



Project Title/Subject: The Climate Crisis: Working Together for Future Generations

Project Type: Inter-Regional Project

NPA: FHI 360

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Why San Diego?

San Diego is a great location to learn about how to tackle global climate issues and sustainable livelihood. San Diego County includes a diverse array of ecosystems, such as coastal regions, deserts, mountains, and chaparral habitats. This variety enables the examination of numerous conservation challenges and strategies across different environments. Moreover, San Diego has a number of academic institutions and biotech companies that focus on some ongoing climate issues such as reducing greenhouse gas emissions and producing clean energy. San Diego is also known for its proximity to Mexico and its role in the innovation economy fostering a multicultural and collaborative approach to addressing climate issues. The city's diverse population and global connections encourage inclusive, cross-border solutions that can be applied globally.

Academic Resources

University of California, San Diego - Center for Energy Research Jacobs School of Engineering: Advanced Energy Research Initiative

www.jacobsschool.ucsd.edu/aeri/

UCSD's Center for Energy Research was established to develop solutions for the growing challenges of energy supply and utilization, and is now one of UCSD's largest organized research units. Members include internationally recognized scientists, faculty from various UCSD departments, visiting scholars, and students. Together, they perform basic and applied research in

fusion, solar energy, fuel cells, energy storage, and related disciplines, to create solutions for the growing challenges of energy supply, distribution, and utilization.

Professor Byron Washom, Director of Strategic Energy Initiatives

http://chancellor.ucsd.edu/archive/qa_washom.html

Byron Washom is UC San Diego's first director of strategic energy initiatives. He has been a strategic advisor on a wide range of clean energy technologies to the World Bank, the International Energy Agency, U.S. Department of Energy, national laboratories, and numerous regulated utilities and corporations. Future projects at UCSD include energy storage systems that adjust to the intermittency of renewable energy and provide permanent load shifting; strategic purchasing of renewable energy from the grid during periods of surpluses; coproduction of hydrogen from its fuel cell system; utilizing cold ocean water from the adjacent La Jolla Trench; and converting the campus vehicle transportation fleet into cleaner, alternative fuels. A visit to UCSD would involve a discussion with Professor Byron Washom about how he is promoting UCSD's sustainability initiatives, and a visit to the Center for Energy Research to explore how they foster an interdisciplinary approach to energy studies among a cross-section of university stakeholders. We also propose exploring UCSD's energy microgrid and electric vehicle charging availability. UCSD reports savings of over \$800,000 monthly thanks to energy provided by its very own microgrid.

University of San Diego School of Law, Energy Policy Initiative Center

www.sandiego.edu/epic/

The Energy Policy Initiatives Center (EPIC) is a non-profit academic and research center of the University of San Diego School of Law that studies energy policy issues affecting the San Diego region and California. EPIC integrates research and analysis, law school study, and public education, and serves as a source of legal and policy expertise and information in the development of sustainable solutions that meet our future energy needs. EPIC currently offers a law school course on Energy Law and Policy and is in the process of conducting legal and policy research into the following areas: renewable energy credits, distributed generation, solar laws, advanced electricity grid technology, and public interest program funding. In addition, EPIC monitors regulatory and legislative activity related to energy policy issues affecting the San Diego region and California. A visit to USD and EPIC would demonstrate how the university integrates research and analysis, law school study, and public education, to be a hub of legal and policy expertise in the development of sustainable energy solutions.

Meeting Focus: Learn about energy law and policy especially in renewable energy credits and advanced electricity grid technology, and Explore how EPIC monitors some ongoing policy issues in San Diego.

Government Agencies

City of San Diego, Sustainability and Mobility Department - 2022 Climate Action Plan & Climate Equity Index/Working Group

<https://www.sandiego.gov/sustainability/climate-action-plan>

<https://www.sandiego.gov/climateequity>

San Diego's landmark 2022 Climate Action Plan takes bold steps toward a more sustainable place to live, work and play - has been unanimously approved by the City Council and signed into law by Mayor Todd Gloria. The 2022 CAP establishes a community-wide goal of net zero by 2035, committing San Diego to an accelerated trajectory for greenhouse gas reductions. More than 4,000 San Diegans shared their needs, concerns and priorities in the development of this plan. San Diego is leading the way and the City has already begun work, including transitioning all City facilities to San Diego Community Power's 100% renewable energy service, funding early implementation steps, and partnering with labor organizations to complete a workforce impacts study.

