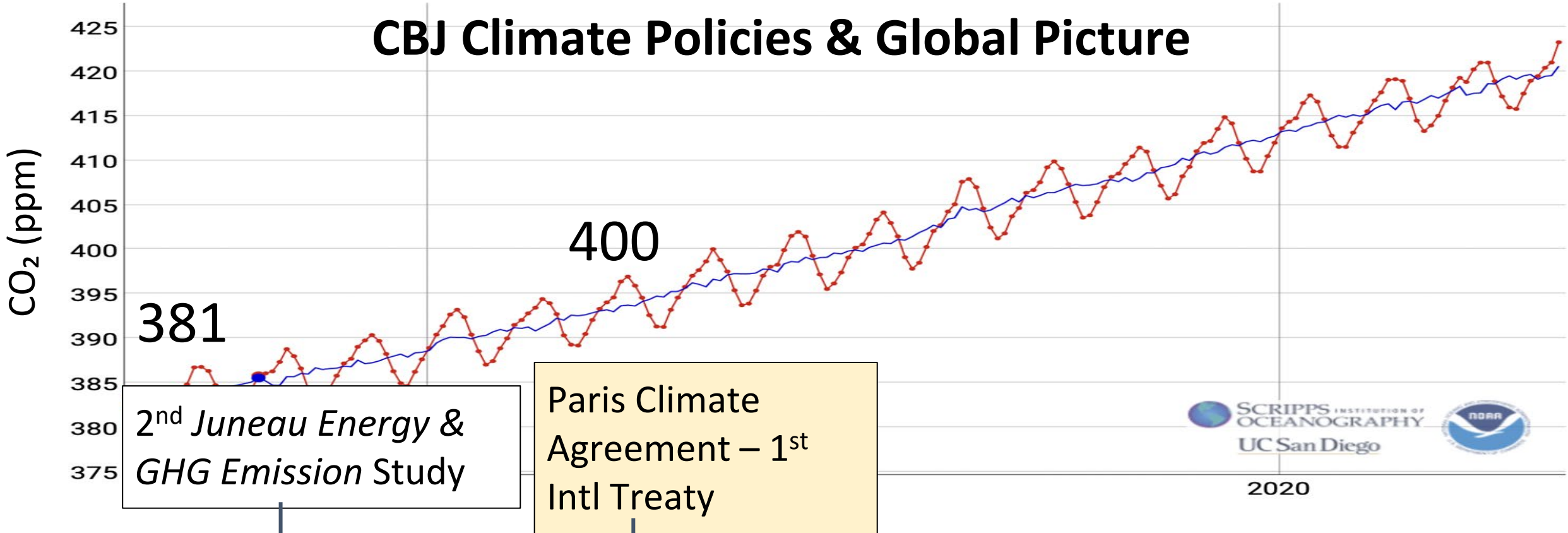
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JCOS established.
Res 2401. 1st
*Juneau Energy &
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Juneau Climate Action
& Implementation
Plan. Goal: 25% GHG
reduction by 2032



