County of San Diego

GETTING TO ZERO

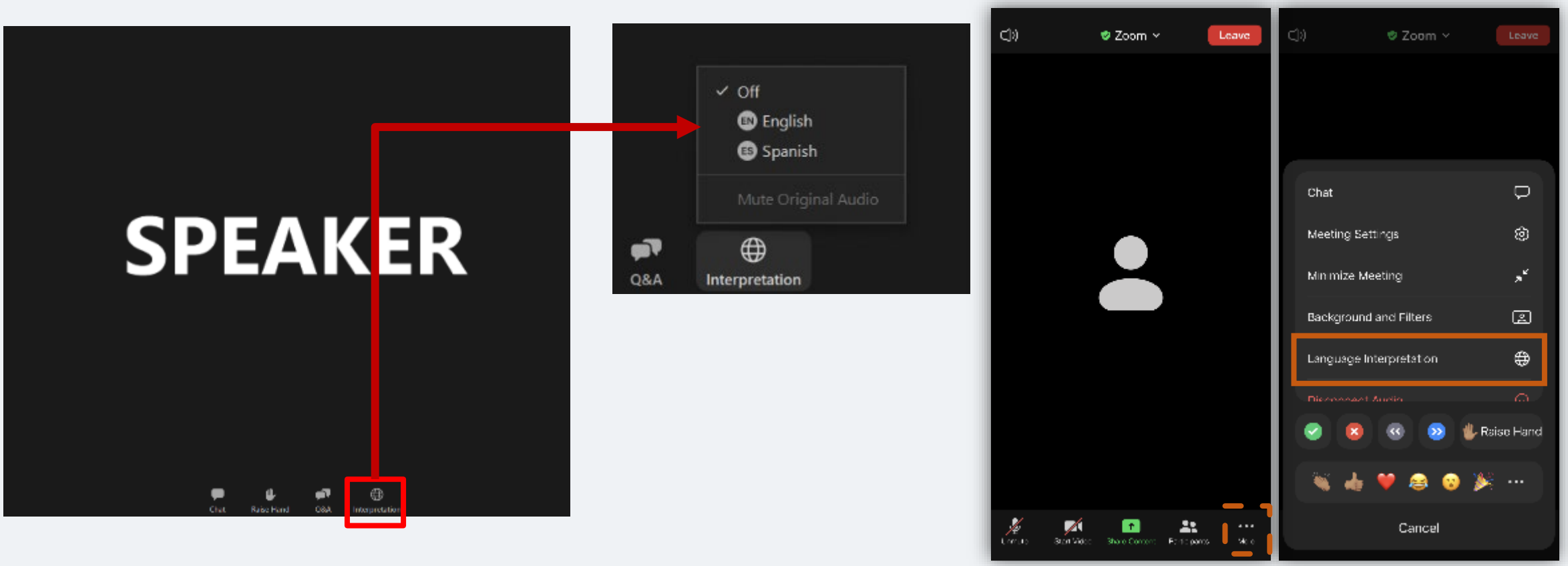
SAN DIEGO COUNTY
REGIONAL DECARBONIZATION FRAMEWORK

