ENERGY GENERATION AND STORAGE (EGS)

Co-benefits

- Adaptation Strategy Support
- Air Quality
- Economy + Jobs
- Energy Conservation
- Public Health
- Resource Conservation
- Transportation System Improvement

Energy generation and storage (EGS) strategies involve supporting clean renewable energy, and decreasing dependence on traditional, GHG-emitting power sources. Renewable energy technologies such as wind, solar, geothermal, hydroelectric, and biomass — provide substantial benefits for the climate, human health, and economy.

Some renewable energy technologies such as wind and solar have variable outputs which can cause them to generate power inconsistently. Storage technologies have the potential for smoothing out the electricity supply from these sources and ensuring that the supply of generation matches the demand. Different energy storage technologies such as thermal storage, compressed air, hydrogen, pumped hydroelectric storage, flywheels, and batteries contribute to electricity stability by working at various stages of the grid -- from generation to consumer end-use. The Cities in the South Bay recognize the importance of energy generation and storage and will continue to explore how some of these technologies can be used both locally and collectively, across the South Bay. Because these strategies are exploratory, the GHG reductions were not be quantified for this CAP. In the future, as the South Bay Cities Council of Governments and cities in the South Bay identify and implement EGS strategies, the associated GHG reductions will be quantified.

This CAP presents the EGS goals and measures that most of the South Bay cities expressed interest in implementing. A full list of EGS Strategies selected by the cities along with references is available in the Appendix F.

GOAL EGS: A - SUPPORT ENERGY GENERATION AND STORAGE IN THE COMMUNITY

To expand the usage of renewable energy generation and storage technologies, it is critical to implement the right policy tools and educate the public about the benefits of these technologies.

MEASURE EGS: A1 - COMMUNITY CHOICE AGGREGATION

Community Choice Aggregation (CCA) allows cities and counties, to combine the electricity demand of customers in their jurisdictions and procure electricity for these customers through their own generation or through the market. Benefits of aggregation include increased local control over electricity rates, possible savings to the customer, and the option to use more renewable energy.

MEASURE EGS: A2 - SITING AND PERMITTING

To accelerate the implementation of renewable energy technologies, regulatory barriers need to be addressed to help ensure smooth deployment. Streamlining the siting and permitting process and reducing administrative burden to developers will help speed up the process of bringing these projects to reality.

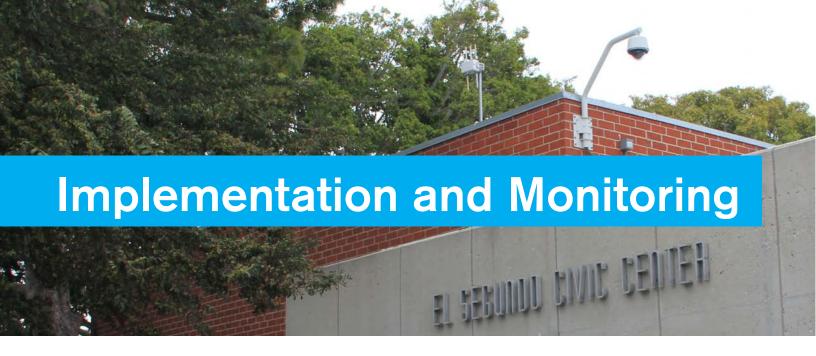## MEASURE EGS: A3 - POLICIES AND ORDINANCES

Robust policies will help scale up the implementation of renewable energy technologies and will also make users more resilient to interruptions in power supply and price variations, while promoting the benefits of new local industries.

MEASURE EGS: A4 - EDUCATION AND OUTREACH

Educating communities about the renewable energy generation sources and energy conservation is important to cause change in society towards a cleaner and greener future. Education and outreach strategies need to be catered to different stakeholder groups to address some of the key challenges facing the implementation of these technologies at the local level.

MEASURE EGS: A5 - EXPLORE TECHNOLOGIES IN MUNICIPAL FACILITIES

Cities that utilize renewable energy and storage technologies in municipal facilities can help to increase energy capacity for municipal operations. These activities can also set an example for the community.

Implementation and Monitoring

The Sub-Regional Climate Action Plan is a policy-level document that provides South Bay cities with guidance for the implementation of their city specific climate action plan GHG reduction measures. The SBCCOG's role for the successful implementation and monitoring of these plans is to assist cities through its mission of environmental advocacy and outreach as well as its role in facilitating and securing funding for implementing cities' climate action program strategies to lower their GHG emissions. Additionally, the SBCCOG's role is to assist South Bay cities in the preparation of climate change through inventory updates as well as aiding cities in the future development of climate adaptation plans and programs. The following sections outline key program areas for the SBCCOG to assist in monitoring, financing and outreach:

Monitoring: Baseline and GHG Inventory Updates

South Bay cities' GHG inventories were collected and analyzed in 2014. To understand and monitor the impacts of cities' implementation efforts, updates to the inventories will need to occur. The SBCCOG, in cooperation with its Utility Partners, will work to provide this information through the following opportunities:

- Continue to provide South Bay cities with resources to participate in the utility companies' Energy Efficiency Programs. These programs include:
  - o Energy Efficiency Benchmarking for Municipal Agencies
  - o Energy Efficiency Leadership Program

- Solicit and/or respond to funding and grant opportunities (Strategic Growth Council; California Energy Commission; etc.) to update city and sub-regional inventories.

