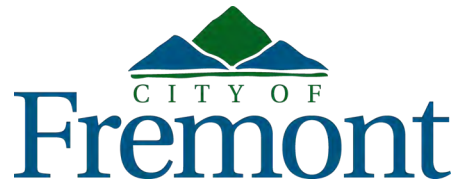




Climate Action Plan Update 2021

Climate Talks - Day 5

Green Business and Market Innovation



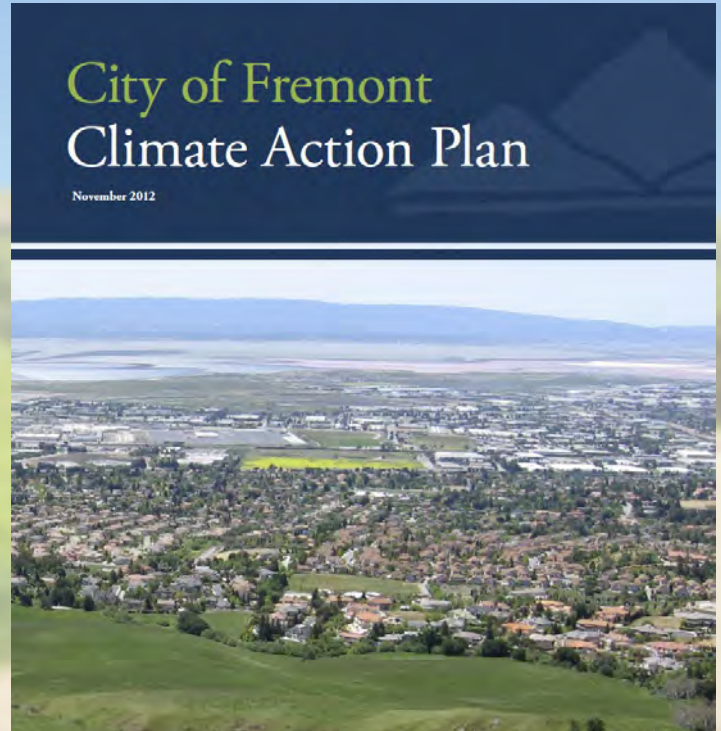
Agenda

Introductions and CAP Process Update	20 minutes
Brief Remarks from Panelists	10 minutes
Questions from the Chat	5 minutes
Community Discussion	20 minutes
Consider.it Platform Overview and Closing Remarks	5 minutes

- Please be respectful during the discussion.
- Chat box: Voice your questions, concerns, and ideas in the chat box. We ask that you stay on topic and try to be concise.
- **If you would like to speak during the discussion, click “Raise Hand” on bottom of Zoom interface or *9 for phone callers.**

Introduction to the Climate Action Plan

- Roadmap for specific activities a city will undertake to reduce greenhouse gas emissions.
- Fremont's 1st CAP adopted in 2012
- CAP 1.0 goal of 25% GHG emissions reduction by 2020
- Now that it's 2021, time to update!



2019 Carbon Neutrality Resolution Sets the Stage for CAP Update



By or before 2045

➤ Carbon Neutral City
2030 interim target

➤ 55% emissions
reduction

2045 forward

- “Post-Carbon Community
Framework”
- ✓ 4 Overarching Values
 - ✓ 7 Key Strategies