Electricity Working Group

Decarbonizing Electricity

September 20, 2022

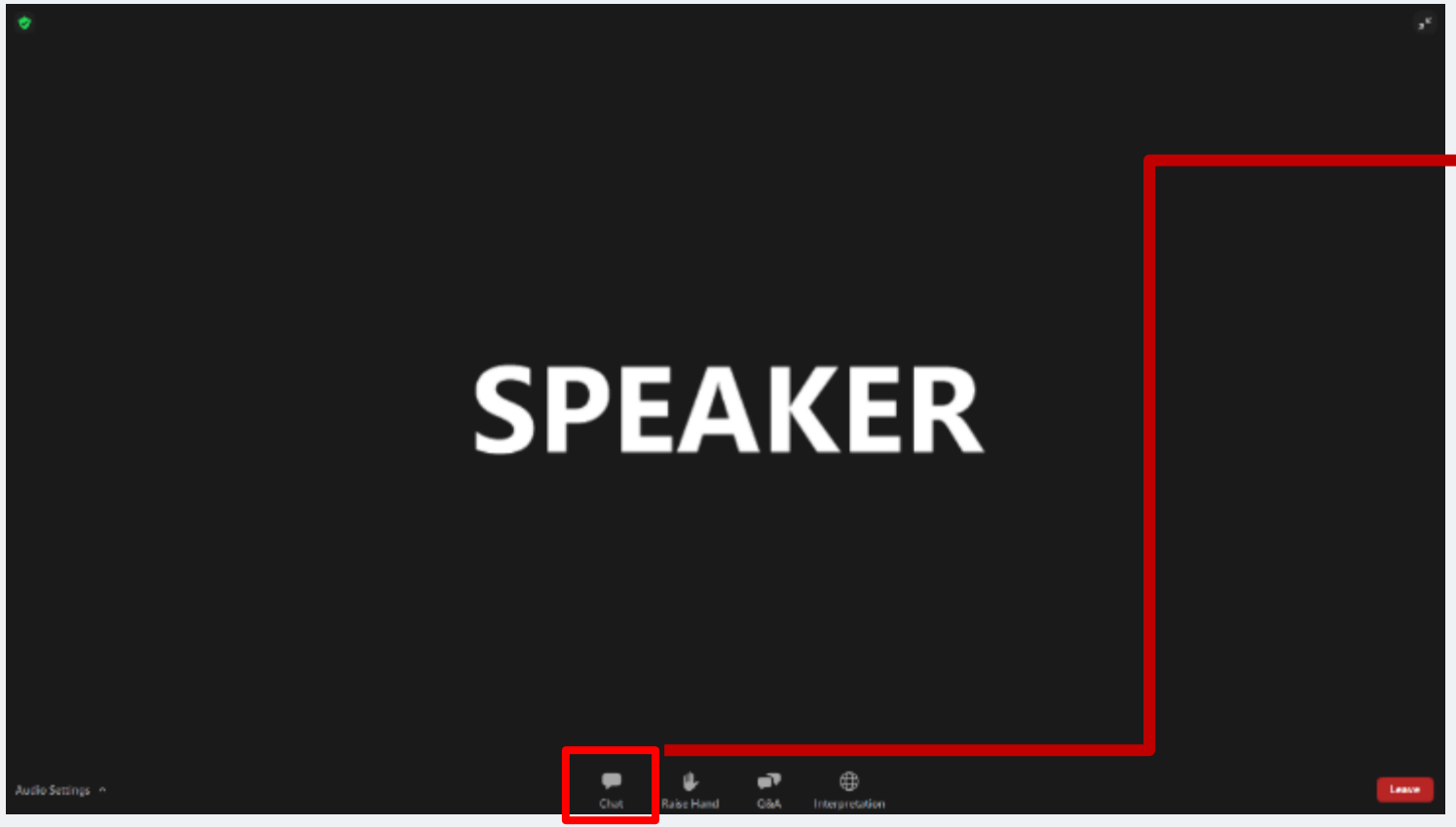
How to use Zoom // *Cómo Usar Zoom*

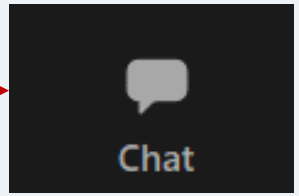


Please select your language of choice (you must select one option)

Debe seleccionar el idioma de su preferencia (Tiene que escoger un idioma)

How to use Zoom // *Cómo Usar Zoom*





Comments and questions can be submitted through the chat window.

Los comentarios y las preguntas se pueden enviar a través de la ventana de chat.

