

Date: May 12, 2011 **REVISED 5/27/11**

To: Joint Policy Committee

From: Jack Broadbent, Executive Officer, BAAQMD
Steve Heminger, Executive Director, MTC
Ezra Rapport, Executive Director, ABAG
Will Travis, Executive Director, BCDC

Subject: Proposal on Regional Economic Development and Resilience

EXECUTIVE SUMMARY AND RECOMMENDATION:

At the March 18th JPC meeting, the members present requested that the executive directors bring a strategic work program on Bay Area economic development and climate/energy resilience to the May JPC meeting.

This memo proposes three complementary projects that integrate Bay Area economic development and climate/energy resilience. Climate/energy resilience includes both adaptation and mitigation actions. These projects, which require the JPC's leadership, will make the Bay Area economically stronger and healthier in the near-term and more prepared for the major challenges confronting us between now and the middle of the 21st Century. The projects will be conducted in conjunction with our partners from business, academia, government, philanthropy and other sectors.

1. The **Near-Term Green Jobs+ Project** will immediately focus JPC resources on three strategies—building retrofits, local renewable power and electric vehicles—that will create Bay Area jobs now, build our resilience to climate/energy impacts, and reduce greenhouse gas emissions.
2. The **Bay Area Economic Strategy Framework**, undertaken for the JPC by the Bay Area Council Economic Institute and its partners, will provide the basis for long-term public-private sustainable economic development in the region, and will support and inform the development of Plan Bay Area. The strategy will assess and analyze

regional industry distribution, the qualitative drivers of Bay Area economic growth, and our economic competitiveness.

3. The **Bay Area Climate and Energy Resilience Strategy** will provide guidance to long-term regional and local planning, including Plan Bay Area, on protecting the Bay Area's economy, public health, infrastructure and ecosystems from sea-level rise, water shortages, high energy prices and other impacts. This work will focus on the institutional structures and resources that will be needed to create a multi-stakeholder adaptive management process on regional resilience.

Recommendation:

To further the initiatives outlined in this memo, WE RECOMMEND:

1. THAT the Joint Policy Committee direct the leadership of the regional agencies to proceed with the projects outlined in this memo.

A BAY AREA CALL TO ACTION

The Bay Area is one of the best places in the world to live and work. It's not an accident that we attract and develop great people who do great things. We have a \$500 billion economy (24th in world if we were a nation) and one of the most highly educated workforces in the country. Technology developed in the Bay Area has changed the world.

We are historic champions for civil rights and one of the most diverse communities anywhere. We have protected the bay and open spaces, created a fabulous system of parks, and developed unparalleled cultural offerings. We are national leaders in hybrid-car use, solar installations and clean tech. Tourists love our beautiful urban setting.

Perhaps most importantly, the Bay Area has proven that economic development and environmental protection support each other. The protection of our environment has made our region attractive to investors and smart people who build our economy. Our strong economy has provided us with much of the resources to protect our environment.

However, as the 21st Century unfolds, there are a number of very serious and inter-connected threats to the Bay Area's health and prosperity. We are facing severe and long-term state and local fiscal problems. Our job growth is uneven. The high cost of housing is a major barrier to personal and regional progress. Much of our critical infrastructure—roads, energy pipelines, water and sewer systems—is aging while budgets have been cut. There are significant disparities between lower-income and higher income residents—schools, access to services, food and health, pollution, etc.

And looming over it all, we face substantial and potentially catastrophic threats from both a major earthquake and climate/energy impacts like sea-level rise, water shortages, wildfires and high energy prices.

Clearly, the choice is ours. We can rest on our past greatness, putting our people and our considerable assets at risk, or we can look forward, revitalizing and reinventing the Bay Area for the global economy of the 21st Century. If we choose the path of working *together*, we can once again combine economic prosperity and environmental protection for the good of the entire region. And in doing so, we will serve as an inspiring model for the world.

Doing this will require, first and foremost, that we take greater responsibility for determining our future. Real economic prosperity requires that we create a sustainable economy for the long run. Our long-term economic well-being will not be assured unless we build it on a strong foundation that is resilient to the impacts of climate and energy changes. In fact, dealing with climate change in the Bay Area is as much an economic necessity as it is an environmental imperative. The Bay Area is in competition with the rest of the world to attract investment capital to our region. International capital will continue to flow to those places that have recognized the reality of climate change and are taking concrete steps to both reduce and adapt to its impacts. On the other hand, insurers are already abandoning places where risks remain too high. Again, the choice is ours.

