wbcsd

Zero Emissions Cities

SAN DIEGO Low Emissions Economy Partnership

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EXECUTIVE SUMMARY

The City of San Diego, through the passage of its Climate Action Plan (CAP), calls for aggressive greenhouse gas (GHG) emissions reductions, including 100% clean electricity by 2035. This goal is binding[1] for the city and has placed San Diego in a leadership role among large US cities with deep climate action commitments.

The World Business Council for Sustainable Development (WBCSD), with AECOM, DNV GL and ENGIE, reached out to the San Diego business community to support the city's Climate Action Plan.

The effort in San Diego was a part of WBCSD's Zero Emissions City (ZEC) project. ZEC has evolved into the WBCSD's Low Emissions Economy Partnership (LEEP), a new and emerging strategic initiative model that brings together a cross-sectoral group of companies and selected cities to jointly drive GHG emissions reduction projects through public-private partnerships.

The San Diego LEEP effort involved targeted outreach to strategic community stakeholders, including the City of San Diego, the San Diego Regional Economic Development Corporation, Cleantech San Diego, the Center for Sustainable Energy, and the Industrial Environmental Association. WBCSD members collaborated on this effort, which included a series of workshops showcasing business-sector perspectives on:

1. The Return on Investment of Climate Action (January 2017)
2. The Importance of Measurement (April 2017)
3. Organizing for Climate Action (October 2017)

This document summarizes the WBCSD ZEC and LEEP efforts to date and, based on our findings, provides suggestions for future San Diego actions to meet the needs of the local business community in support of the city's CAP goals. At a minimum, these future efforts should address the three distinct needs that emerged from the partnership engagement and workshop input:

1. CREATE A NEW PROGRAM OR ENTITY

Determine the feasibility of a new program or entity to facilitate innovation and seed investments in low-carbon facilities, systems, infrastructure or processes for the business sector, either through its own sources or as an intermediary, leveraging third-party private and public capital sources.

2. DEFINE OPPORTUNITY SITES AND SERVICES

Identify select pilot projects of varying scales to demonstrate a master plan for low-emissions development, potentially including distributed renewable energy microgrids.

3. ENGAGE IN BUSINESS-TO-BUSINESS OUTREACH AND EDUCATION

Deepen business-to-business outreach and education on the value of investing in low-emissions projects and the importance of measuring and reporting data to monitor progress and establish a forum to share lessons learned.

[1] City of San Diego, Office of City Attorney of San Diego, Memorandum 59, dated 17 May 2016

WBCSD AND ZEC BACKGROUND

WBCSD members develop roadmaps to effectively transform city energy systems to reach zero emissions and identify catalytic opportunities to drive implementation.

Our goal is to support cities in implementing high-efficiency measures for mobility, buildings and industries. We work through partner organizations and companies to optimize energy supply and demand (decrease the supply-demand gap) by using information and communication technology (ICT) solutions. We implement a holistic, integrated approach requiring collaboration between inhabitants, local stakeholders, governments, business and solution providers.

Our Zero Emissions Cities project (ZEC) brings together local and global companies to work with selected cities to support the implementation of zero emissions goals. The companies provide energy infrastructure, buildings, mobility/logistics and green infrastructure expertise directly to city officials. Cities and businesses work together with other local stakeholders in early, pre-commercial engagement to develop a strategy that can be replicated and scaled city-wide and across other cities.

"LEEP will identify and demonstrate how innovative partnering and financing models can deliver action and investment."

Roland Hunziker,
Director, Sustainable Buildings and Cities, WBCSD

SAN DIEGO'S ZEC PROJECT AND LEEP FRAMEWORK

In December 2015, the City of San Diego adopted a Climate Action Plan (CAP) that includes a 100% clean electricity target. Thus, it was fitting that WBCSD selected San Diego as the first ZEC North American demonstration project to explore private sector-led models to reduce emissions.

WBCSD members worked collaboratively with local stakeholders – the City of San Diego, the San Diego Regional Economic Development Corporation, Cleantech San Diego, the Center for Sustainable Energy, and the Industrial Environmental Association – and corporate partners AECOM, DNV GL, ENGIE/OpTerra Energy, Toshiba and UPS on this effort.

Throughout the ZEC workshops, WBCSD, local stakeholders organizations and workshop participants from the private sector drew upon national, international and local San Diego examples of innovation to discuss lessons learned and how they may apply to San Diego's efforts to become a Zero Emissions City.

Recognizing the significant potential impact businesses could have on the CAP's success, the group mapped out and executed a year-long engagement that explored how the regional business community could help the City of San Diego achieve its CAP goals while strengthening the local economy and increasing profits, ultimately positioning the region as a center for cleantech innovation globally.