San Diego's Climate Equity Index was developed in 2019, and revised in 2021, to measure the level of access to opportunity residents have within a census tract, and assess the degree of potential impact from climate change to these areas, prioritizing areas that face the largest barriers and impact. The Climate Equity Working Group brings together local nonprofits and community-based organizations that serve or are located within a Community of Concern, as well as other organizations seeking to advance social equity or environmental justice. Currently, the working group meets virtually every third Wednesday of the month, from 10:30 a.m. to noon. Meeting Focus: Learn about San Diego's landmark 2022 Climate Action Plan that aims to reach net zero emissions by 2035, and the steps the City is taking to partner and implement this plan while advancing climate equity. *Possible attendance of the Climate Equity Working Group (however it may still be virtual in 2023).

City of San Diego Our Climate Our Future

<https://www.sandiego.gov/climatefuture>

The City of San Diego's "Our Climate, Our Future" initiative is a plan to achieve net zero greenhouse gas emissions citywide by 2035. This initiative focuses on equitable and sustainable solutions, aiming to enhance economic opportunities, protect vulnerable communities, and improve both urban and natural environments. Key strategies include increasing the use of renewable energy, expanding green infrastructure, promoting sustainable transportation, and building climate resilience. The plan underscores the city's commitment to addressing climate

change while ensuring a healthy, thriving future for all residents.

Meeting Focus: Discuss the importance of promoting sustainable transportation options, including public transit, cycling, and electric vehicles. Identify barriers and solutions.

City of San Diego Public Utilities

<https://www.sandiego.gov/public-utilities>

The San Diego Public Utilities Department is dedicated to providing essential water and wastewater services, ensuring the community has access to safe, reliable drinking water and effective wastewater management. The department oversees water treatment, distribution, and conservation efforts, while managing wastewater collection, treatment, and disposal. Committed to sustainability and infrastructure maintenance, the department also engages in public education to promote environmental stewardship and water conservation. By prioritizing innovation and efficiency, the department aims to enhance the quality of life for all San Diego residents.

Meeting Focus: Discuss strategies for enhancing water conservation, improving water efficiency, and expanding the use of recycled water. Highlight successful initiatives and potential areas for innovation.

County of San Diego Climate Action Plan

<https://engage.sandiegocounty.gov/cap>

In response to the climate emergency, the County is developing a Climate Action Plan (CAP) to implement bold climate actions that reduce greenhouse gas (GHG) emissions. The CAP outlines actions, also referred to as measures, to meet State targets and achieve a goal of net zero carbon emissions by 2035-2045. The CAP and associated goals apply to the unincorporated areas of the county and County operations. CAP measures will also provide important benefits to the environment and our residents. Benefits may include preserving the environment, reducing health disparities, increasing access to green careers, improving quality of life, and advancing environmental and social justice. Community input has been vital to the County's efforts to develop the CAP to date, and we want that to continue.

Meeting Focus: Discuss potential projects and initiatives that the department can undertake in partnership with other organizations, businesses, and community groups to enhance climate resilience and sustainability.

Non-Profit Organizations

I Love a Clean San Diego

<https://cleansd.org/about-2/>

As San Diego's longest running environmental nonprofit, I Love A Clean San Diego (ILACSD) is a pioneering leader in encouraging environmental awareness close to home. Through recycling, education, and cleanups of San Diego's most beloved areas, ILACSD is the only community-based organization dedicated to the future of the entire county - from inland to the coast. While most known for its beach cleanups, ILACSD is deeply committed to serving its

mission - educating the community to actively conserve and enhance the environment. ILACSD prioritizes practical solutions rather than rhetoric, which is often seen in the variety of programs offered: Environmental Education, WasteFreeSd.org, and Community Cleanups. Environmental Education is centered on providing hands-on learning for children, teens, and adults to learn about recycling, waste education, resource conservation, and pollution control.