PROJECT #1: NEAR-TERM GREEN JOBS+ PROJECT

This project will create Bay Area jobs, assist local businesses, increase the Bay Area's climate/energy resilience, and advance the shift to a low-carbon economy. The project will focus JPC coordination assistance on three high-impact strategies:

- Residential and commercial building retrofits
- Local renewable power
- Electric vehicles and infrastructure

We have selected these three strategies because they (a) address the economic, energy and climate crises together, (b) have the potential to eventually transform the region, and (c) are perfectly suited to local projects now that will teach us critical lessons for later region-wide scaling-up. The three strategies will also serve to complement Plan Bay Area's focus on the transportation and land use connection.

There are number of Bay Area public and private stakeholders working on each of these three strategies. Therefore, the JPC role will vary for each topic, strategically using our coordination, convening and leadership skills where we can add the greatest value.

Residential and commercial building retrofits

Energy efficiency is one of the most cost-effective and important strategies for reducing GHGs, increasing energy independence, creating jobs and boosting local economies. A Bay Area-wide building retrofit program could generate tens of thousands of jobs at varying skill levels and benefit thousands of small businesses. A California Community Colleges study in 2009 forecast a 38% increase over three years in Bay Area building energy efficiency jobs. Next Ten's *Many Shades of Green* found that California green jobs grew by 36% from 1995-2008 while overall jobs grew only by 13%. Finally, energy-saving retrofits are effectively a permanent utility bill reduction for all households, with particular importance for low- and fixed-income individuals. Money not spent on energy is money that can help grow the economy in other areas.

ABAG and eight Bay Area counties are currently developing *Energy Upgrade Bay Area*, a CEC-funded pilot program with two-year goals to retrofit 13,000 homes, create more than 1,700 jobs and reduce energy spending annually by \$6.7 million. The program is providing excellent lessons learned for marketing, incentives, job training and other factors crucial to creating a large-scale Bay Area program.

How will the JPC staff advance this strategy?

Energy Upgrade Bay Area is a two-year pilot program using ARRA stimulus funding. The region needs a financially sustainable, long-term, regional retrofit program. The JPC staff will work with ABAG to convene and facilitate public and private sector stakeholders who will create the roadmap for this long-term effort, focusing on finance and other top issues.

Local Decentralized Renewable Power

Governor Brown has proposed that California, by 2020, build 12,000 megawatts of clean, local renewable power generation—small and mid-sized solar, wind, combined heat and power (CHP) plants. This would supply 5-8% of current California electricity demand and be combined with an additional 8,000 MWs from large-scale renewable plants. The overall plan could produce a half million jobs in research, development, manufacturing, construction, installation and maintenance over the next decade.

A 2010 study by UC Berkeley’s Renewable and Appropriate Energy Laboratory (RAEL) found that a California feed-in-tariff, the financial instrument that makes local generation attractive, would, in the next ten years, create three times the number of jobs, increase direct state revenues by \$1.7 billion and stimulate up to \$50 billion in private new investment versus a “business-as-usual” renewable energy supply approach. Distributed power could also be brought on-line much faster than distant centralized sources with long transmission lines. Such a program would increase energy independence, improve air quality and bring significant revenue to cities, commercial building owners, school districts, and others. Ratepayers would see a small increase in their bills from distributed power in the near-term, but would save money long-term as fossil fuel prices rise.

How will the JPC staff advance this strategy?

While a range of public organizations and private businesses are pushing local renewable power, we are lacking a unified Bay Area strategy that will bring a large share of the Governor’s proposed 12,000 megawatts to our region. The JPC staff will fill this leadership void by coordinating and convening these stakeholders to develop a unified state/local action for finance, siting and other key issues.

Bay Area Electric Vehicle/Infrastructure Strategy

Electrification of the transportation system—through plug-ins like the Chevrolet Volt and full battery EVs like the Nissan Leaf— has the potential to transform our biggest Bay Area GHG sector, improve air quality and significantly increase our resilience to energy prices shocks and shortages. The Bay Area already has some of the nation’s least carbon-intensive electricity (primarily hydroelectric, natural gas and nuclear) and our increasing use of solar, wind and other renewables will make EVs even greener. Perhaps most importantly, similar to the effect of driving less demonstrated in CEOs for Cities’ *Portland Dividend*, more EVs can shift billions in Bay Area energy dollars that are currently going to oil companies and foreign countries and redirect them to the local economy.

How will the JPC staff advance this strategy?

BAAQMD, MTC and ABAG are each providing funding and support for separate Bay Area EV projects. The JPC staff will work with the three agencies to streamline and strengthen these now-distinct programs into a unified and coordinated approach. This work will build on the recent analysis of the JPC agencies’ EV efforts by ICF International.