CBJ Climate Policies & Global Picture



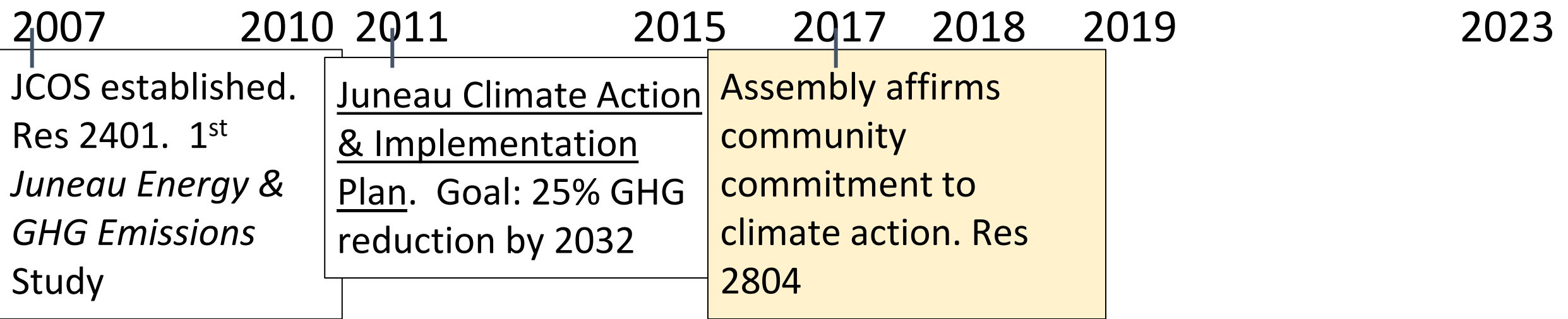
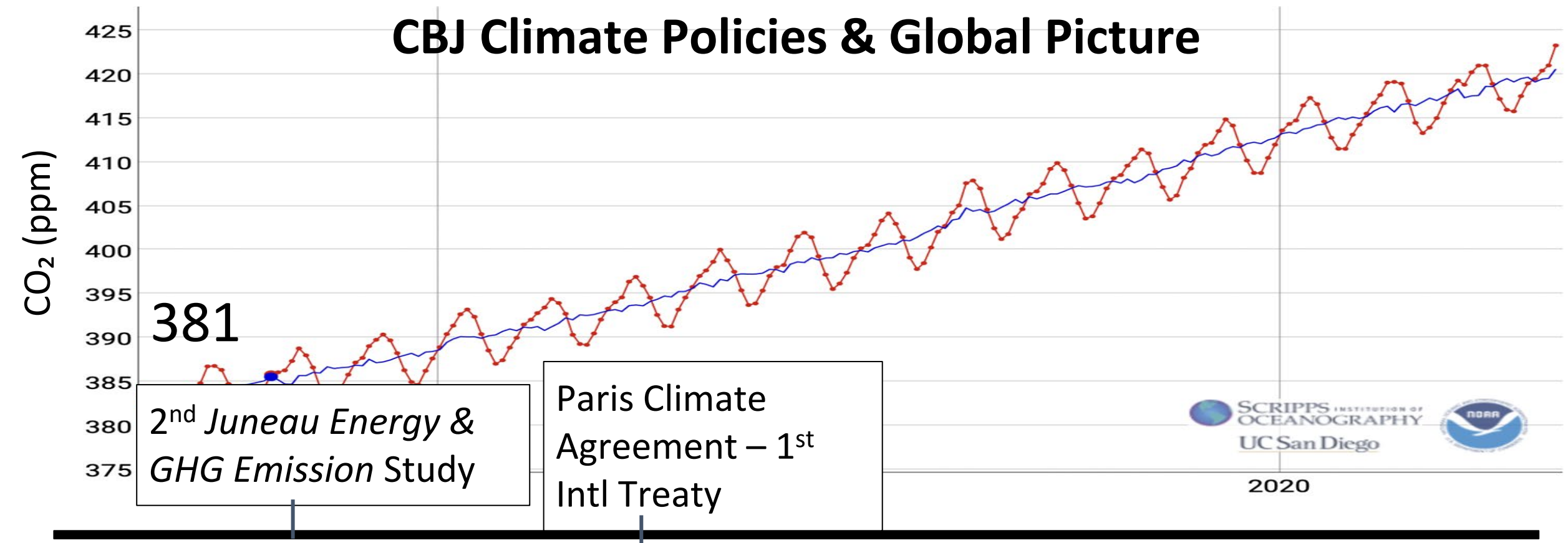
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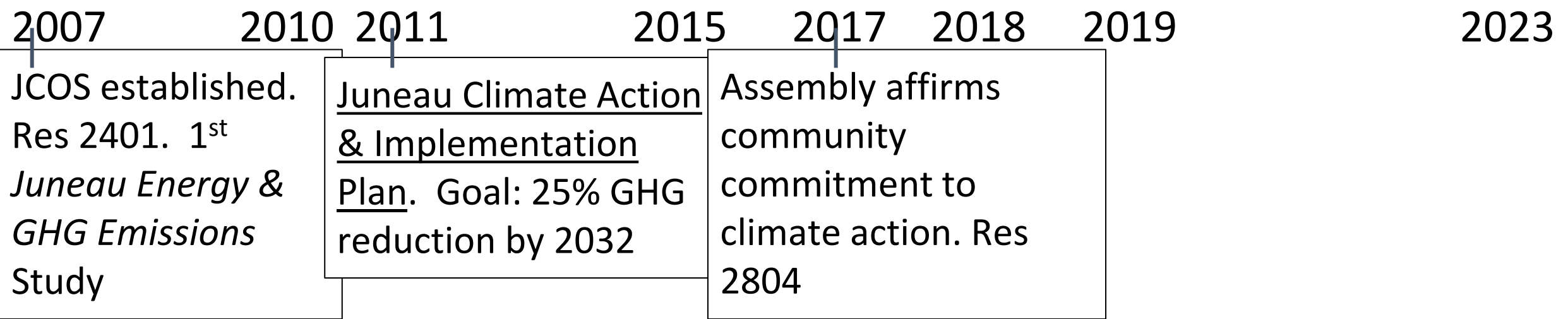
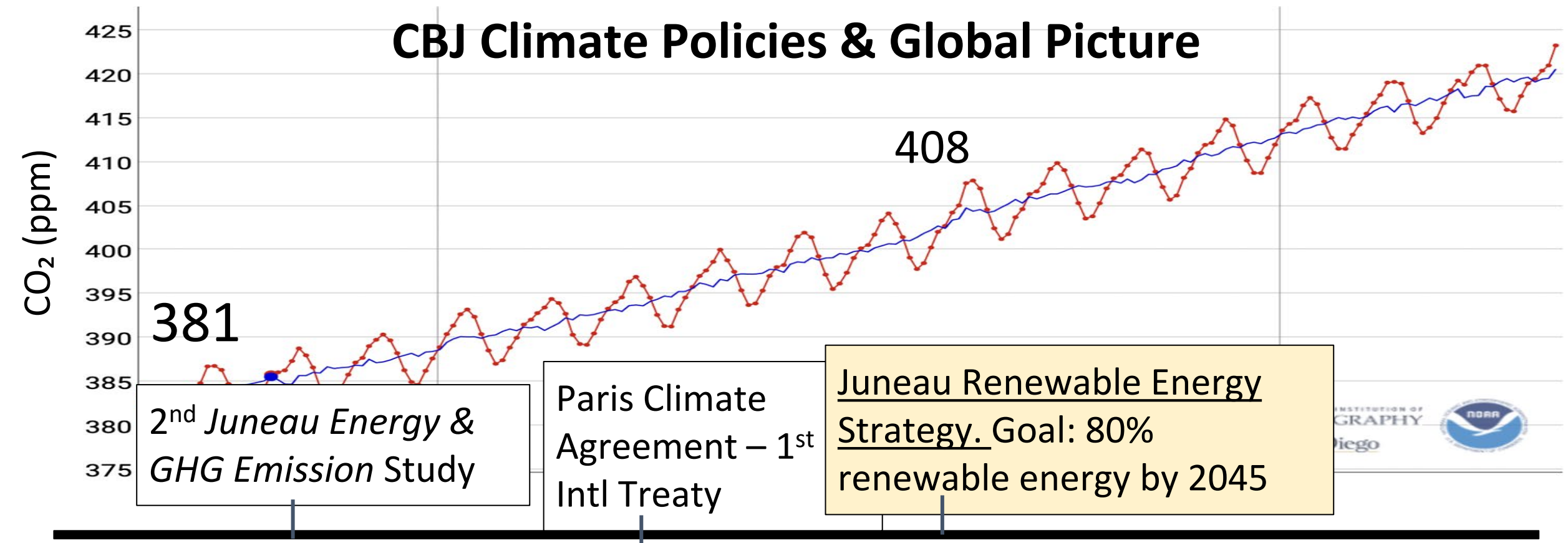
Juneau Climate Action & Implementation Plan. Goal: 25% GHG reduction by 2032