Post-Carbon Framework Values



**Equity &
Access**



**Efficiency &
Innovation**



**Health &
Wellness**



**Resiliency &
Capacity-Building**

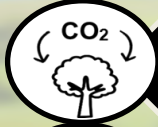
Post-Carbon Framework Strategies



Clean & Renewable Power



Electrification & Fossil Fuel Phase-Out



Carbon Sequestration



Mobility & Connectivity



Resource Conservation & Elimination of Waste

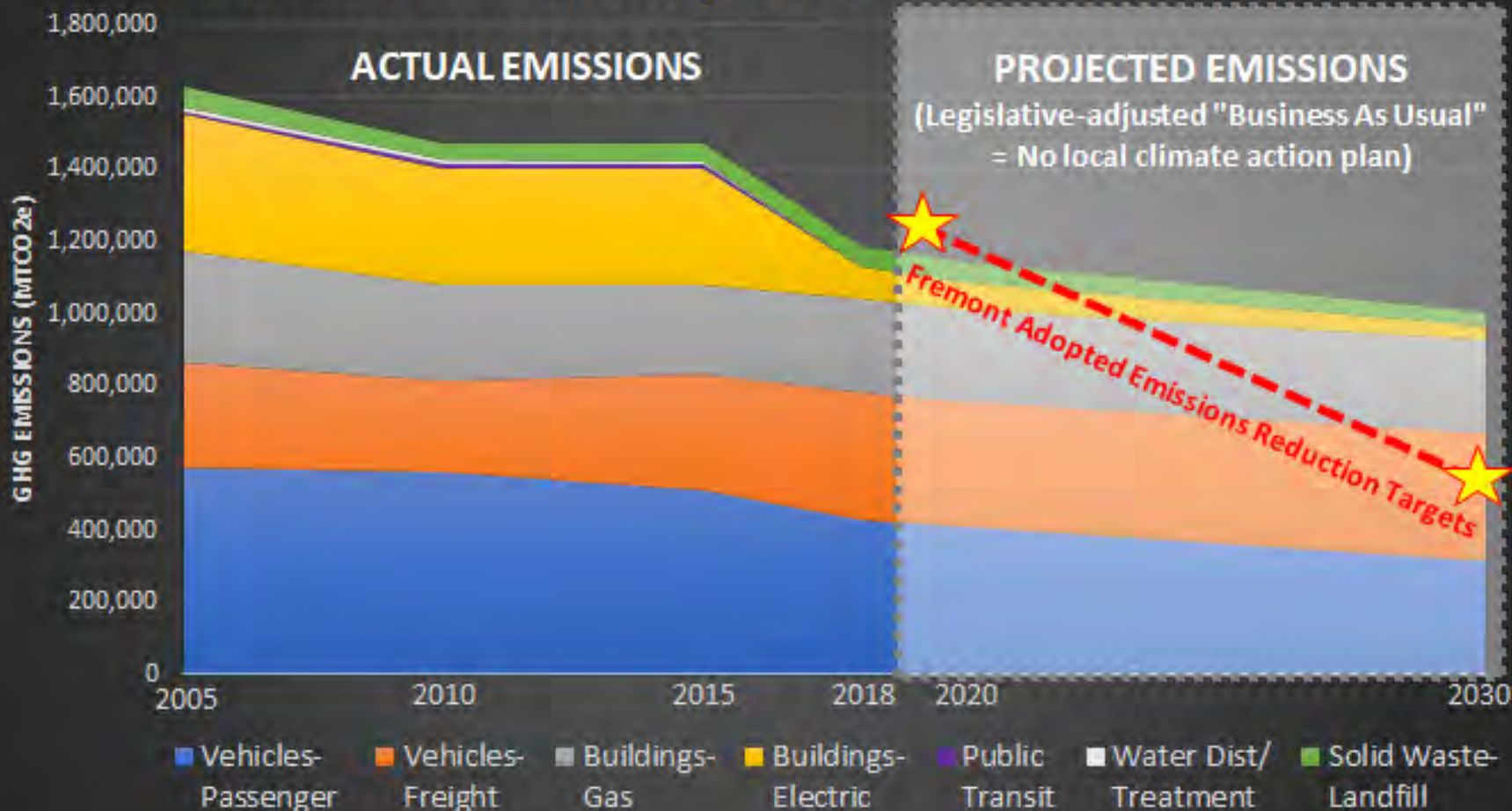


Restorative Ecology & Green Infrastructure



Climate Adaptation & Resilience

Fremont Community-Wide GHG Emissions



Closing the Gap through Local Action

- local ordinances
- city building and zoning codes
- incentive and recognition programs
- infrastructure and upgrades
- regional collaboration
- state and federal policy advocacy
- funding mechanisms



Collaboration is Key

Local Government



Partner Public Agencies

Community Members

Community Outreach

- **Virtual Community Workshops**

- Workshop #1: Visioning a Sustainable Future (Sept 22)
- Workshop #2: CAP Climate Talks Week (Feb 1-5)
- Workshop #3: Resilience, Equity, & Community Connections