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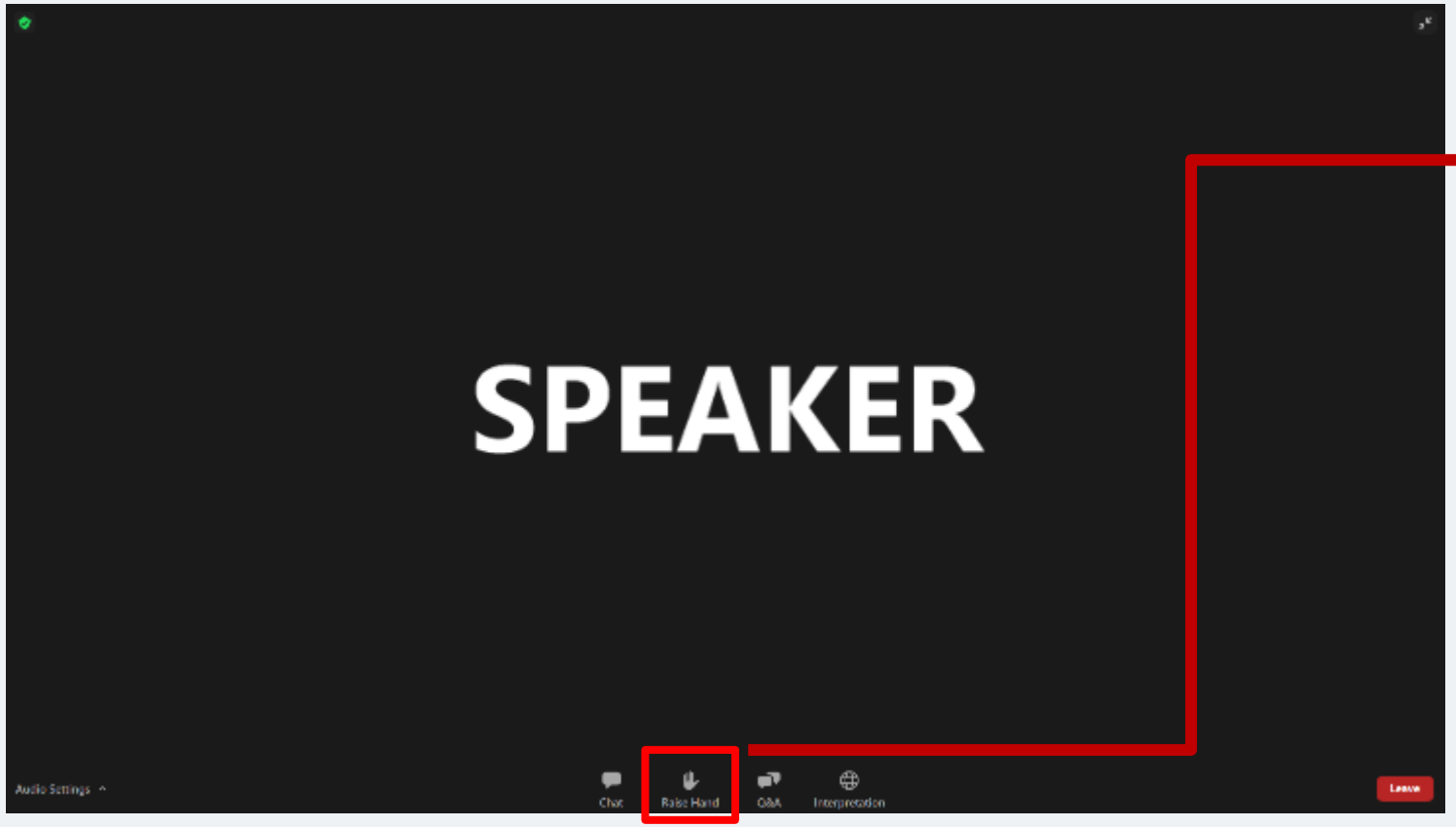
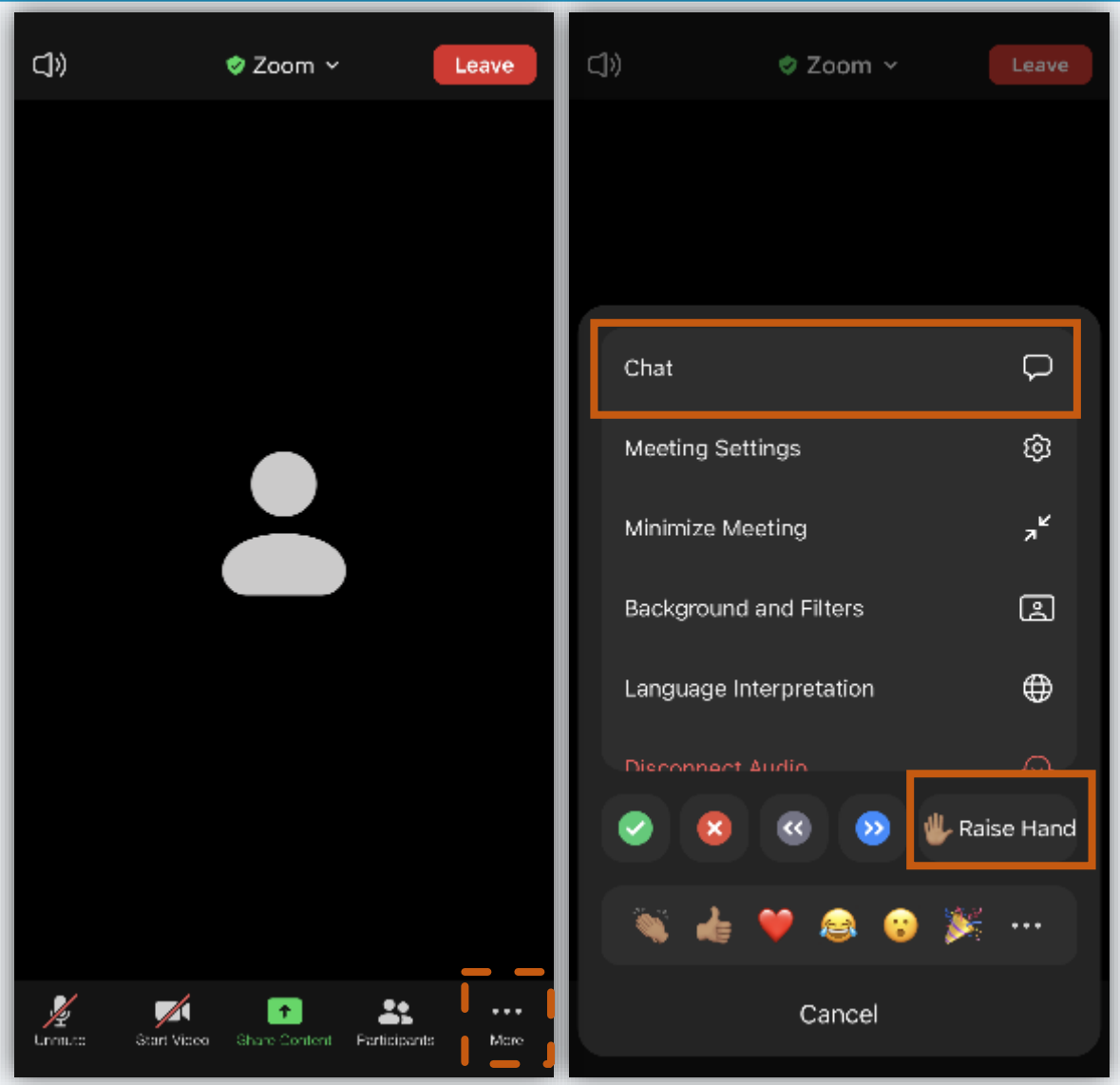