Financing: Implementation and Adaptation Projects

The SBCCOG will continue to seek Local and State resources to fund sub-regional and city specific sustainability strategies that advance the goals and measures chosen by cities to reduce GHG emissions. This will range from innovative pilot projects to those that will be scalable based on previous work. The SBCCOG will solicit program specific and/or innovation grants from a multiplicity of funding sources including:

- Metro Transportation Funds
- California Energy Commission Funds, including EPIC and ARFVTP grants
- Workforce Investment and Community Development Grants
- Air Quality Mitigation Grants through the South Coast Air Quality Management District
- California Air Resources Board Funds, Including Climate Communities grants
- Other funding mechanisms, including Electrify America settlement

Table 9: Funding Sources

Strategy	Federal Sources	State Sources	Local Sources
Accelerate the Market for Electric Vehicles	▪ Recreational Trails Program (for NEVs) ▪ Economic Development Administration (EDA) Grant ▪ Surface Transportation Block Grant Program (STBGP) (multi-modal complete streets) ▪ Transportation Investment Generating Economic Recovery (TIGER) Grant	▪ Infrastructure and Economic Development Bank - Infrastructure Revolving Fund Program ▪ Gasoline Taxes/Operations and Maintenance ▪ California Air Resource Board (CARB) ▪ California Energy Commission (CEC)	▪ Transportation/Mobility Improvement Programs (Measure M) ▪ Southern California Edison Charge Ready Program ▪ South Coast Air Quality Management District (SCAQMD) Programs
Adopt Active Transportation	▪ Surface Transportation Block Grant Program (STBGP) ▪ Economic Development Administration (EDA) Grant ▪ Recreational Trails Program (RTP) ▪ Safe Routes To School Program (SRTS)	▪ Infrastructure Revolving Fund Program ▪ Gasoline Taxes/Operations and Maintenance ▪ Caltrans ATP Grant	▪ Transportation/Mobility Improvement Programs (Measure M) ▪ Rule 20A Utility Set-asides ▪ Local Return on Measure M and Previous Initiatives ▪ Enhanced Infrastructure Financing District (EIFDs) ▪ Development impact fees
Integrate NOD	▪ Surface Transportation Block Grant Program (STBGP) ▪ Community Development Block Grant (CDBG) Program ▪ Economic Development Administration (EDA) Grant	▪ Infrastructure Revolving Fund Program ▪ Statewide Community Infrastructure Program ▪ Strategic Growth Council (SGC) Grant	▪ Transportation/Mobility Improvement Programs (Measure M) ▪ Rule 20A Utility Set-asides ▪ Community Facilities Districts (CFDs) ▪ Community Revitalization and Investment Areas (CRIAs) ▪ Local Return on Measure M and Previous Initiatives ▪ Landscape and lighting districts (LLDs)
Transit Network Infrastructure	▪ Surface Transportation Block Grant Program (STBGP)	▪ Low Carbon Transit Operations Program	▪ Los Angeles County Metropolitan Transportation Authority (Metro) ▪ Transportation/Mobility Improvement Programs (Measure M) ▪ Local Return on Measure M and Previous Initiatives ▪ Property and Business Improvement Districts (BIDs)
Land Use Element and Zoning Update (Affordable Housing)	▪ Community Development Block Grant (CDBG) Program	▪ Strategic Growth Council Transformative Climate Communities (TCC) ▪ Affordable Housing and Sustainable Communities (AHSC) Program	▪ Property and Business Improvement Districts (BIDs)
Energy Efficiency	▪ Solar America Cities Program ▪ Clean Cities program	▪ Property Assessed Clean Energy Financing ▪ California Solar Initiative ▪ Financing Authority for Resource Efficiency in California ▪ Self Generation Incentive Program	▪ Landscape and lighting districts (LLDs)
Waste, Greening, Energy Generation	▪ EPA's Water Finance Clearinghouse ▪ Economic Development Administration (EDA) Grant	▪ Low Carbon Transit Operations Program ▪ Reuse Assistance Grant Program	▪ Community Facilities Districts (CFDs) ▪ Development impact fees

Sustainability projects for consideration will include strategies to:

- Promote the Electric Vehicles (EV) market
- Plan, install and maintain public EV charging infrastructure
- Identify opportunities where renewable energy technologies can be aggregated and used with battery storage to promote site specific and scalable Net Zero Micro-Grids
- Pilot projects to test renewable energy use such as community-based anaerobic digestors or urban geo-thermal technology
- Develop and implement a sub-regional "Slow-speed Network
- Identify Hazard mitigation and security Improvements
- Seek Workforce and community development programs
- Foster partnerships and programs in support of community health and wellness

Environmental Advocacy and Public Outreach

Integral to the process of effective implementation is the engagement and education of city residents and businesses. Community education and involvement is essential to help the South Bay cities reach their GHG emission reduction goals. The SBCCOG will continue its outreach efforts through the program work and communications channels of its South Bay Environmental Service Center. Working with its environmental partners (including: SCE, The Gas Company, West Basin Water District, Los Angeles Department of Water and Power and the County Sanitation District and Los Angeles Metropolitan Transportation Authority) the SBCCOG will promote and market sustainability programs and information to South Bay residents and businesses. These include:

- Water Conservation
- Recycling Programs
- Home and Business Energy Efficiency Programs
- Renewable Energy Financing Programs
- Alternative Transportation Programs