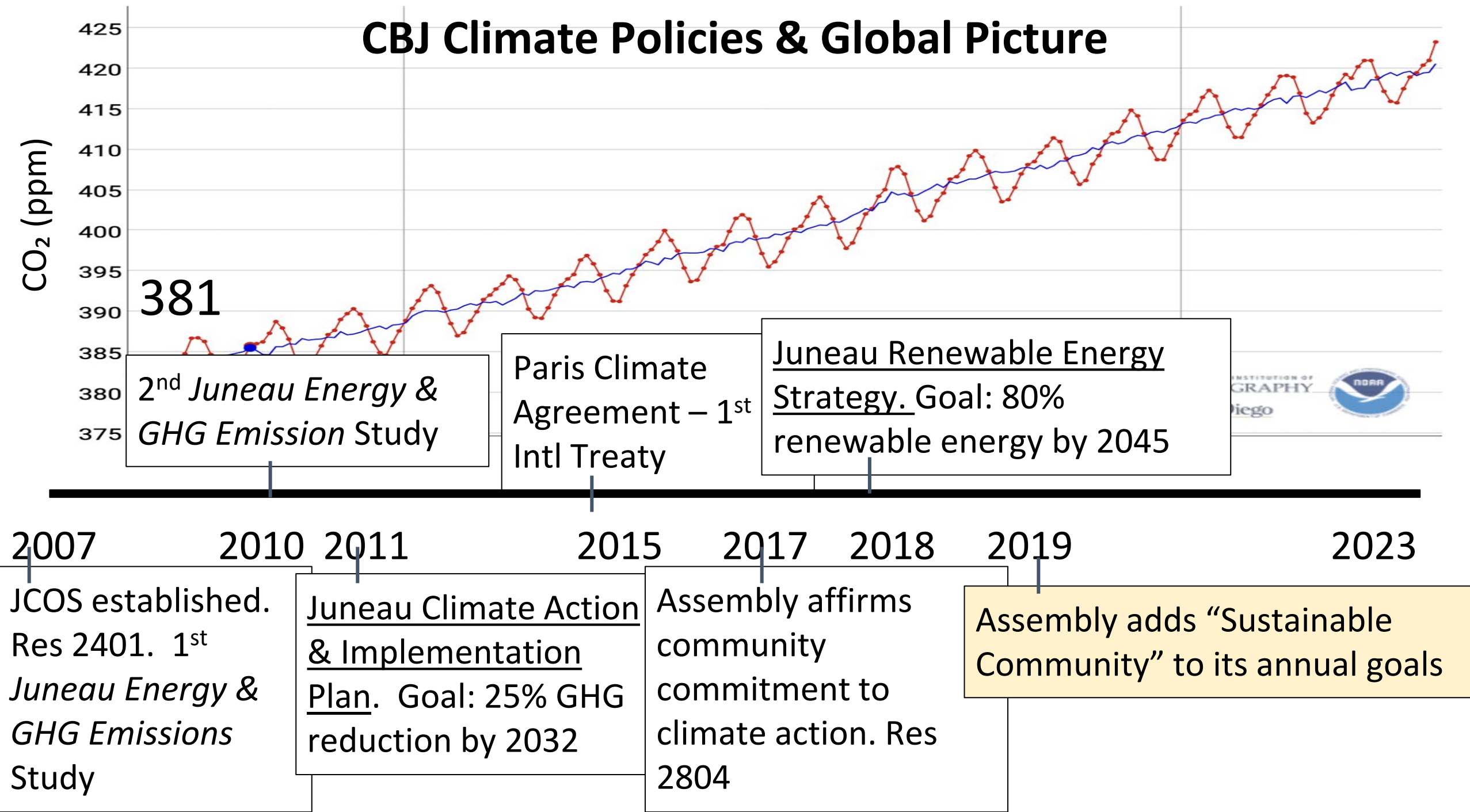
CBJ Climate Policies & Global Picture



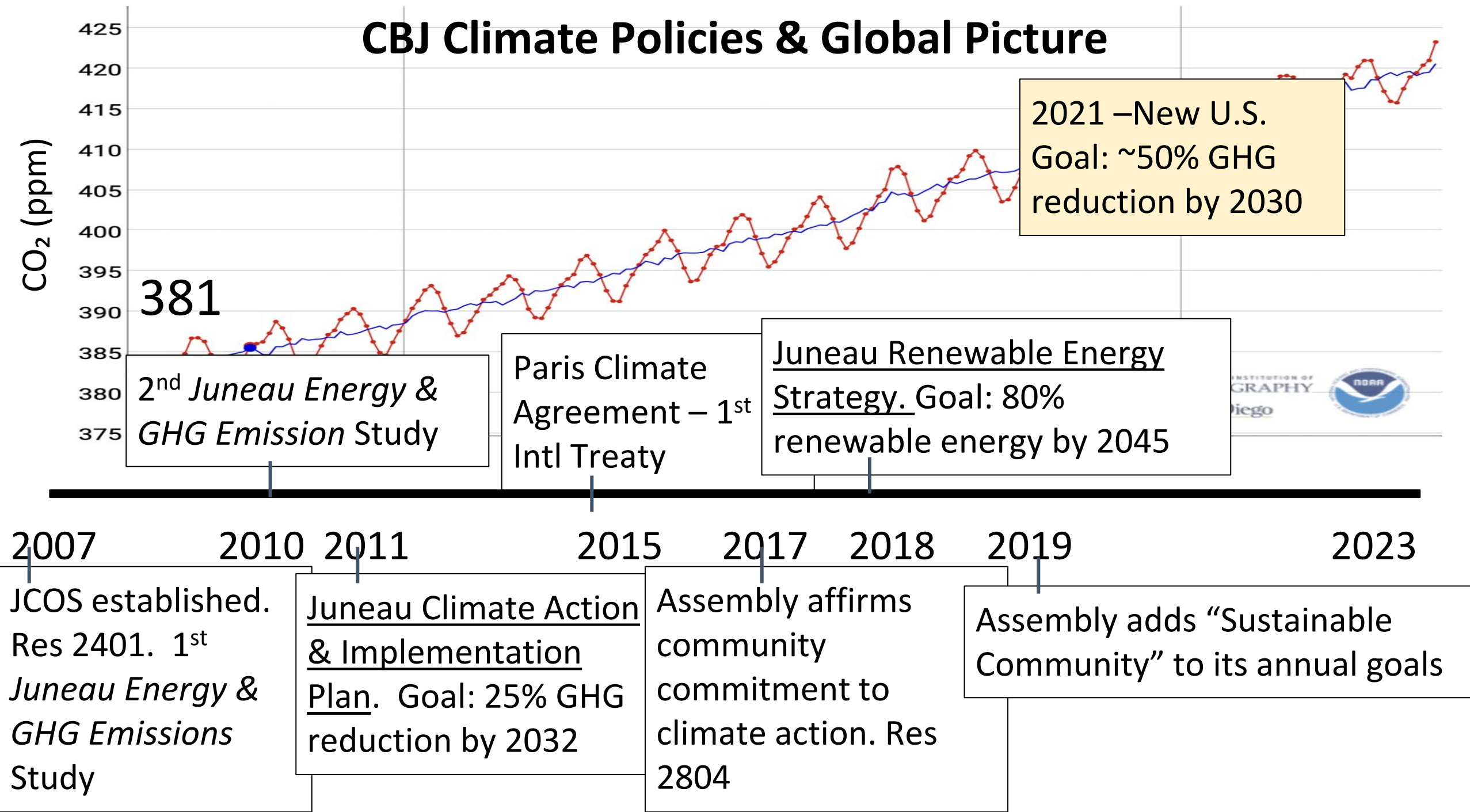
CBJ Climate Policies & Global Picture