Meeting Focus: Assess the accessibility of climate change information in American households. Discuss strategies for recruiting, retaining, and educating volunteers along with how to foster a dedicated and connected volunteer community. Identify the resulting impacts of climate change on the biodiverse San Diego region.

WILDCOAST

<https://wildcoast.org/>

WILDCOAST is an international team that conserves coastal and marine ecosystems and addresses climate change through natural solutions. The organization envisions a society in which ecologically sensitive and globally significant coastal and marine ecosystems and wildlife are conserved, restored and sustained for future generations. WILDCOAST's programs establish new marine protected areas, deter poachers and build conservation capacity in local communities. It mitigates the impact of marine debris by organizing beach clean ups, pushing for strict legislation and creating new recycling markets. The organization is also helping to ensure the long term conservation of precious marine ecosystems and the diversity of wildlife found within them.

Meeting Focus: Explore WILDCOAST's long term conservation of marine ecosystems, and learn the organization's "natural solutions" to tackle environmental issues and climate change.

San Diego 350

<https://sandiego350.org/>

<https://sandiego350.org/teams/youth4climate/>

San Diego 350 is an inclusive volunteer organization building a movement to prevent the worst impacts of climate change and climate injustice. They strive to create a future that supports a livable planet and just society through education and outreach, public policy advocacy, and mobilizing people to take action.

Their vision is for an informed, mobilized and united community that is empowered to reduce our carbon footprint, and hold our elected officials accountable for creating a low-carbon, sustainable and just world.

They've organized San Diego's largest climate mobilizations, including the 5,500-person "People's Climate March" in April 2017 and the climate walkouts in 2019. Their Youth4Climate (Y4C) is empowering youth activists with climate change education, skill building, leadership and activism opportunities.

Meeting Focus: Discuss strategies for engaging and educating diverse communities about climate change, and examine the role of public policy in addressing climate change and climate justice.

San Diego Canyon Lands

<https://www.sdcanyonlands.org/>

San Diego Canyonlands is a dedicated nonprofit organization focused on preserving, restoring, and enhancing the natural canyons and open spaces of San Diego for the benefit of both nature and the community. By fostering stewardship and advocating for sustainable land management practices, San Diego Canyonlands aims to create healthier urban environments and promote biodiversity. Their efforts include habitat restoration projects, educational programs, and community engagement initiatives to ensure these natural treasures are protected for future generations. The organization also collaborates with local governments, schools, and other nonprofits to maximize the impact of their conservation efforts.

Meeting Focus: Discuss the importance of advocating for policies that address the root causes of climate change and promote environmental justice. Explore ways the organization can amplify its voice and influence decision-making at local, state, and national levels.

Climate Change Journalism

Joshua Emerson Smith, San Diego Union Tribune Senior Environmental Reporter

<https://www.sandiegouniontribune.com/staff/joshua-emerson-smith>

Joshua is the senior environment reporter for The San Diego Union-Tribune. Since joining the paper in 2015, he's written about everything from climate change, drought and wildfire to public transit and housing. He unpacks complex, often political issues using data analysis and vivid storytelling.

Meeting Focus: Discussion with Joshua Emerson Smith on his approach to

Possible Day Trip to Imperial Valley Exploring Large-Scale Sustainable Energy Projects (2 ½ - 3-hour drive east from downtown San Diego)

Imperial Valley Geothermal Area

<https://www.energy.gov/eere/geothermal/imperial-valley-geothermal-area>

The Imperial Valley Geothermal Project consists of 10 generating plants in the Salton Sea, in Southern California's Imperial Valley. The project has a combined capacity of approximately 327

net megawatts. Geothermal plants can generate emissions-free, renewable electricity constantly, unlike solar panels or wind turbines - but plants are much more expensive to build. However, to meet California's energy goals by 2045, geothermal energy is rising in popularity. A meeting in this region may be supported by a driving tour, accompanied by a representative to discuss the growing and evolving renewable energy movement in California and the U.S.

Meeting Focus: Explore the financial aspects of building and maintaining geothermal plants, including potential funding sources and economic benefits for the region.