During the discussion, if you would like to speak over the audio, please raise your hand (otherwise questions and comments can be submitted through the Chat window)

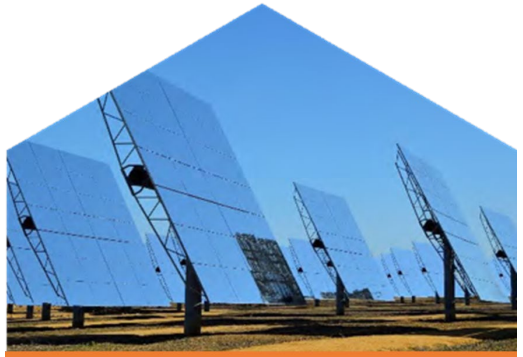
Durante el debate, si desea participar de manera oral, por favor, levante la mano (de lo contrario, las preguntas y comentarios pueden presentarse a través de la ventana de Chat)

On your Phone // *En su teléfono móvil*



Role of Working Groups

BUILDINGS



ELECTRICITY

FOOD SYSTEMS & CIRCULAR ECONOMY

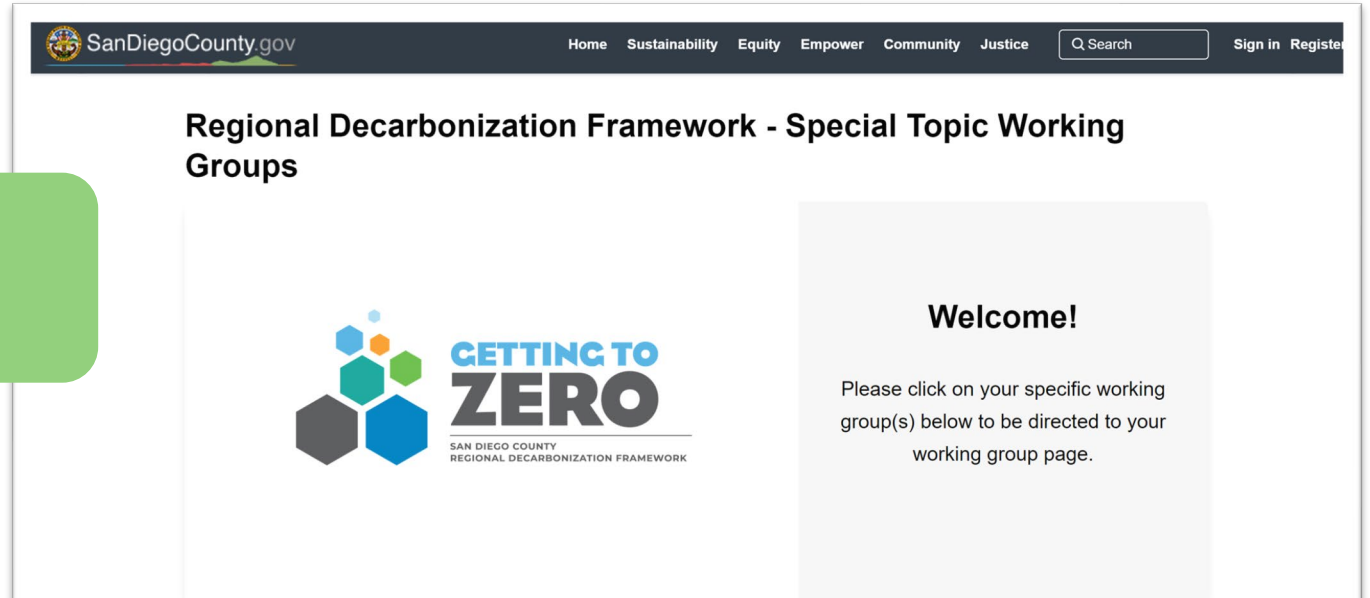
LAND USE & NATURAL CLIMATE SOLUTIONS

TRANSPORTATION

Engagement Portal

- Special Topic Working Group Engagement Portal: https://engage.sandiegocounty.gov/hub-page/working-groups
  - Central area where all workshop materials, agendas, recordings, notes etc. will be stored.
  - Can also access the working group portal through the RDF engagement site
- Only have access to working groups that you have shown interest in via interest form

Questions/Concerns email us at: ZeroCarbon@sdcounty.ca.gov



Today's Agenda

- Introduction to the Implementation Playbook (10 minutes)
- Electricity (90 minutes)
  - Emissions and Strategies to Decarbonize Electricity (5 minutes)
  - Grid Supply Introduction (5 minutes) and Discussion (25 minutes)
  - Customer Supply Introduction (5 minutes) and Discussion (25 minutes)
  - Open Discussion on Electricity Topics **Not** Discussed (25 minutes)
- Closing (5 minutes)