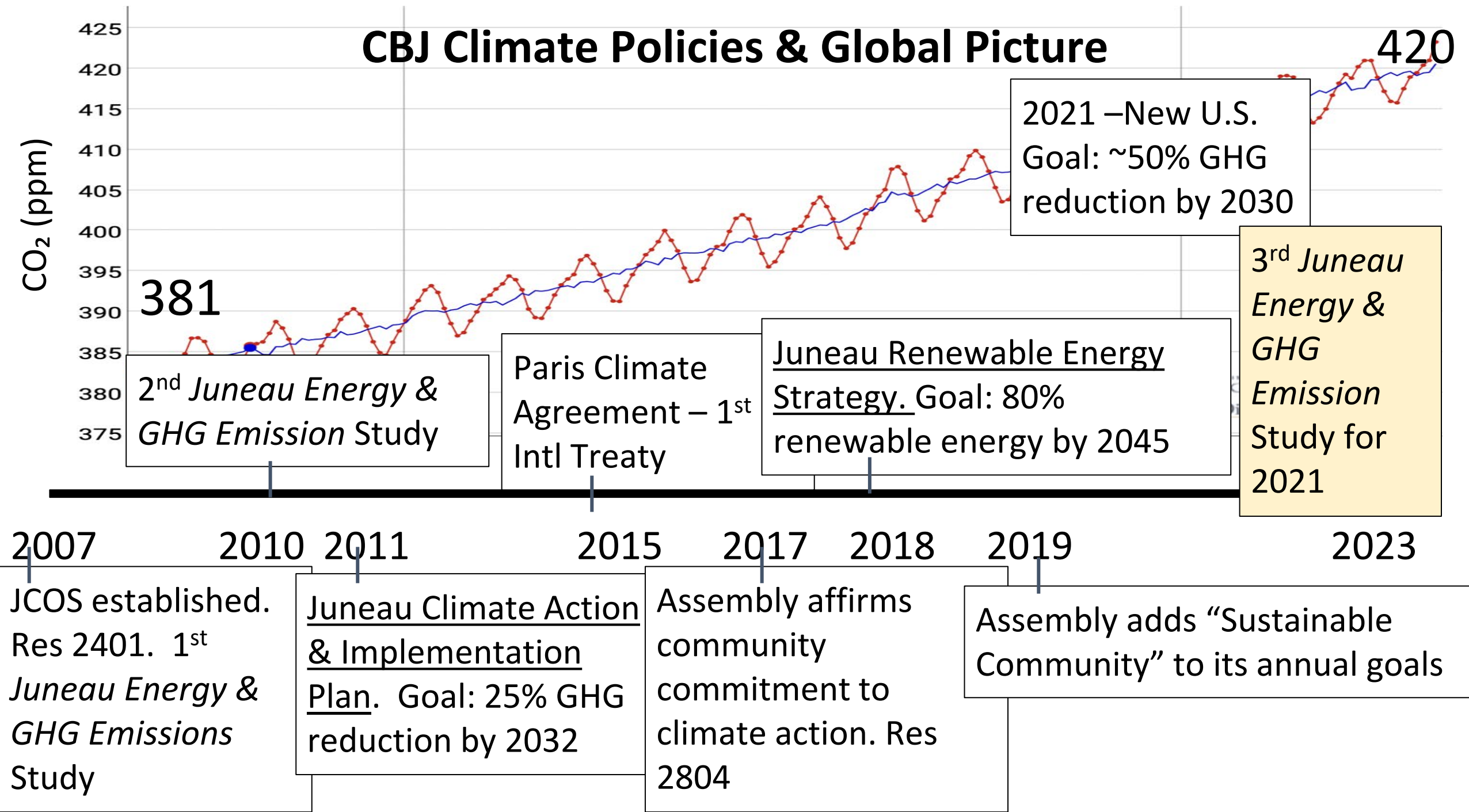
CBJ Climate Policies & Global Picture



CBJ Climate Policies & Global Picture