Beginning with a questionnaire, the group explored current business practices and their perceptions of the city's recently passed CAP. Based on responses, we planned a series of workshops on Zero Emissions Cities.

The workshops – *The Return on Investment of Climate Action* (January 2017), *The Importance of Measurement* (April 2017), and *Organizing the San Diego Business Community for Climate Action* (October 2017) – drew upon national, international and local innovation examples and applied lessons learned to San Diego's efforts to reduce its greenhouse gas emissions. Between workshops, the ZEC group conducted interviews with key stakeholders, including local investors, business groups and city staff.
See summaries of the workshops in Appendix 2.

LOCAL LEADERSHIP AND OPPORTUNITY

The region surrounding San Diego is diverse, with a population of 3.3 million people in the immediate area and growing to over 6 million people when taking into account the communities across the border in Mexico. San Diego, a major US city of 1.3 million people, is growing about 1% per year. Its success is transferrable to other major metropolitan areas nationally and globally.

San Diego is well positioned to be an innovator in sustainable investment:

CLIMATE

Its universities, led by research at the Scripps Institute of Oceanography, have conducted seminal research on climate change since the 1950s.

ENERGY

San Diego and its utility provider have been leaders in renewable energy for decades – it is ranked highly in terms of the number of solar installations per capita among large US cities and is an early achiever in statewide renewable energy portfolio goals. San Diego was one of the first demonstration cities for electric vehicles.

WATER

The region was an early investor in purple-pipe water recycling systems and is now implementing the Pure Water program for indirect potable reuse.

BIODIVERSITY

San Diego has forged the way in habitat systems planning and open space preservation since the 1990s, which has directed development towards the core and more clustered suburban development.

PLANNING

The City of San Diego successfully adopted the first General Plan for a large jurisdiction, following California's Global Warming Solutions Act (AB32), steering future growth into mixed-use communities near transit and job centers. It was also the first to adopt a regional Sustainable Communities Strategy. The City of San Diego developed and passed an aggressive and legally binding Climate Action Plan to complement the General Plan. Thus, San Diego is now recognized for its approach to climate action.

This foundation brought consensus that the private sector should engage businesses, government, citizen groups, and local foundations in support of an effective Climate Action Plan for the City of San Diego. The proposed WBCSD Low Emissions Economy Partnership (LEEP) can help facilitate this engagement.

Through this partnership, the private sector can rapidly test ideas to help a range of local stakeholders. Efforts would focus upon the unique local context of small and medium-sized businesses for outreach and investment. This segment of the business sector, which comprises the foundation of San Diego's economic base, often lacks the organizational capacity, resources and time to address sustainability and low-energy solutions that businesses in the larger national and international corporate sector have.

The partnership would also provide broader ideas, funding, demonstration projects, engineering and financing solutions in the interests of the government and inhabitants. By pooling knowledge and finance and aiming for scale, the partnership can help governments and the community test ideas flexibly and quickly in a way these groups cannot on their own.

The San Diego region is dominated by small businesses. Of the more than 77,000 businesses with more than one employee, 99% have fewer than 250 employees; 57% of regional businesses have one to four employees.[2] Many of these companies are already engaged in regional and sub-regional economic development through existing organizations: chambers of commerce, industry organizations, business improvement districts, green business networks, and industry interest groups such as Cleantech San Diego.

Consequently, a communication infrastructure already exists for business-to-business engagement and education and for marketing services and funds to stimulate more private investment in sustainable energy and conservation. The new partnership would leverage this existing communication network and develop a channel focused on lowering emissions. Additionally, the proposed program services and investment resources could pull from existing public and private investment in sustainable development and operations.

[2] Halverstadt, Lisa. "San Diego Businesses, By the Numbers", Voice of San Diego, 7 August 2014.

NEED 1 New program or entity

The short-term need is to build an inclusive private-sector program organization with staff, access to funds, and clout that complements and helps integrate various city and state initiatives to build a low-emissions region.

As currently envisioned, the program could be an independent entity or a private program within an existing organization that facilitates business expertise and investment, either directly or as an intermediary. As a private sector entity, it would also have greater flexibility and nimbleness to fund, manage and implement a range of actions to support emissions reductions and a stronger, more inclusive regional San Diego economy. The proposed capabilities of this new program or entity are summarized in the table below.

The program could start small but expand as resources and a track record evolves. It could build a permanent innovation capacity, control its own or an affiliated revolving fund and serve as an intermediary and originator using third-party funds to catalyze projects that support a climate strategy. It eventually could serve as a replicable model that other municipal and regional governments, member companies and WBCSD could implement elsewhere.

This could be a new organization or program within one of the region's existing organizations. The organization could serve as the program's fiduciary agent until it is better established. If feasible, funds could be coordinated with other City of San Diego and State of California venture funds that promote energy efficiency, energy generation from renewable sources, sustainable water use, and economic growth for small and medium-sized businesses.