Integrated Regional Decarbonization Framework

Technical Report led by UC San Diego and USD

Completed
August 2022

Workforce Development Study by Inclusive Economics

Completed
August 2022

Implementation Playbook

1st Draft December 2022
2nd Draft February 2023
Final by Spring 2023

www.sandiegocounty.gov/RDF

Implementation Playbook

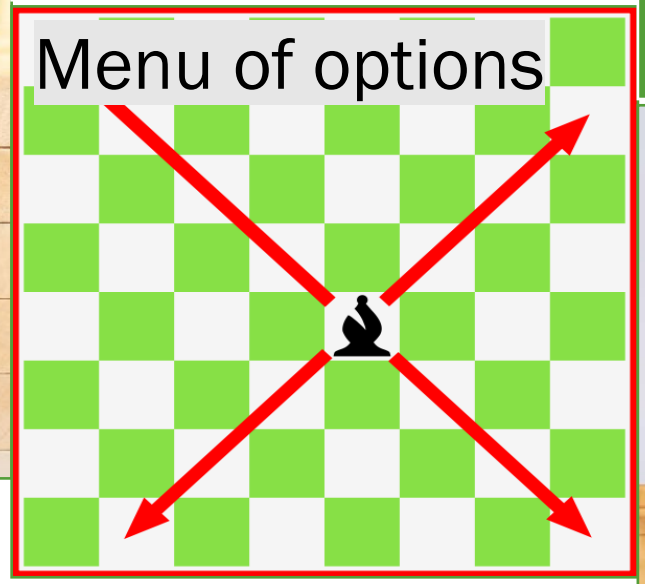
All measures in Climate Action Plans

Voluntary

Accessible

Best in class for each topic

Menu of options



Public or private organizations

Implementation Playbook: Level of Approach

Organizational Operations

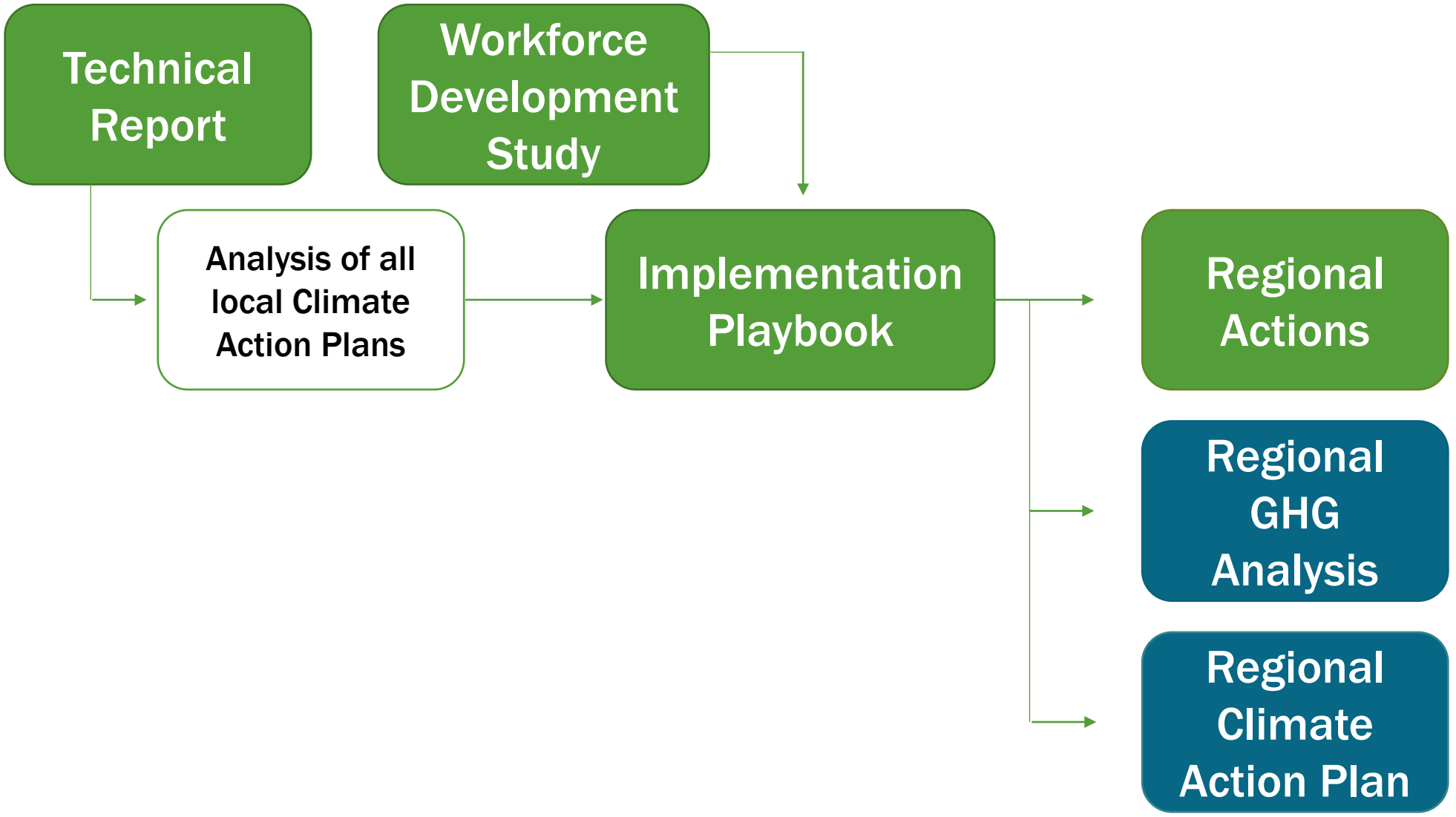
Community

Region

What we need from you….

1. In your experience what has worked or not worked in terms of existing policies?
2. What programs could benefit underserved communities or have adverse impacts?
3. What are solutions that are not in the data base?

What is Next?



Possible Board Direction in Spring 2023

Decarbonizing Electricity

Regional GHG Emissions – Main Sources

On-Road Transportation

48%

Electricity

20%

Natural Gas

12%

80%

of total GHG emissions in the San Diego region

Regional GHG Emissions – Other Sources

Industrial Gases

8%

Other Fuels
(e.g., wood, propane)

4%

Off-Road Transportation

4%

Solid Waste

2%

Water, Aviation, Rail, Wastewater, Agriculture, Marine Vessels, Fertilizers

1% or less each

Decarbonizing the Electric Supply

Grid Supply

- At the utility scale of operations, large power plants
- Example: Solar or wind farm in Imperial Valley
- Involves utilities and other entities that purchase electricity for customers

Customer Supply

- At the scale of a building or campus, where electricity generation is located at the customer's site
- Example: Rooftop or parking lot solar generation projects
- Involves homes, businesses, local governments, etc.