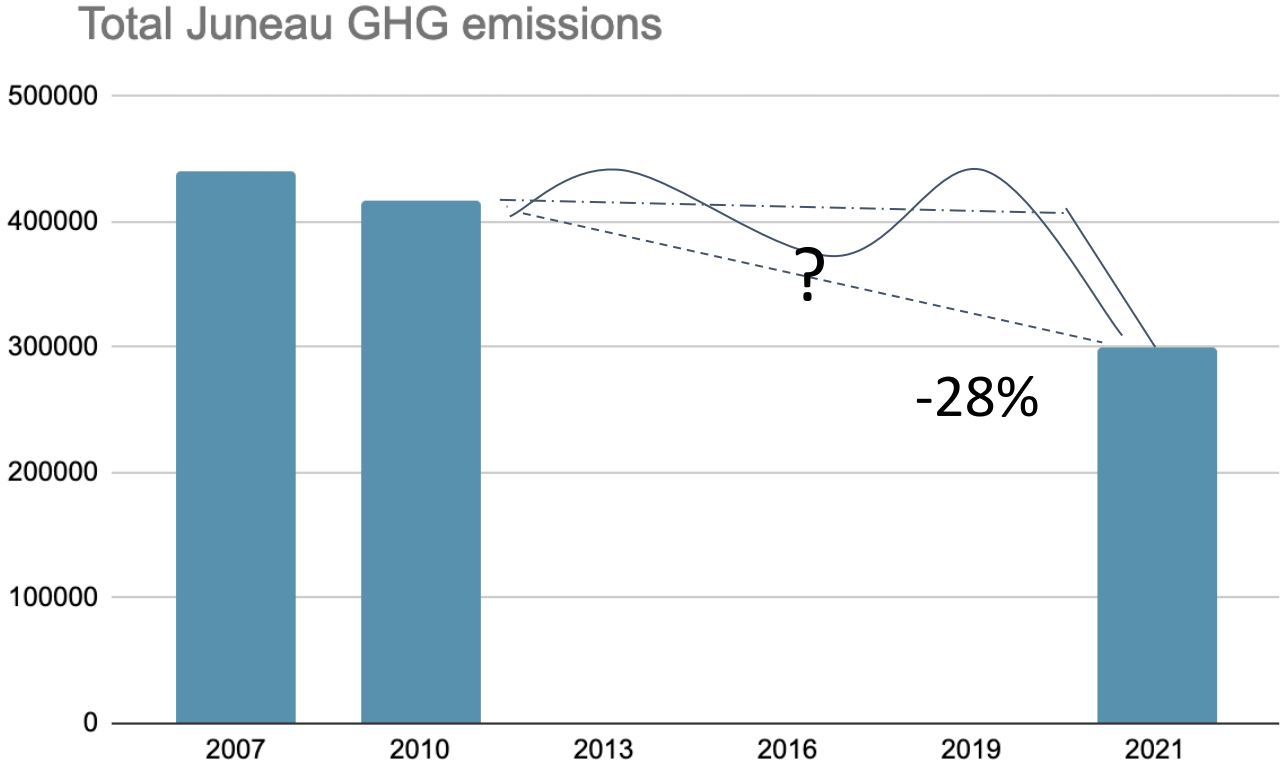


CBJ Climate Policies & Global Picture

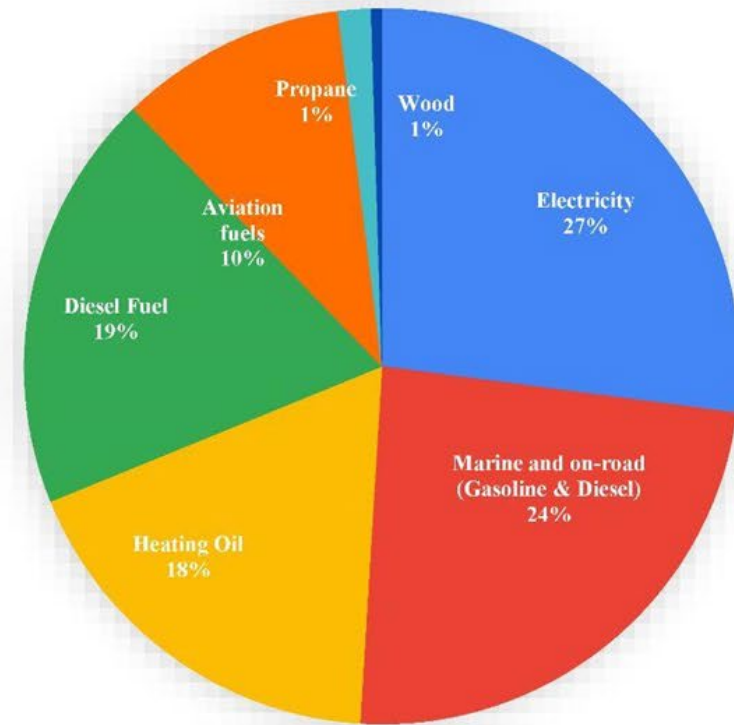
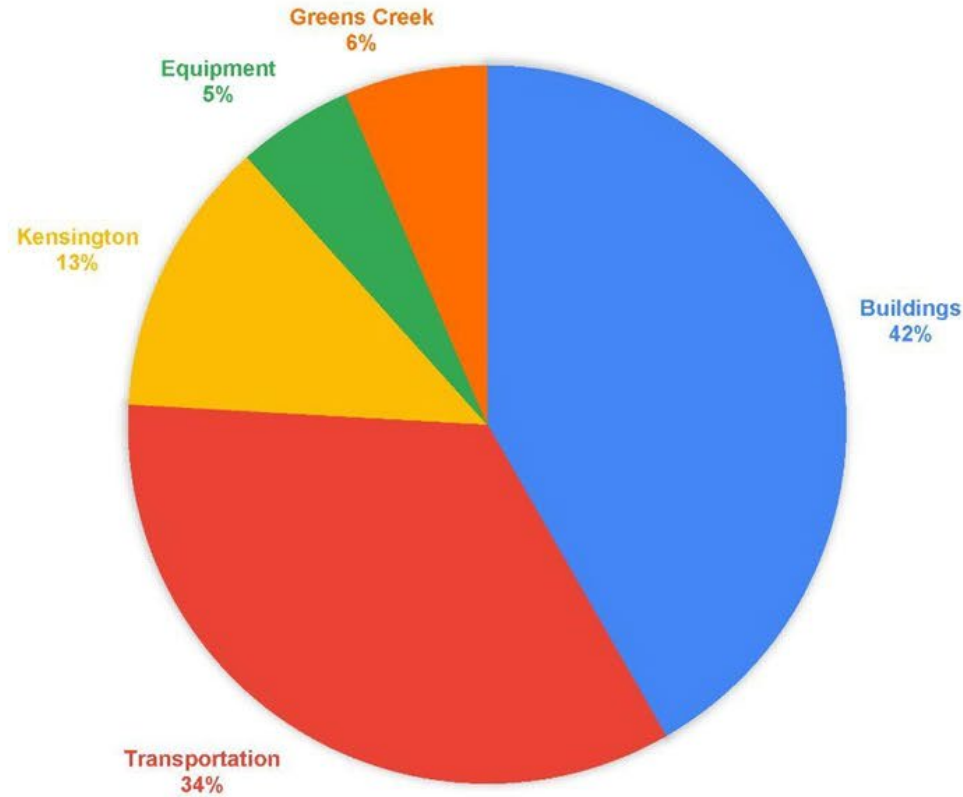