Controlled Thermal Resources

<https://www.cthermal.com/>

By combining direct lithium extraction with renewable geothermal power, Controlled Thermal Resources is setting new benchmarks to provide renewable energy to the western U.S. and to deliver the most sustainable, battery-grade lithium products in the world today. Demand for lithium, which is used in batteries and energy storage systems to power cars, cities, and countries, is expected to surge by approximately 2 million tons per annum by 2030. Controlled Thermal Resource's leadership team has successfully developed and managed world-scale renewable energy projects in the Salton Sea region for over 20 years. Controlled Thermal Resources would be able to explain to the IVLP group how lithium extraction and renewable geothermal power operate, and the benefits of diversifying clean energy sources.

Meeting Focus: Address the increasing global demand for lithium, its applications in energy storage systems, and how Controlled Thermal Resources is positioned to meet this need sustainably.

Pattern Energy: Ocotillo Wind Project

www.ocotillowind.com

The Ocotillo Wind facility, owned by Pattern Energy, is an investment in the Imperial Valley region that is creating many economic benefits, including jobs and substantial growth in the property tax base. The Ocotillo Wind Project consists of 112 turbines, which have the annual power equivalent equal to the needs of approximately 125 000 homes. The project sells 100% of its electricity generation to San Diego Gas & Electric ("SDG&E") under a long-term power purchase agreement. Ocotillo connects to the SDG&E 500 kV transmission system. The project is located on approximately 12,500 acres in Imperial County, CA and is almost entirely on federal land administered by the Bureau of Land Management. The project was granted a right-of-way by the Bureau of Land Management. Visiting Ocotillo would show participants the operations of a partnership with San Diego's main gas and electric provider, and demonstrate another alternative source of renewable energy.

Meeting Focus: Explore the operational aspects of the 112 wind turbines and their capacity to meet the energy needs of approximately 125,000 homes annually.

Sustainable Energy & Green Building Solutions

Tenaska Imperial Solar

<https://www.tenaska.com/>

As California electricity providers strive to meet the requirements of the state's Renewables Portfolio Standard, Tenaska has been developing solar energy projects in Imperial County.

Tenaska Solar Ventures, LLC (TSV) manages solar projects in North America. TSV has several utility-scale projects in Imperial County in Southern California. Current projects range from 130 to 160 megawatts (MW) and are among the largest solar generating facilities in California powering almost 100,000 homes.

Tenaska Imperial Solar Energy Center South was the first large-scale solar project to begin construction in Imperial County, and it is the first large-scale solar project to transmit power from the Imperial Valley via San Diego Gas & Electric's (SDG&E) new Sunrise Powerlink transmission line. It is also one of the largest commercially financed solar projects in the U.S. to date.

Meeting Focus: Explore the LLC(TSV)'s solar projects to learn more about clean and sustainable energy and discuss how solar energy can contribute to tackle global climate issues.

EDF Renewables North America

<https://www.edf-re.com/>

EDF Renewables North America is a market-leading independent power producer and service provider with over 35 years of experience. The Company delivers grid-scale power: wind (onshore and offshore), solar photovoltaic, and storage projects; distribution-scale power: solar and storage; asset optimization: technical, operational, and commercial expertise to maximize performance of generating projects, and onsite solutions, through the Company's PowerFlex affiliate, offering a full suite of onsite energy solutions for commercial and industrial customers: solar, storage, EV charging, energy management systems, and microgrids.

Meeting Focus: Explore the company's technology of clean energies that company provides, and discuss how clean energy can contribute to sustainability.

Incubators and Accelerators

Environmental Health Coalition

<https://www.environmentalhealth.org/#>

The Environmental Health Coalition (EHC) is dedicated to achieving environmental and social justice. The EHC believes justice is accomplished by empowering communities to act together to make social change. The EHC strives to reduce greenhouse gas emissions and air pollution,

create clean and affordable public mass transportation, increase public investments in environmental justice, improve children's health, and maintain and create healthy communities. Climate justice is one of the EHC's main focuses. The EHC stands with people and communities in creating climate solutions. Climate justice emphasizes how people and communities are the least responsible for warming the planet yet are most at risk for experiencing the impacts of climate change. The EHC echoes that the people most impacted by the climate crisis need to be part of deciding the solution.

Meeting focus: Learn about how the EHC empowers communities to come together to create change and environmental justice. Expand on strategies of how to engage volunteer networks and extend public outreach. Hold a workshop on understanding climate justice and the role of creating community networks in achieving climate justice.