- **Outreach to key community sectors**

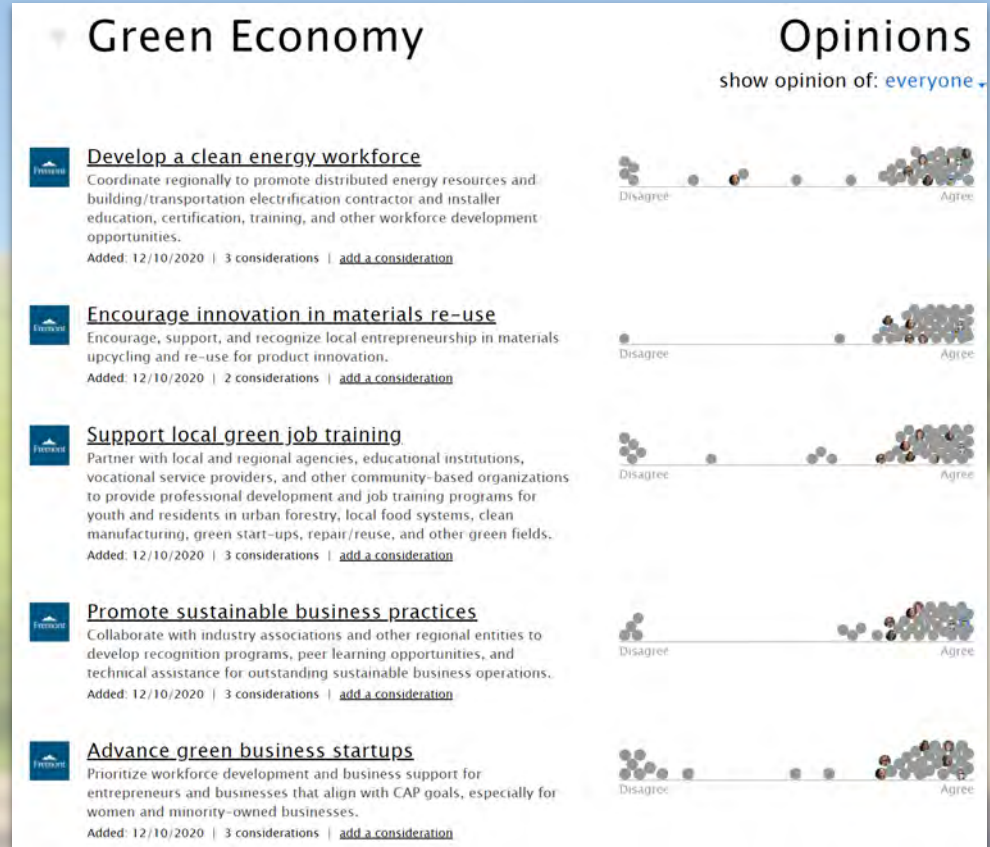
- Youth, Seniors, Environmental Organizations, Faith-Based & Cultural Organizations, Neighborhood Associations, Small Business, Industry, Energy Utilities, etc.

- **Online polling/surveying: www.Fremont.gov/CAPConsiderIt**

Consider.it Community Forum

[Fremont.gov/CAPConsiderIt](https://www.fremont.gov/CAPConsiderIt)