2021 Energy Use & Greenhouse Gas Emissions Inventory for Juneau, Alaska

DRAFT • Public Review until June 16, 2023



Community wide Energy (MMBtu) 2021



- Electricity
- Heating Oil
- Air (Ave Gas & Jet Fuel)
- Wood

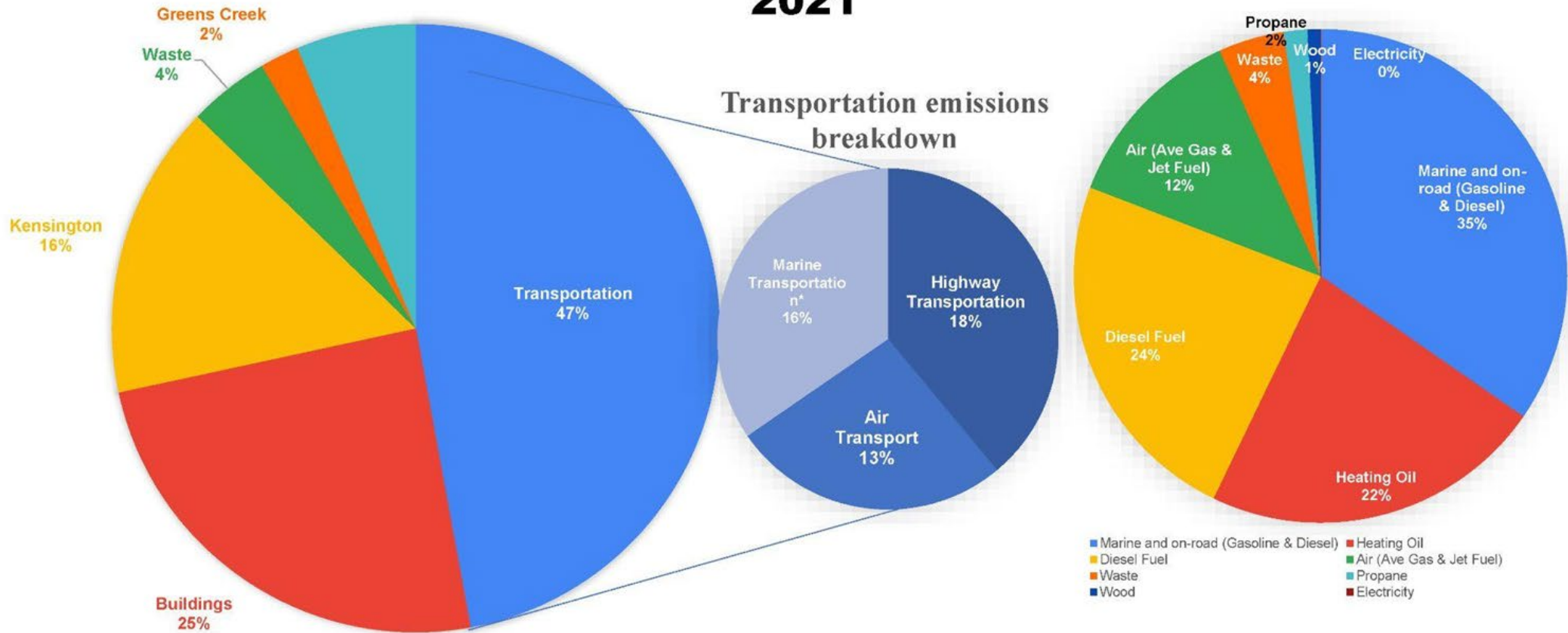
- Marine and on-road (Gasoline & Diesel)
- Diesel Fuel
- Propane