Several other cities have implemented similar approaches. Some of these and a few case studies are described in Appendix 1.

Table 1: Suggested capabilities for a new program or entity

Organization	Structured as an independent public-private partnership	A strong board representing local government, businesses, finance, universities, community-based NGOs. Philanthropy, government and businesses to help provide start-up capital.
	A neutral forum for analysis, deal brokering and conflict resolution	A credible, objective, flexible, apolitical organization with sufficient capacity to innovate. Supports local government, businesses and business groups. Office can start new private initiatives as appropriate. Key is to provide respected expertise. Can act as a broker between government and private interests, with great flexibility.
Analytics	Provides and tests tools to allow a more integrated analysis of the region's economy and emissions	Obtains research grants and contracts and works on a project, district, city or metro-region basis. Provides local and international engineering and economics ideas and tools directly or through procurements. Can test various resource flow, technology, land-use strategy, infrastructure and other models to determine how they affect government budgeting and emissions. Can start by developing a city/region-wide energy plan and emissions strategy, district heating/cooling or microgrid plan. Later, it can include new topics like circular economy, water, etc. Advises government (which may or may not adopt recommendations) but seeks to reach broader stakeholders.
Finance	Provide patient finance and seed capital	Offer or broker attractive interest rates, draw in additional private capital, retain a portion for operations and to support a local incubator/innovation fund. Could become the local climate or innovation fund manager, or link to other local or state venture funds.
	Capture savings from energy, water, waste system efficiency gains or a piece of local generation	Would have staff to aggressively push energy and water efficiency and waste management, possibly recover small fee for projects completed. This could also include new energy or water supply/cleaning generation.
	Facilitates low-emissions energy performance of large mixed-income, mixed-use/housing development	Help provide advanced eco-design tools and technologies to complete large-scale projects; create demonstration, learning effects. Work with community housing groups, housing corporations; small fee recovery to help generate revenue to make effort self-financing over longer term.

NEED 2 Opportunity sites and program services

OPPORTUNITY SITES

The best opportunity sites for demonstration projects of scale that use new program investment, such as eco-districts with microgrids, are ones that allow a mix of uses and are preferably located near transit and job centers. Based on these criteria, potential opportunity sites for a project of scale fall into the following general categories:

1. Public campus sites with public buildings, including public buildings built under public-private-partnership finance and delivery mechanisms, such as universities and schools, public hospital districts, public housing, military installations, cultural parks and civic complexes.
2. Public land with private buildings leased on public land, perhaps in combination with public buildings, such as ports, airports, universities, hospital districts, sports facilities, cultural parks and redevelopment sites.
3. Private land of scale with mixed planned-unit developments under one or a limited number of land ownerships, such as commercial sites, corporate campuses and large landholdings.
4. Private land of scale developed according to a master plan and subdivided into separate parcels and ownerships.
5. Existing urban mixed-use employment/residential districts of multiple parcels, mostly private, but could include some public land.

Many of these types of sites exist in the San Diego region. Master plans for future infill development are being created for private properties, such as former shopping center sites, golf courses, quarries as well as obsolete commercial and industrial lands.

Potential public and non-profit properties of note for which redevelopment has been proposed include the City's stadium property in Mission Valley, the Sports Arena site, surplus government properties, several existing hospital and university district expansions and redevelopments, and select Port of San
Diego properties.

OPPORTUNITY SITE SERVICES

- Define the regional road map to achieve 100% renewables target – possibly self-/co-funded and involving all founding and local companies.
- Advise on performance standard objectives for demonstration projects and public land development requests-for-proposals.
- Review all major property developments, comment on energy, water and emissions implications and ensure that high-performance standards are included in plans.
- Set up community housing outreach for higher energy and water-efficiency retrofits and small-scale generation and storage, microgrids, etc. – education and referral service for both technical help and financing, e.g. Special Improvement Districts (SID).
- Develop ongoing outreach on behalf of demonstration projects with journalists, the public, investors, regulators and entitlement decision-makers.
- Develop list of potential priority demonstration projects.

Depending upon fundraising, these could either be funded from a revolving/innovation fund or specific project-based funds.

NEED 3 Business-to-business outreach and education

A need identified through the outreach process, including the survey, is to establish business-to-business outreach and education around energy efficiency and renewable energy. The goal of this work should focus on the opportunity to inform on experiences and educate on the problems and opportunities that address the small business sector's unique barriers.

Throughout the workshops, it was clear that the educational efforts should focus on messages tailored to different audiences. There is a need to create a peer-to-peer network where business professionals with similar roles can meet to discuss issues.