Climate Action Campaign

<https://www.climateactioncampaign.org/mission>

Climate Action Campaign's mission is to stop the climate crisis through effective policy action. Climate Action Campaign (CAC) was founded in San Diego in 2015 by their Executive Director, Nicole Capretz to ensure the City of San Diego's draft landmark Climate Action Plan (CAP) became law, which Nicole authored while working in the Mayor's office. A broad-based and non-traditional coalition of elected officials, businesses, community planning groups, civic organizations, labor unions, and environmental and social justice organizations emerged, unified behind the trailblazing plan. Through the lens of equity and justice, they are fighting for a Zero Carbon future with all-electric homes, world class transit, resiliency, 100% clean energy, and bike able, walkable neighborhoods. They believe change happens from the group up.

Meeting Focus: Learn about CAC's strategies of stopping the climate crisis through effective policy action, and the wide reaching coalitions that have come together under its leadership.

San Diego Coastkeeper

<https://www.sdcoastkeeper.org/our-history>

The San Diego Coastkeeper was founded in 1995 and originally intended to combat the systematic pollution of the San Diego Bay. Today the San Diego Coast Keeper advocates, educates, and engages with communities across San Diego County to address a multitude of water challenges. As the voice for San Diego's rivers, streams, and coastline, the San Diego Coastkeeper fights to protect and restore the San Diego waterways for the communities and wildlife that depend on them. This mission is accomplished through promoting legislation to improve stormwater health, holding polluters accountable, educating San Diego's students about watershed and wildlife, and sending trained volunteers to collect water samples. The San Diego Coastkeeper believes smart, effective, science-based laws and policies are crucial to maintaining the health of the environment. With two decades of advocacy experience, the San Diego Coastkeeper has been at the forefront of advocating for

laws, permits, regulations, and policies to protect and restore San Diego's water. The San Diego Coastkeeper has engaged with state law makers to pass groundbreaking water conservation and efficiency legislation.

Meeting Focus: Learn about San Diego Coastkeeper's history in advancing environmental legislation and discuss how current international and national policies impact their legislative efforts. Discuss the best practices in engaging volunteer networks to develop the skills necessary to create volunteer communities in any field.

Sunrise Movement

<https://www.sunrisemovement.org/about/>

The Sunrise Movement is a dynamic, youth-led organization committed to addressing the climate crisis by advocating for the Green New Deal and promoting sustainable job creation. Founded to combat the influence of fossil fuel industries, Sunrise mobilizes young people through grassroots organizing, public education, and direct action. The movement seeks to unite diverse communities across racial and socioeconomic lines to demand bold climate policies and a transition to a just, low-carbon economy. Sunrise has played a pivotal role in shaping public discourse and influencing political leaders to take meaningful climate action.

Meeting Focus: Discuss strategies for effective grassroots organizing and youth engagement in climate action, and the importance of advocating for bold climate policies like the Green New Deal, and ways to promote sustainable job creation.

Cultural Activities

Dinner Hospitality can be arranged

San Diego Zoo

www.sandiegozoo.org

Price: \$62 for one Adult Ticket

The 100-acre (40-hectare) Zoo is home to over 3,700 rare and endangered animals representing more than 650 species and subspecies, and a prominent botanical collection with more than 700,000 exotic plants. Accessibility: The zoo is located just north of downtown San Diego in Balboa Park (a 5-10-minute drive from downtown).

Chicano Park

<http://www.chicanoparksandiego.com/>

Chicano Park is the geographic and emotional heart of Barrio Logan, located in Logan Heights, San Diego's oldest Mexican-American neighborhood. The park is home to the largest concentration of Chicano murals in the world with more than 80 paintings on seven acres dotted with sculpture, gardens, picnic tables, and playgrounds. Throughout the year, it hosts festivals of music and Aztec dance, the biggest being Chicano Park Day held each April.

Harbor Cruise

www.sdhe.com

Price: \$30 for one Adult Ticket for a one-hour narrated tour (south bay or north bay routes); \$35 for a full bay two-hour narrated tour which covers it all: ships of the Maritime Museum, Harbor and Shelter Islands, North Island Naval Air Station, the Submarine Base, as well as the Coronado Bridge, and more. The full bay tour is about 25 miles in length. Accessibility: The tour begins and ends at the same location downtown along Broadway Pier.