Juneau consumed 5.3 million MMBTU of energy



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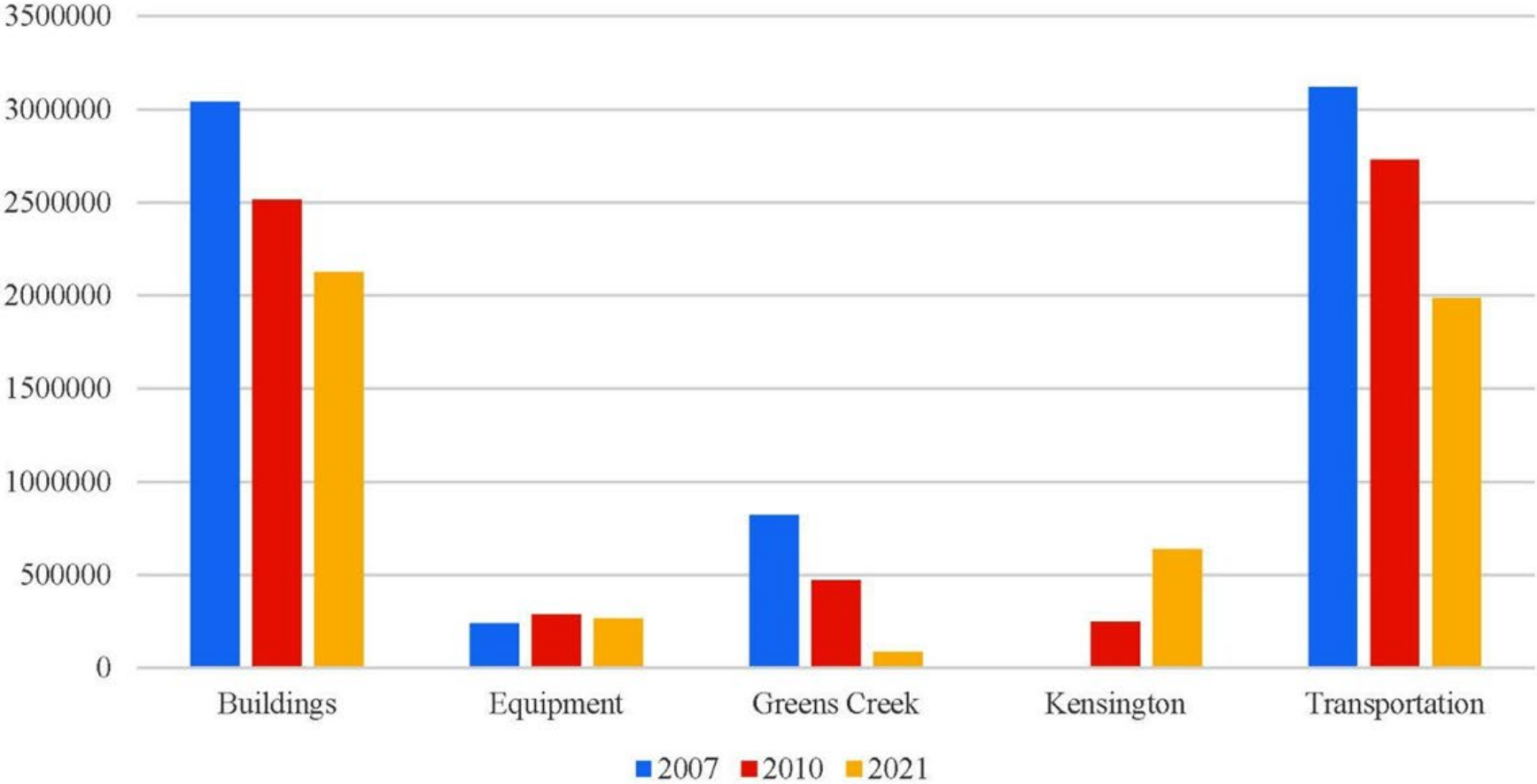
Community wide Emissions (MT CO₂e) 2021