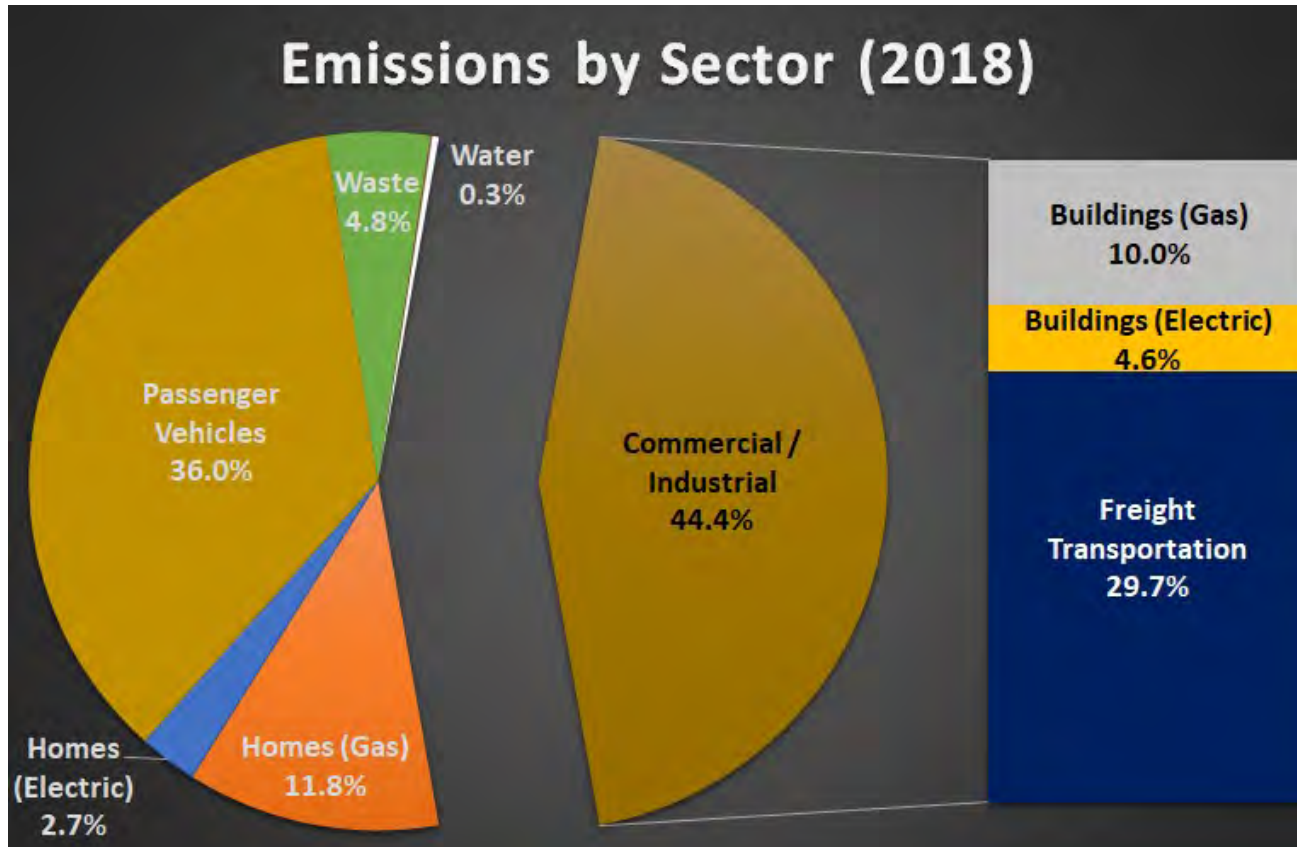
- Open through mid-Feb
- Participants can comment, add CAP measure ideas, and respond to others
- Can adjust view to see opinion of various stakeholder groups



Climate Talks Day 5: Green Business and Market Innovation



Business Activities = 44% of Fremont's Emissions



Getting to Zero Emissions in the Business Sector

Energy Efficiency & Innovation

- High efficiency and innovative / adaptive design

Zero Carbon Electricity & Energy Storage

- On-site renewables & GHG-free grid energy
- Back-up clean energy storage for increased resiliency

Low Carbon / No Pollution Manufacturing

- Electric processes (when possible) and biofuel, hydrogen, and/or synthetic gas in place of fossil gas

Zero Emissions Medium/Heavy Duty Fleet

- Battery electric and hydrogen fuel cell vehicles
- Robust EV charging infrastructure

Low Embodied Emissions

- Lifecycle emissions of production & materials

Robust Materials Reuse / Circularity

- Shift from “cradle to grave” to “cradle to cradle”



Fremont Economic Development

Our Mission

Foster business activity and investments in Fremont that lead to a higher quality of life for our residents by facilitating the creation of good jobs, a thriving environment for businesses of all sizes, and a financially healthy government to support City services.

Think
Fremont
Think Silicon Valley



Fremont is the "Hardware Side of the Bay"

SILICON VALLEY TECHNOLOGY INFRASTRUCTURE

Silicon Valley's thriving technology ecosystem is represented by major anchor companies claiming different parts of the region as home base.

In Fremont's case, it's Tesla Motors – an advanced manufacturing icon.



Where Innovation Takes Place in Silicon Valley

Silicon Valley 1.0



Hewlett-Packard Garage
Historic Landmark

Today



Exterior of Hyundai's flying electric
passenger drone manufacturing
center in Fremont

Fremont's Growth Industries



ADVANCED MANUFACTURING

- In Silicon Valley speak, Fremont is the "Hardware side of the Bay"
- We're home to over 900 advanced manufacturing companies, representing 1 in every 4 jobs.
- Includes companies like Lam Research, Synnex, Quanta Computer, and Mattson Technology



LIFE SCIENCES

- Fastest growing sector in Fremont and highest concentration of firms
- Sector ranges from scrappy startups to industry titans
- Many companies have pivoted to aid in the COVID-19 response
- We continue to have new company investment during SIP