This group would engage small business owners to reduce their energy use. There are many energy programs and resources that provide value for almost any kind of small business. The challenge is that, from the perspective of a small business owner, simply knowing where to start can be a burden, making the whole endeavor look more complicated than it needs to be. Some suggestions for how to organize outreach and education include:

- Meet participants where they are in their climate action path
- Consider roundtables on topics within the workplace
- Find the right level and forum for conversation
- Frame conversations about business success (e.g. "how to be a better business")
- Create competitive learning opportunities
- Identify leadership opportunities on environmental issues
- Celebrate successes.

The City of San Diego has recently launched a Green Business Network to advance the conversation on energy efficiency between businesses and overcome barriers to entry for small businesses. The outreach group would collaborate with this network.

CENTER FOR SUSTAINABLE ENERGY (CSE)

The Center for Sustainable Energy (CSE) is a non-profit with the mission to accelerate the transition to a sustainable world powered by clean energy. CSE's areas of expertise include transportation, distributed energy resources, policy, engineering, and research and analysis projects. Such projects are funded through a variety of sources, including private investment, local governments, state and federal grants, donations and ratepayer dollars.

Three of CSE's projects directly align with aspects of the LEEP concept: the Equinox Project, the San Diego Regional Green Business Network, and the City of San Diego ZNE and Demand-Side Management Demonstration Project.

The Equinox Project is a nonpartisan policy initiative that inspires, informs and engages the public and decision-makers in crafting better solutions to regional challenges. Rather than focusing on just one issue, Equinox focuses on the intersecting issues that together shape regional quality of life. The products are crafted to make complex issues tangible and clear, present practical options and propose potential solutions linked to measurable benchmarks and goals.

The San Diego Regional Green Business Network (SDRGBN) is a San Diego county-wide resource for sustainability in business. SDRGBN offers opportunities to engage in resources, workshops, events and community recognition programs designed to facilitate actions that improve the environment and boost economic growth. The goal of the SDRGBN is to educate the region's business community, connect businesses to the resources necessary to take action on sustainability, and share lessons learned by fellow business owners in pursuing these types of projects.

Additionally, the SDRGBN serves as the home for the Benchmarking Coach program, which provides one-on-one technical support to building owners wishing to track their building's energy, water, and waste and materials consumption.

The program is open to any building owner or tenant within San Diego County and also provides support for mandated benchmark reporting, like that required by the Building Energy Use Benchmarking and Public Disclosure Program (AB 802).

CSE helps support two local Green Business Networks (Port of San Diego GBN and City of San Diego GBN) and recently launched and fully manages the San Diego Regional Green Business Network.

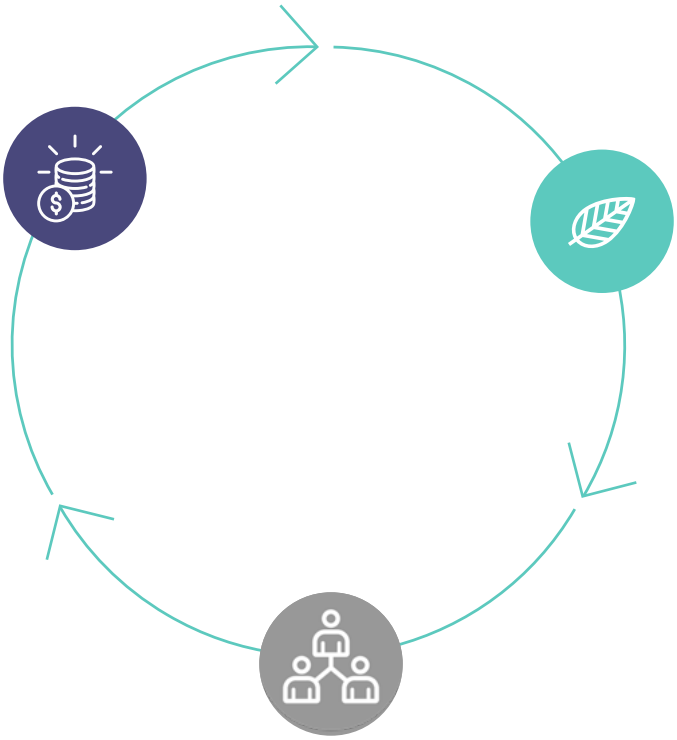
For the City of San Diego Zero Net Energy (ZNE) & Demand-Side Management Demonstration Project, CSE is partnering with the California Energy Commission and City of San Diego in a multiyear effort to test, verify and demonstrate the value of integrating energy efficiency, solar power and other demand-side resources by converting three public libraries to ZNE or near-ZNE buildings.

The aim is to create a replicable blueprint for local governments and substantiate the technical capacity of integrated demand-side management and renewable technologies to cost-effectively deliver ZNE in existing nonresidential municipal buildings and small commercial buildings.