Juneau released almost 299,965 MT CO₂e in 2021

Changes in Juneau's Energy Use by Sector | 2007-2021

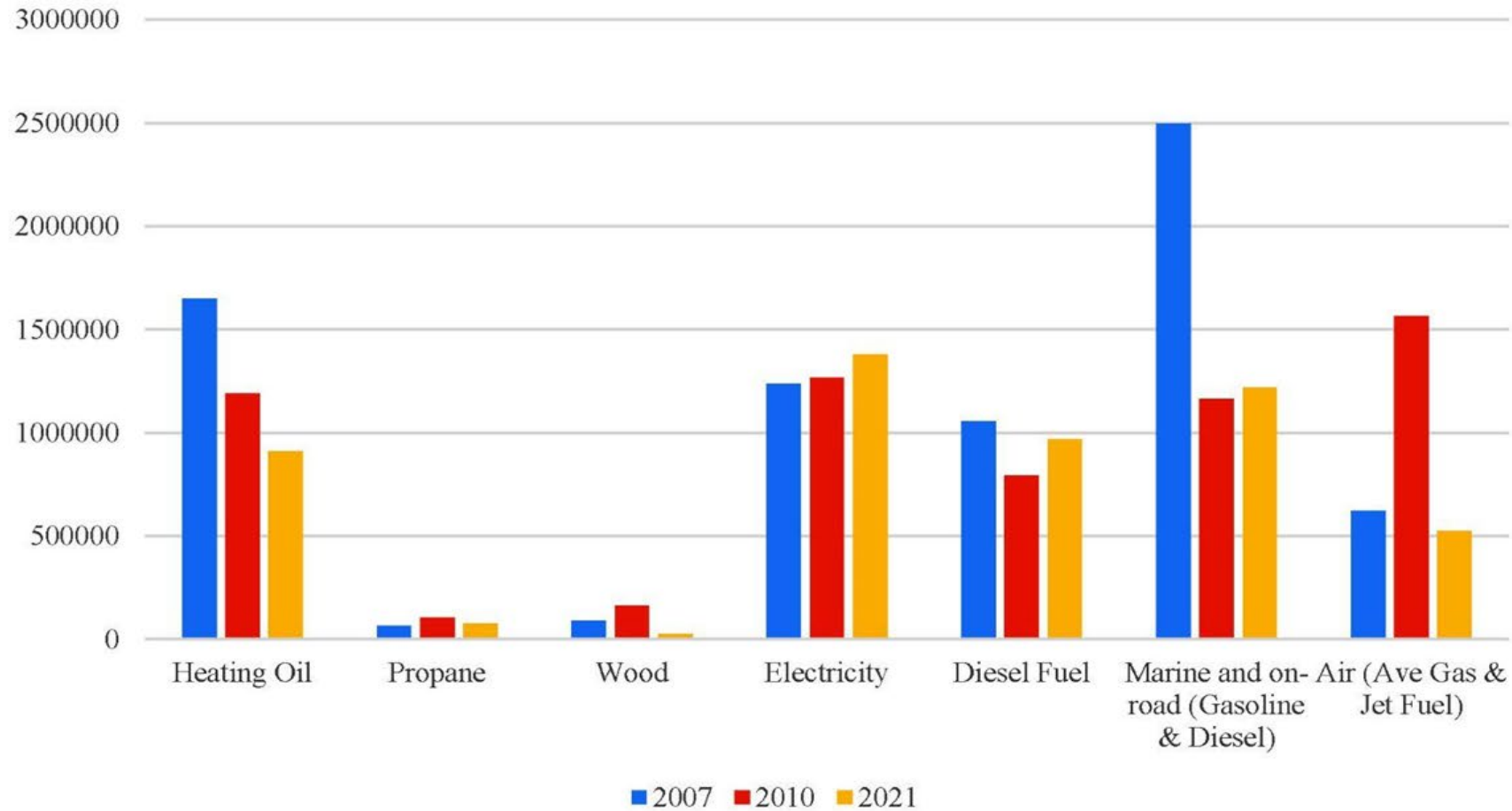
Energy changes by sector



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Changes in Juneau's Energy Use By Source | 2007-2021

Energy changes by source



Four Ways to Reduce Energy Use & GHG Emissions

More Efficient Use of Current Energy Source

Electrification: Shifting from fossil fuels

Reduce Auto Dependence / Support Infill Development

Composting Organic Waste



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Where are we?

CBJ Energy Management

Assembly Goal 3F: “Maintain Assembly focus on deferred maintenance including BRH and JSD” (these are the 2 largest CBJ carbon emitters)

Oct **2020 bond** funded energy efficiency upgrades to city facilities

Current/future projects - estimated 18% fuel reduction in next 5 years (General Gov’t facilities)

CBJ Fleet– at least 5 passenger vehicle EVs

Capital Transit – charging & bus barn upgrades; 7 Gillig elec. buses in late 2024

CBJ Energy Management...cont'd

CBJ Staff Estimates of Energy-related Work

- Grant Writer – new position in 2023 to seek federal funding
- Eng & PW – FTE
- Maintenance/Parks & Rec – 0.25 FTE
- Docks & Harbors - 0.10 FTE
- Tourism Manager - 0.15 FTE

Where Are We? Juneau Housing & Buildings



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Housing & Buildings...cont.

Housing

Lower Income Housing – EE upgrades & heat pumps (AK Heat Smart)

Low Income Houses - 38 heat pumps (Juneau Carbon Offset Fund)

All Incomes Housing - heat pumps in almost 2,000 Jnu homes

Rental Housing

Market Place

Local Jobs



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Where Are We? Transportation



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Where Are We? Transportation

Assembly Goal 5C: support public EV charging network

700 EV's. And used model resales provide lower-cost entry

33 Public EV Chargers thru public-private collaboration

AEL&P EV Rates

Federal DOT EV Charging Grant



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Transportation...cont'd

Lead by Example – CBJ Gillig electric buses in service by 2025

Assembly Goal 4C: Explore subsidizing transit & eliminating fares

Electric Bus Circulators Downtown – completion fall, 2023

Franklin & City Docks – electrical transformers for cruise ship shore power



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Composting Juneau's Organic Waste



**JUNEAU
COMPOSTS**
COMMUNITY ORGANICS RECYCLING

1,409,811 pounds of food scraps diverted from the landfill!

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Composting Juneau's Organic Waste

Assembly Goal 5A: Develop a zero waste reduction plan

Municipal Composting Facility - grant funding

Zero Waste Subdivision

FY24 Staff Work



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What's Next? JCOS Recommendations

Continue and Accelerate Existing Activities

Actions...1-9

New Near-Term Activities

Actions...10-15

Further Down the Road

Actions...16-17



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Continue and Accelerate Existing Activities

Action 1: Update *Energy & GHG Emissions* Analysis for 2022 & 2023

Action 2: Incorporate climate/energy priorities in CIP and budget

Action 3: Support community transit and consider subsidized fares.

Action 4: Implement bike and pedestrian improvements

Action 5: Expand public EV charging network

Continue and Accelerate Existing Activities...cont'd

Action 6: Complete electrification of CBJ docks by 2025.

Action 7: Incorporate energy efficiency & electrification into affordable housing actions.

Action 8: Partner with and support programs conducting outreach and incentivizing energy efficiency & electrification.

Action 9: Lead by example on CBJ building performance.

New

Near-Term Activities

Action 10: Develop financing options to accelerate building and transportation energy efficiency & electrification.

Action 11: Update Juneau climate target to meet national goals: 50% reduction in GHG pollution by 2030?

Action 12: Adopt a zero emission municipal fleet policy. Commit to complete transition by 2030 for all vehicle uses with viable zero emission makes and models.



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New Near-Term Activities...cont'd

Action 13: Assist in procurement of electric school and shuttle buses. Commit to develop a plan by 2025 for full electrification of these bus fleets by 2030

Action 14: Collaborate with businesses, nonprofits and other agencies to acquire EV fleets.

Action 15: Adopt a carbon-neutral operations standard for new municipally-owned and funded buildings.

Activities

Further Down the Road

Action 16: Task CDD/BCAC with adopting up-to-date residential and commercial building energy codes.

Action 17: Task CDD with developing a voluntary stretch code for carbon neutral building construction, and a related information program for permittees.



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Conclusions

- Keep Measuring Juneau's Progress
- Continue & Accelerate What's Working
- Find Ways to Finance Clean Energy
- Lead by Example: CBJ Energy Management
- Collaborate and Support efforts by Others
- Celebrate Success & Educate the Community



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