CLEANTECH/AUTOTECH

- Energy storage and Battery Development continue to concentrate in Fremont
- Tesla is building out world-class battery manufacturing plant in Fremont
- Startups like Enovix are designing and manufacturing next-gen battery technology
- Auto-tech & AV growth including Lucid, Waymo, Hyundai, Pony.ai, & ZOOX



A National Leader in Clean Tech



Warm Springs Innovation District

- 4,000 housing units and up to 20,000 jobs adjacent to regional transit



FREMONT
INNOVATION
DISTRICT

Private Sector Sustainable Developments



- LEED Silver
- 1 MW rooftop solar system
- Indoor water recirculation + Rainwater harvesting
- High efficiency natural/LED lighting



- LEED Platinum
- 620KW rooftop solar array + 500KW bi-facial parking array system
- Rainwater harvesting, geothermal heat exchange

Sonic Manufacturing: America's 1st ZNE Manufacturing Facility

- Retrofit of 80,000 square foot manufacturing facility over 30 years old
- 18-hour, 7 day per week operation
- 1.7 MW solar solar system
- Window, lighting, HVAC retrofits
- Total investment: \$3.5M; 5-year payback w/ \$1.1M tax credit
- Property market valuation increased \$6M





David Ginsberg, vp of
Supply Chain



“In order to keep domestic manufacturing competitive, we need to focus on the operating efficiency of our plants. One of the best ways to do that is to save on energy. And while we become more energy efficient, we are improving our environment.”

Fremont's Fire Station Microgrids: Public Private Partnership Model



The Future is Electric!



Electrified Fleets



Electrified Freight



Electrified Buildings

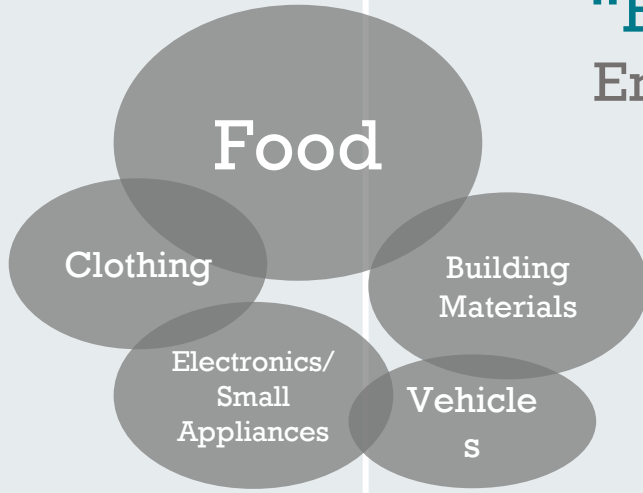
MEDIUM & HEAVY-DUTY (M/HD) EVs



- Work w/CALSTART
- GOAL: “1st mover market” for urban delivery & Class 3-6 zero-emission vehicles by 2030
 - DMV registration data analysis
 - Develop M/HD technical assistance pilot(s)
 - Relationship building: Port, logistics providers, fleet users and operators
 - Prep technical assistance to school districts
 - Prep pipeline for new M/HD incentive program
- External funding opportunities:
 - CEC M/HD Blueprint - applied
 - EPA Brownfields Assessment - applied



“Embodied Carbon/Emissions”
Emissions that occur over materials’
lifecycle, particularly along
product supply chains



Linear Economy

Extract

Produce

Consume

Dispose

Toward a More Circular Economy

Recycle/Compost

Repair

Reuse

Local economic opportunities with fewer overall emissions



Extract

Produce

Consume

Dispose

Local Economic Opportunities: Keeping Dollars in our Communities

- Emphasize local services (over products)
- Localize appropriate supply chains
- Made with renewable energy
 - Electrified, efficient manufacturing with clean grid
- Extend life / close the loop

New tech platforms enable sharing & reverse logistics

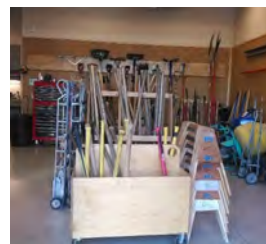
- Sharing, food recovery
- Reuse/repair
- Refurbish/remanufacture/deconstruction
- Local recycling markets