BENEFITS TO BE PART OF LEEP SAN DIEGO

SAVE MONEY

By saving energy, water and reducing your waste, more money can be invested back into your business instead of its utility bills.



HELP THE ENVIRONMENT

San Diego is a world-class Smart City that leads the way in sustainable practices and goals, and your business can be a part of that.

GROW YOUR NETWORK AND CUSTOMER BASE

Gain exposure through the City of San Diego's Green Business Network and be more attractive to customers.

NEXT STEPS

The next steps for San Diego's LEEP to zero emissions will require the following actions in 2019-2021:

NEED 1

Form a new program and/or entity to facilitate innovation and seed investments in low-carbon facilities and systems.

Action 1-1

Gather a selected stakeholder group to determine the appropriate governance and organization structure for a San Diego program.

Action 1-2

Solicit funds to prepare a business plan for the start-up program and/or organization. Goals of the funding should include assessing market potential, conducting due diligence, articulating a focused mission, establishing a self-sustaining business model, including partnerships, defining organizational size and scale needed and determining start-up investment capitalization needs to execute projects.

Action 1-3

Establish environmental, economic/fiscal and social justice performance requirements to achieve the intended mission and attract capital investments for projects and site development. Targets may include:

- GHG reductions that align with state and city goals
- kWh reductions
- Peak-kW reductions
- Renewables capacity installed (in kW)
- Payback metrics (savings to investment ratio (SIR), internal rate of return (IRR), net present value (NPV), total resource cost (TRC), etc.
- Financial returns for growth and investment

NEED 2

Identify and select opportunity sites and program services of scale to demonstrate a master plan for low-emissions development and application.

Action 2-1

Working with willing property owners, develop a list of opportunity sites based on criteria presented in this report, and draft potential performance goals that may be adopted as policy or criteria for development partnerships, covenants, conditions and restrictions (CC&Rs), public land leases and development requests for proposals.

Action 2-2

Define service model options and qualify vendors (energy service companies, direct installer, power purchase agreement, water purchase agreement, energy-as-service model and others).

Action 2-3

Define the technical potential from preliminary engineering analysis for energy efficiency and renewable energy.

NEED 3

Deepen business-to-business outreach and education on the value of investments in low-emissions projects.

Action 3-1

Identify the outreach needs for stakeholders.

Action 3-2

Establish a peer-to-peer information exchange within existing professional organizations.

Action 3-3

Coordinate with the local utility provider, San Diego Gas & Electric, and existing local green business networks to provide education and outreach.

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Jack Monger, Executive Director, Industrial Environmental Association

APPENDIX 1 Case studies from other cities

Aspects of the broad LEEP idea have been or are being implemented in several efforts around the US and Europe. Some of these are surveyed briefly below.

Project or organization	Comment
Amsterdam Climate Fund (Amsterdam, Netherlands)	€100 million fund capitalized from sale of municipal utility; invests in wide range of energy-efficiency and generation projects, contracted by city and managed by Triodos Bank.
Berlin Energy Company (Berlin, Germany)	Bundles properties together for large energy retrofits of government owned assets.
Chicago Infrastructure Trust (Chicago, USA)	Integrated approach to regional infrastructure investment and finance. Public-private partnership.
Etriplus Greenport-Venlo (Venlo, Netherlands)	Public-private partnership charged with 44% reduction in emissions in large business park. Owned by area companies. Currently under development.
Boston Green Ribbon Commission (Boston, USA)	Helps bring businesses and universities together to implement Boston Climate Plan.
Innovation City Management (Bottrop, Germany)	Staff of 25 people charged with economic "green" renewal of large region; capitalized by private firms; brokered and completed over 200 projects, 980 buildings retrofitted, 37% reduction in emissions against baseline. https://icm.de/en/
London Green Fund (London, UK)	£120 million energy-efficiency revolving fund. Many public housing and school retrofits completed, district heating systems, fund capitalized by city and European Investment Bank and managed by Amber Infrastructure. www.london.gov.uk/what-we-do/funding/european-regional-development-fund/london-green-fund
NYC Energy Efficiency Corporation (New York City, USA)	Helps arrange technical assistance and financing for energy/water efficiency upgrades in New York City by brokering between all parties. www.nyceec.com

Pecan Street (Austin, USA)	Focused on advancing university research and accelerating innovation in water and energy. An applied research site that provides utilities, technology companies and university researchers with access to the world's best data on consumer energy and water consumption behavior, testing and verification of technology solutions, and commercialization services to help them bring their innovations to market faster.
Power Matching Cities (Groningen, Netherlands)	Consists of 40 households that have been part of a laboratory for sustainable living since 2007. Participating households have managed to find a balance between energy conservation, energy generation and comfort, while sharing resources, including micro combined heat and power systems, hybrid heat pumps, and smart appliances, in one system. https://www.dnvgl.com/technology-innovation/broader-view/sustainable-future/vision-stories/power-matching-city.html
Zuid Oost Energy (Amsterdam, Netherlands)	Public-private partnership under development near Amsterdam football stadium. Partnering with large data centers, banks, hospital and stadium to set up local utility to exchange heat, cooling and electricity among buildings at different times of day and night. Aims for zero emissions by 2035. http://www.zoenergy.nl/nieuws/