Grid Supply – Laws and Programs

- State Law/Regulation
  - Senate Bill 100
    - 60% renewable by 2030
    - 100% carbon-free by 2045
- Regional Action
  - Community Choice Aggregation (CCA) Programs
    - Purchase Electricity on Behalf of Citizens and Businesses
      - SDG&E still delivers electricity over their power grid
    - Two CCA Programs in the San Diego region
      - San Diego Community Power
      - Clean Energy Alliance

SAN DIEGO COMMUNITY POWER

CLEAN ENERGY ALLIANCE

Grid Supply – Other Key Considerations

California's plan to reduce GHG emissions

- Decarbonize electricity
- Electrify transportation
- Electrify buildings

GHG reductions from buildings and transportation hinge on decarbonizing electricity = central role in this process

Changes to grid electricity supply affect all customers

Transmission needed to bring electricity from generation point to customers

Grid Supply – Example Actions

Organizational Operations

- Purchase 100% carbon-free electricity for operations/facilities

Community

- Join a Community Choice Aggregation (CCA) program
- Set default CCA service to 100% carbon-free electricity

Region

- Form and implement a CCA program
- Accelerate 100% carbon-free supply

Grid Supply Discussion

Customer Supply – Laws and Programs

- State Requirements
  - Title 24 Building Energy Code
    - 3-year cycle – newest codes take effect 1-1-2023
    - New buildings, and alterations and additions
    - Trend toward electrification, onsite renewable energy generation, and storage
- Financial Incentives
  - Federal tax credits
  - Single family Affordable Solar Homes Program (SASH)
  - Multifamily Affordable Solar Homes Program (MASH)
  - Financing

Customer Supply – Other Key Considerations

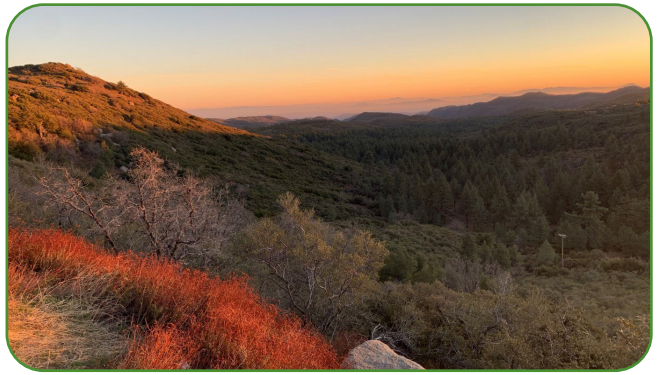
Buildings

- 1% of buildings built new each year
- 80% of buildings that will be here in 2050 already exist

Equity

- Most solar in neighborhoods with higher incomes and higher homeownership
- Proportion of systems in communities of concern increasing in recent years
  - Due, in part, to focused programs (previous slide)

Customer Supply – Example Actions



Organizational Operations

- Install rooftop solar on own buildings and in parking lots

Community

- Adopt a policy to streamline permitting process for rooftop solar projects
- Require solar on certain buildings

Region

- Conduct an analysis to determine equity implications of distributed renewable electricity programs
- Develop programs to help local governments evaluate policy options on distributed renewable electricity generation