Old Town Trolley Tour

www.trolleytours.com/san-diego

www.oldtownsandiegoguide.com

Price: \$44 for a 1-Day Adult Ticket (discounted when purchased online)

For 30 years, Old Town Trolley Tours has been providing sightseeing tours, highlighting the best San Diego attractions. The Tours are designed so that you can hop on and off the trolley and explore on your own at any time throughout the day. Hours of operation are generally 8:50 am – 5:00 pm, with later hours in the Spring and Summer. The fleet of orange and green trolleys travel frequently throughout San Diego and over the iconic San Diego-Coronado Bridge to Coronado on a continuous 25-mile loop visiting 10 neighborhoods with 10 destination stops.

USS Midway Museum

www.midway.org

Price: \$26 for one Adult General Admission Ticket (\$1 discount when purchased on-line).

Imagine experiencing life at sea aboard one of America's longest-serving aircraft carriers. Visitors to the USS Midway Museum enter a floating city at sea and walk in the footsteps of 225,000 Midway sailors who served our country and upheld the American ideals of strength, freedom, and peace. Guests can spend the day exploring more than 60 exhibits with a collection

of 30 restored aircraft. The self-guided audio tour, narrated by Midway sailors, brings the carrier's history to life. Operating Hours: 10 am – 5 pm (Last admission at 4 pm). Accessibility: The museum is located downtown alongside the Navy Pier.

Border Field State Park & Friendship Park

https://www.parks.ca.gov/?page_id=664

<https://www.friendshippark.org/>

Located within the Tijuana River National Estuarine Research Reserve, Border Field State Park sits in the very southwestern corner of the United States, 15 miles south of San Diego. This important wildlife habitat, consisting of sand dunes and salt marshes, gives refuge to critically threatened and endangered birds such as the Western Snowy Plover, the California Least Tern, and the Light-footed Ridgway's Rail. Friendship Park is a binational park located at the western end of the US-Mexico border. For generations, people have gathered here to meet up with friends and family "across the line."

Balboa Park

www.balboapark.org

Home to 17 major museums and cultural institutions, renowned performing arts venues, beautiful gardens, and the San Diego Zoo, Balboa Park has an ever-changing calendar of museum exhibitions, plays, musicals, concerts, and classes—all in the beautiful and timeless setting of this must-see San Diego attraction. Accessibility: Balboa Park is conveniently located just north of downtown San Diego (a 5-10-minute drive from downtown).

Coronado

<http://coronadovisitorcenter.com>

<https://www.sandiego.org/explore/things-to-do/beaches-bays/coronado.aspx>

A drive across the 200-foot tall Coronado Bridge treats you to one of the best views in all of San Diego, as you descend upon the charming and picturesque oceanfront community of Coronado. Consistently voted among America's finest beaches by The Travel Channel, Coronado's beaches glisten year-round due to the mineral Mica in the sand, while gentle waves caress the shoreline. Coronado Central Beach runs along Ocean Boulevard with a backdrop of fine homes and mansions and the Hotel del Coronado at the southern end. Accessibility: Coronado is a popular stop on the Old Town Trolley Tour and can be accessed from Downtown using the Coronado Ferry or a water taxi. Coronado is a 15-20-minute drive from downtown.

SeaWorld San Diego

www.seaworldparks.com/en/seaworld-sandiego

Price: \$99.99 for one Adult Ticket (discounted when purchased online)

Come celebrate the wonders of the sea at SeaWorld San Diego. Experience the Orca Encounter, Dolphin Days, and Sea Lions Live shows and thrilling rides like Electric Eel, Manta, and Journey To Atlantis. Feed and touch dolphins and get up-close to beluga whales, polar bears, sharks, and penguins. Enjoy fascinating aquariums and exotic birds from around the world. Hours vary by season. Also enjoy the opening of Sesame Place in March 2022, a Sesame Street-themed section of the park with new water, ride, and musical attractions. Accessibility: A 15-20-minute drive from downtown San Diego.