APPENDIX 2 Summaries of the workshops

WORKSHOP 1 – THE RETURN ON INVESTMENT OF CLIMATE ACTION - 27 JANUARY 2017

Keynote Speaker: Mayor Kevin Faulconer, Mayor of City of San Diego

The first workshop took the perspective from the city and set the stage on perceiving sustainability as both a city and a business affair. We also looked at the city's overall climate goals. Participants discussed how GHG emissions will have both important implications for businesses, and how businesses can contribute to the implementation of the city's climate action plan. We also ensured that the attending business representatives understood upcoming policy changes from the federal- and state level, so that they can get out in front.

What types of potential initiatives and projects might be pursued in San Diego to engage the public and private sectors around the Climate Action Plan (CAP) goals?

- Wider use of emissions benchmarking
- Large-scale, integrated, low-carbon development districts
- A public-private partnership to help monitor and implement the CAP
- A "commitment" summit
- Demonstration projects in Barrio Logan, neighborhood in south central San Diego
- "Pilot mobility hub"
  - Electric with parking garage, smart tech, shuttles to shipyards
- Master planning
  - Businesses have time to incorporate additional changes but planning needs to begin now
  - Need quantifiable goals for outcomes and impact
- Collaboration: businesses typically work with businesses, and cities with cities, but haven't seen the joint approach much
- Microgrid with multiple owners
- Public sector can learn from private sector
- Need to work within mandates – a lease can require more than what is mandated.

How are businesses currently looking at their energy bill?

- Benefits – what are perceived benefits? Use metrics that resonate with businesses
  - Financial – save on operational costs, energy costs, maintenance costs; people driven primarily by money
  - Environmental stewardship: climate action economic development
  - Business understanding that efficiencies make them more competitive
  - Visibility/building a global reputation for San Diego businesses: marketing tool
- Cultural change – how does efficient movement of goods fit into this overall sustainable culture/lifestyle?
  - Need a general sense that energy and sustainability matters
  - Many companies do not have someone in charge of the program, of a sustainability initiative
  - Tenant relationship matters
  - What can a business do to affect sustainable delivery?
    - Example: Fill from retail store to reduce shipping distance
    - Extreme weather can affect logistics in different places
- Would a business be willing to give up profitability for sustainability? Not either/or; can be synergistic.

What (creative) financial and modeling mechanisms are available and what data is needed to inform wise investment decisions?

- Rolled costs into lease
- Total cost of ownership – incorporate this into financial planning
- Be aware of hidden costs and think long term
- Data is important – decisions should be driven by data and transparency
- Allows businesses to listen and come up with creative solutions
- Need a plan for a project that makes a significant contribution to achieving a CAP goal without government as the sole/key funding source.

How to communicate successes?

- Success stories work to attract businesses
- Referral program on city website
- How can the city leverage the connection point with these local small/medium-sized businesses?
  - Business improvement districts
  - Green business program – port
  - Peer-to-peer education needed
- Case studies focused on:
  - Buildings and standards for residential and commercial buildings; how to translate this to more complicated industrial/manufacturing facilities; becomes complicated when discussing benchmarking; what are we benchmarking against?
  - When benchmarking and looking for improvements over time, how to account for business growth at an industrial facility?

WORKSHOP 2 – THE BUSINESS METRICS OF CLIMATE ACTION - 4 APRIL 2017

Keynote Speaker: Commissioner Andrew McAllister of the California Energy Commission

During the second workshop, which took place two months later, we reviewed the efforts that came out of the first workshop and connected to the overall goal of the series of workshops: engaging the local San Diego business community in climate action. We introduced San Diego's Climate Action Plan on energy and water ordinances, in the context of requirements from the State of California. Over the course of the workshop, we tried to empower business leaders to commit to collecting and analyzing energy, water, waste and/or transportation data for their facilities. We also encouraged them to share best practices on anticipating to policy and to influence local action.

How can benchmarking help to achieve CAP goals for businesses?

- To know how to prioritize resources to achieve goals
- Baseline data to show marginal cost effectiveness of actions, measure progress
- What you measure becomes important
- Competitive advantage, reputation, keeping up with (getting out in front of) peers
- Executive buy-in/support for actions, to make argument for intelligent investing.

What can we learn from other cities and their benchmarking actions?