Customer Supply Discussion

Open Discussion – Electricity

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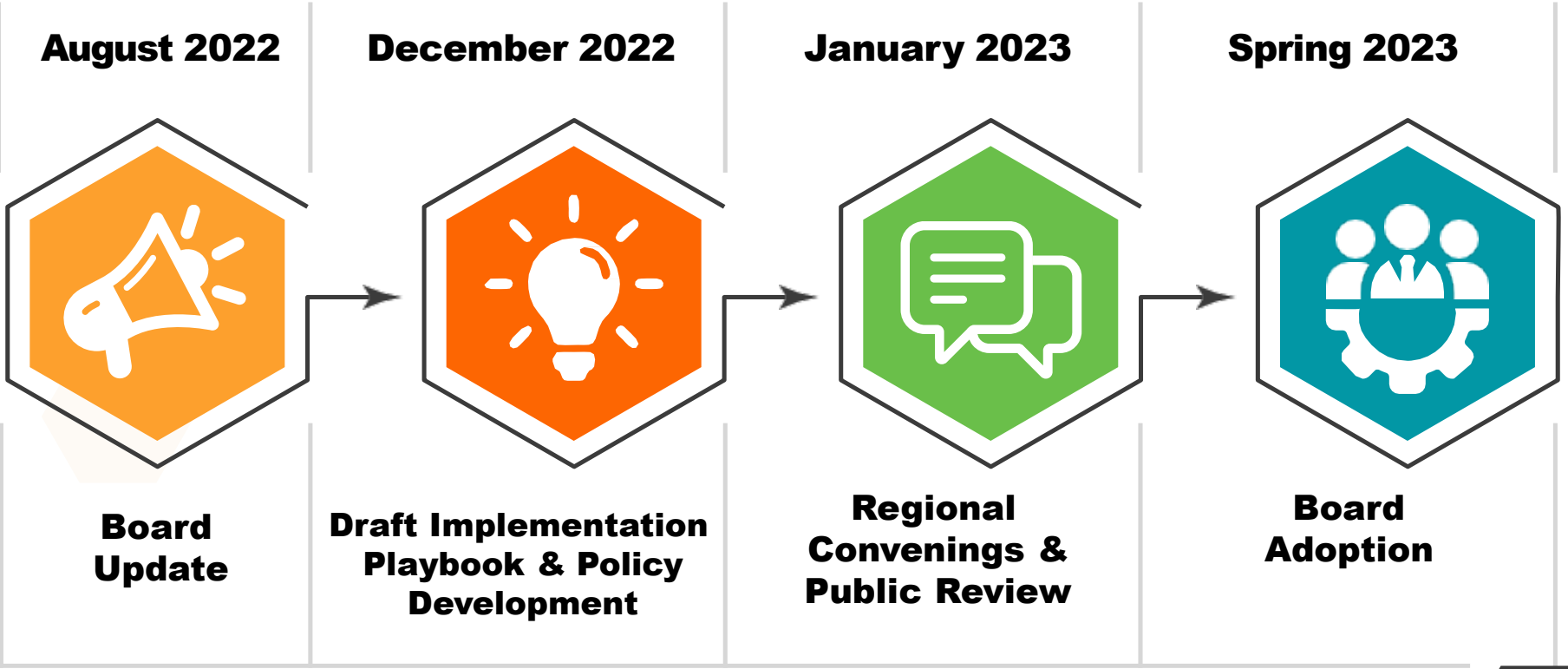
September 20, 2022

Additional Slides for Q + A

Timeline



PROGRAM DETAILS

- Public Workshop
- Completion of Technical Report & Workforce Development Reports
- Special Topic Working Groups
- Implementation Playbook 1st Draft Released
- Draft Sustainable Agriculture & Food Systems Policy Report
- Implementation Playbook 2nd Draft Released
- Implementation Playbook & Framework Adoption

Public Outreach: Fall 2022 - Spring 2023

Special Topic Working Groups

Sept – Nov 2022

Electricity
Buildings
Transportation
Land Use & Natural Solutions
Food Systems & Circular Economy

Regional Social Equity Working Group

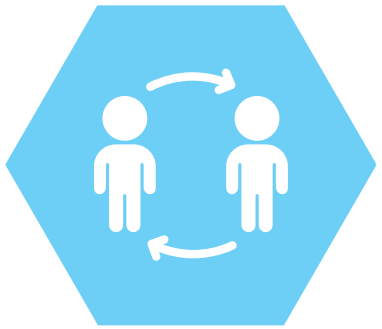
Sept 2022 and Onwards

Social Equity Guidance

Public Workshops

Oct 2022
Dec 2022
Feb 2023

Regional Convenings by Supervisorial District



Jan – Feb 2023

5 supervisorial districts

Technical Working Group

Ongoing

Experts in relevant fields as-needed

Implementation Playbook: Examples

Buildings

- Better use of energy in existing buildings

Electricity

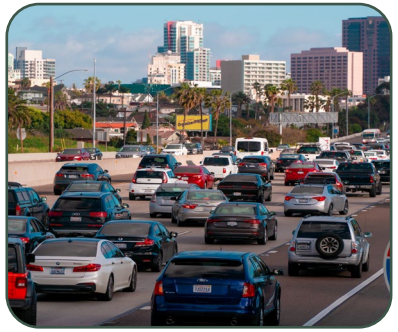
- Educate residents & businesses about 100% renewable energy options

Food Systems & Circular Economy

- Bulk purchase of food
- Waste diversion from landfills

Land Use & Natural Climate Solutions

- Green streets



Transportation

- Retire polluting vehicles

Regional Actions: Examples

Solar electricity for low-income renters

Model building code for electrification

Regional program for suitable tree planting locations