- Renewable resources

Can also sequester carbon

- Agriculture/food
- Building materials
- Textiles

**Community-building
+ economic diversity
= resilience**



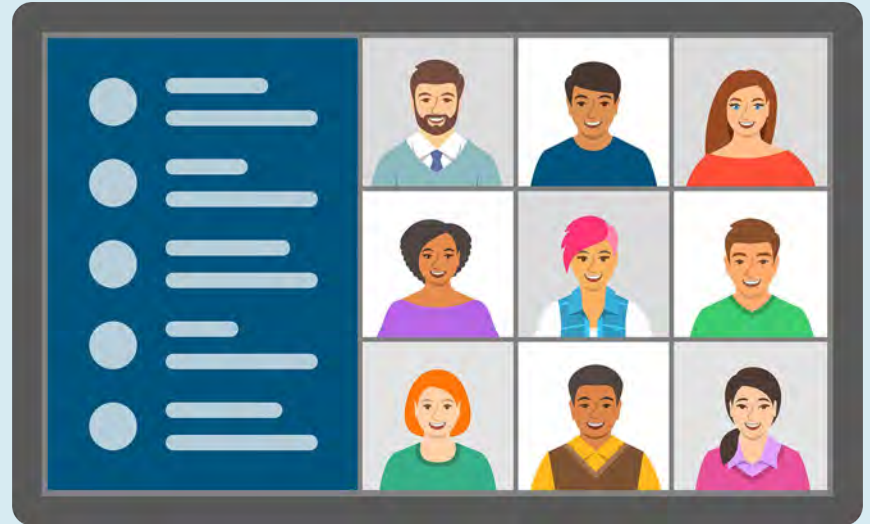
Questions from the Chat

- Type your questions in the chat for the speakers.
- If you would like to voice your question, click “Raise Hand” on bottom of Zoom interface or dial *9 for phone callers



Community Discussion

- If you would like to voice your question/comment, click “Raise Hand” on bottom of Zoom interface or dial *9 for phone callers




Continue the Discussion


www.Fremont.gov/CAPConsiderIt


Green Economy


Opinions


show opinion of: [everyone](#)


 **Develop a clean energy workforce**
Coordinate regionally to promote distributed energy resources and building/transportation electrification contractor and installer education, certification, training, and other workforce development opportunities.
Added: 12/10/2020 | 3 considerations | [add a consideration](#)



 **Encourage innovation in materials re-use**
Encourage, support, and recognize local entrepreneurship in materials upcycling and re-use for product innovation.
Added: 12/10/2020 | 2 considerations | [add a consideration](#)



 **Support local green job training**
Partner with local and regional agencies, educational institutions, vocational service providers, and other community-based organizations to provide professional development and job training programs for youth and residents in urban forestry, local food systems, clean manufacturing, green start-ups, repair/reuse, and other green fields.
Added: 12/10/2020 | 3 considerations | [add a consideration](#)



Please sign up on Consider.it to continue the discussion!

Open through early Feb 2021

CAP Update Project Timeline - Next Steps



Stay Connected

City Website:

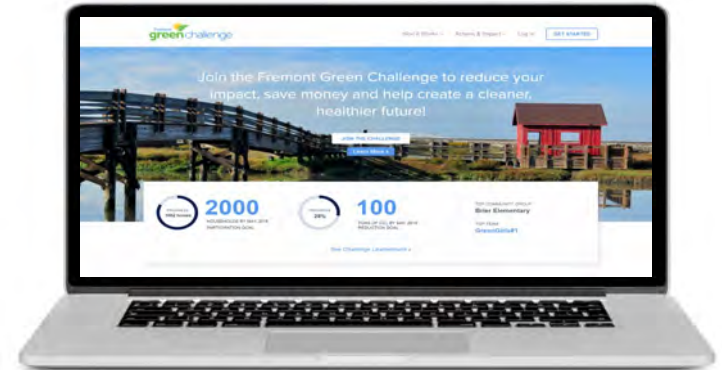
www.Fremont.gov/ClimateAction

Sustainability Newsletter:

www.Fremont.gov/FGCNewsletter

Climate Action Platform:

www.FremontGreenChallenge.org



*Thank
you!*



Rachel A. DiFranco
Sustainability Manager
City of Fremont
RDIFranco@Fremont.gov
(510) 494-4451



Robbie Barton
Sustainability Assistant
City of Fremont
RBarton@Fremont.gov
(510) 494-4519