- Regulations help leaders level the playing field
- Educational component is key
  - Support education and outreach to transform market
- Need to learn more about
  - Successes and failures
  - How to promote the benefit
- Cities with higher growth/more development can reach high goals easier, but also have opportunities for retrofit
- Management systems and methods to find solutions and re-evaluate annually.

What is unique about San Diego and how can we capitalize on that?

- Eighth largest city in the USA
- More B2B, not consumer-facing
- Most companies have 50 employees (small businesses) – few headquarters here
- Existing partnerships, already cross-sector and cross-city communication (very collaborative)
- Train people to make the business case internally; the Chamber's Young Leaders Program
- 2030 District – need a downtown location; disconnected – needs a business lead
- Can do root cause analysis; look for constraints, waste and innovative solutions
- Quality of life dashboard – Equinox Project
- Economy depends on environment; make clearer the link between other issues people care about and CAP goals using metrics
- Military Base and tourism.

How can resource conservation improvements lead to advances in

- Public health/public safety: fewer emissions, better air quality
- Economic development
  - Lower costs and raise revenues related to energy and waste generation
  - Jobs
- Business profitability
  - Avoid carbon tax
  - Resiliency
  - Reinvesting resources that would have been wasted.

What are the fears of data collection from the business perspective?

- Accountability to commitment with uncertainty of long-term business climate
- Makes data public – fear of what could data show
- New thing, new activity requires investment
  - Basic data collection is a challenge
- Building owners do not want to have to raise rent – tenant vs owner problem.

What outcome would you like to see?

- Benchmark against competitor already, but not against other businesses
- Create district "Green teams" to promote peer interactions
  - Industry "clusters" that supply one another
  - A no-name B2B coffee-meeting to influence (basically continue workshops but by industry; have leaders be the people who have been at the workshops; bring their network in; what is their incentive – recognition by CSE?)
- Use Center for Sustainable Energy money "pots" and benchmarking coach program
- Case studies that demonstrate efficacy of benchmarking for profitability
- Marketing toolkit to push to bigger audience
- Develop true call to action, clear direction and roadmap for planning purposes
- Provide visibility and recognition of accomplishment
- Climate education partners – in process of writing up case studies, emphasize the "how" of getting things done
- Understand who is the entry point within an organization
- SD Regional Energy Partnership – Green Business Network shines light on businesses going above and beyond
  - Can we shine light on businesses that influence other businesses (referral program)?

WORKSHOP 3 – ORGANIZING THE SAN DIEGO BUSINESS COMMUNITY FOR CLIMATE ACTION - 10 OCTOBER 2017

Keynote Speaker: Roland Hunziker, Director Sustainable Buildings and Cities, WBCSD

The third and last workshop focused on the Low Emissions Economy Partnership, a WBCSD project. The goal of the workshop was to organize the local business community around climate action. Besides discussing possible demonstration sites within the city of San Diego, we also brainstormed on a potential business to business outreach or advocacy effort.

- Speak directly to pain points of businesses
  - Resiliency
  - Triple bottom line
  - Tap into messaging that is really resonating
  - Provide resources and support network they need to take advantage of resources
- It's incumbent upon the city to make sure businesses have the data they need to make decisions
  - Bring resources to businesses in a way that they can engage
- Reach out to properties, not businesses
  - Property landlords have no incentive to provide solar
  - They're not the ones paying the electrical bill
- How to structure energy efficiency to increase property value?
- Speak the language used by Chief Financial Officier/ property owner can increase rent
- This needs to be recognized by property value assessor community: how to assess energy efficiency and how to standardize it and have it considered in valuation of property?
- Financing to maximize return and minimize risk, increase ROI
  - 3- to 5-year payback generally, but this does not include operational savings; it only includes actual energy cost savings
    - Program structure helps to increase ROI
    - Securitization as an option or forward flow agreements
    - 4.57% fixed for 20 years for a property owner adding solar
    - Revolving loan fund – fund the right things
  - Can we implement triple bottom line reporting?

What can LEEP be?

- Can LEEP be intermediary between investors and those who want to do projects/businesses? LEEP catalyzes push and pull; it's a suite of policies
  - Push – gives tenants a lease buy-right to make efficiency improvements to property
  - Pull – need a charismatic leader
- Not necessarily investment that is needed – need the structure to be right
- Identify offset projects within region that LEEP can support – also identify donations from elsewhere
- Need to get property owners to take action
- LEEP supplements action to drive policy; brings a different type of capital to region for energy projects; maybe its brain power/human capital
- LEEP can provide runway – policies and programs – but has to bring business in
  - Empower businesses to own what's happening in San Diego
  - Connect the dots between businesses wanting to a) do the right thing and b) make money
  - How to bring money to small businesses that don't have access to capital?
- LEEP can help design program for investors; investors need TLC: transparency, longevity, consistency
- LEEP can supplement city efforts and reinforce what they're trying to do
  - Collaboration and partnership projects, close proximity of organization to build needed infrastructure to achieve greater good
  - Policy – benchmarking
  - LEEP as "easy button" to push to insert sustainability into projects
    - Plug in funding
    - Energy around doing projects
    - Operator connectivity
    - Education
    - Between regulations and value proposition for exceeding those
  - Fiduciary entity
    - Has credibility in business world
    - Be able to do deals
    - Led by people who can speak to both sides.

Demonstration site

- University of California, San Diego (UCSD) microgrid
  - Cogeneration plant, natural gas fired, combined heat and power, thermal, 3MW solar, fuel cell, energy storage system, EV charging
    - Allowed UCSD to be carbon neutral by 2025 and
    - Flexibility to control how energy is used
    - Building energy management system
    - Control energy use from a central point
    - Manage energy density as it moves into future
    - Save money
  - Direct access customer – 100% of energy supply is renewable
- LyftLift partnership to measure transmissions within an area to establish goals
- Community plans
- Implementation regulations getting streamlined
- Regional demonstration projects

- Tailgate (mobile) park
  - Private development on public land (Chula Vista Bayfront)
  - C street corridor
  - Sports arena
  - City's stadium property in Mission Valley
  - Investment into city facilities
  - Large complex redevelopment projects up and down California coast
- Modeling high-performance development
  - Three levels of projects: minimum, moderate, maximum
    - How does building purpose determine modeling?
    - Impose requirements – not just on new buildings but on retrofits as well
    - Transparent modeling that can stand up to scrutiny
    - Penalties for not meeting target.

What is the best way to communicate and share? How do you find the pain points?

- The city can't lead the outreach
- Message must be tailored to and different for each audience
  - Business community communications
  - Frame it as "how to be a better business? (with the answer as "being sustainable"; they don't want to be told what to do; competition matters; leadership is possible on environmental issues)
- Meet businesses where they are (roundtables on topics within the workplace.

APPENDIX 3 Cities, companies and organizations taking part in the workshops

AECOM
Alexandria Real Estate Equities
Associated General Contractors San Diego
BAE Systems
Biocom
Caesars Entertainment
Calpine
Carrier Johnson + Culture
CDC Small Business Financing Group
Center for Sustainable Energy
ChargePoint
City of Carlsbad
City of Chula Vista
City of San Diego
CleanSpark
Cleantech San Diego
Climate Action Campaign
Climate Action Commission - Solana Beach
Climate Education Partners
CohnReznick
Coronal Energy
Correlate
Corridor Power Incorporated
DIA/AmeriCorps
Diesel Pollution Solutions Inc.
Dimensional Consulting
DNV GL
Ecova, Inc.
Ellen Kappes Consulting
Energy Policy Initiatives Center
Equinox
Fairbairn Consulting
Forestview Advisors
General Atomics Aeronautical Systems
GOBIZ
Hines
HomeFed Corporation
Illumina, Inc.
Industrial Environmental Association
Investor Confidence Project
Kitchell
Latham & Watkins
lumeo
Manasjan Consultancy
McGinley & Associates
Measurabl
Mentus
National City Chamber of Commerce
Navy Region Southwest
Nettleton Strategies
Okeanos
OpTerra Energy Services
OSIsoft
Port of San Diego
Primo Wind
Procopio
Qualcomm Technologies, Inc.
Rep. Scott Peters
Responsible Solutions
San Diego County Regional Airport Authority
San Diego Gas & Electric
San Diego Regional Chamber of Commerce
San Diego Regional Climate Collaborative
San Diego Regional EDC
San Diego State University
San Diego Unified School District
San Diego World Trade Center
Scripps Institution of Oceanography
SD Regional Chamber
SDG&E
Semper Varia
Sempra Services.Corp.
SenseOps
Solar Turbines
Sony Electronics
Strategic Communications
Sullivan Solar Power
Sustainability Simplified
T2 Energy, LLC
Terra-Gen
The Manasjan Consultancy
The San Diego Foundation
Toshiba America
UC San Diego
UPS
Whitney M. Skala, A P.C.
World Business Council for Sustainable Development

ABOUT WBCSD

WBCSD is a global, CEO-led organization of over 200 leading businesses working together to accelerate the transition to a sustainable world.

We help make our member companies more successful and sustainable by focusing on the maximum positive impact for shareholders, the environment and societies.

Our member companies come from all business sectors and all major economies, representing a combined revenue of more than US$8.5 trillion and with 19 million employees.

Our Global Network of almost 70 national business councils gives our members unparalleled reach across the globe. WBCSD is uniquely positioned to work with member companies along and across value chains to deliver high-impact business solutions to the most challenging sustainability issues.

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