JPC Resources required:

1. *JPC Climate Consultant*
2. *Regional agency staff (subject to availability and funding)*

PROJECT #2: BAY AREA ECONOMIC STRATEGY FRAMEWORK

Objective

A healthy economy is a prerequisite for a strong sustainability strategy. This analysis, undertaken for the Joint Policy Committee (JPC) by the Bay Area Council Economic Institute in partnership with the region's leading business and economic development organizations, will provide insight into the region's business dynamics, economic competitiveness, and current and emerging business trends. In developing the analysis, the project team will draw on the advice and support of an Advisory Committee composed of business and government stakeholders. Participation by individual business leaders and a broad range of business and economic organizations in the development of the study will directly engage business with government on issues of economic importance to the region, providing a framework for interaction and a platform for future cooperation.

The product of the study will provide a basis for the public-private development of economic strategies, for informed public policy decision making, and a framework for a broad economic development strategy for the region. The ideas generated will be actionable by the public and private sectors, will be integrated with JPC resiliency priorities, and will support and inform the region's ongoing Sustainable Communities Strategy (SCS) process.

Business Dynamics - Regional Industry Distribution

The first part of the study will be data-driven. It will evaluate the current distribution of industry and employment in the Bay Area, in the context of regional business dynamics. This will be used to map the Bay Area's economy by business cluster, and will be reflected in graphic representations of regional industry distribution.

Business dynamics will be modeled by examining the following:

- Within the region, a decomposition of employment changes:
 - Firm births versus firm deaths
 - Moves in and moves out
 - Growth versus contraction at existing establishments
 - With specific attention to the location of firm expansion (regionally, in-state, or outside California)
- A specific examination of startups in the region
 - Longevity
 - Expansion and relocation patterns
 - The distribution of related employment
 - In the region/county of their birth
 - In the broader Bay Area
 - In the rest of California
 - Outside of California

- Particular attention will be given to business location moves within and outside the region in an effort to understand the factors that make specific sub-regions more competitive than others for different purposes, and the Bay Area more or less competitive with other parts of California and the nation
 - Domestic data used in the analysis will be at the establishment level, so individual moves, including job numbers can be evaluated
- To the extent possible, using data or interview sources, an effort will be made to address business location decisions at a global level.
- An analysis of industries on the basis of their employment concentrations relative to both the Bay Area as a whole and the United States
 - Particular emphasis will be given to:
 - Driving Industries – those with a high employment concentration in the region (and sub-regions/counties) relative to the US overall
 - Supporting Industries – those with an employment concentration similar to that of California and the US as a whole, but which are necessary to ensure the success of the region’s economic drivers.

Overall, the objective of this element of the study is to identify locations where specific industries tend to accumulate and thrive, based on specific environmental factors that create either comparative advantage or disadvantage.

Business Dynamics – Analysis and Assessment of Qualitative Drivers of Economic Growth in the Bay Area

Building on this data-driven analysis, the second part of the study will use existing regional and extra-regional source material, and interviews with business and economic development organizations, investors, and leaders of both large and small enterprises to develop a qualitative assessment of the most important factors affecting current and future business location, hiring and expansion decisions.

Factors to be analyzed will include (partial list):

- Workforce quality
- Infrastructure quality
- Access to venture and other forms of investment capital
- Access or proximity to universities and other research institutions
- Regulatory cost and efficiency
- Local and regional incentives
- Quality of life and regional resilience/sustainability

Economic Competitiveness - An Actionable Foundation for Economic Strategy

This element of the study, building on the previous two, will provide further insight into the Bay Area’s distinctive strengths, and the regulatory and other issues requiring attention

at the regional and/or sub-regional level to address specific constraints on business investment. It will identify factors that differentiate the Bay Area as an economic region, potential high-value opportunities for growth and job creation, and impediments to business and job growth, as a basis for determining which focal points for regional economic strategy are likely to yield the most significant results.

In addition to data analysis, the analysis will be informed by interviews, possibly supplemented by other analytical tools, and will include perspectives from leading business, technology and research organizations, and both large and small/medium businesses.

The combined Business Dynamics and Economic Competitiveness analyses will support a focused set of recommendations for regional economic strategy and public policy to support strengthened competitiveness and economic growth. The outcome will provide a forward-looking foundation for an economic development strategy for the region that engages business and government around a refined set of economic and policy priorities.

This assessment will be presented in a format that is actionable at the public, private and public-private levels, based on a deeper level of understanding between government and business of jointly-developed regional economic priorities and a strengthened process for informed decision making on regional economic development strategies.

Timeline

July – December 2011

Estimated Cost

\$150,000 baseline, to be shared equally by MTC and private sector partners

PROJECT #3: BAY AREA CLIMATE AND ENERGY RESILIENCE STRATEGY

This project will provide initial guidance to regional and local planning processes, such as the 2013 Sustainable Communities Strategy, on how to protect the Bay Area's economy, public health and ecosystems from climate and energy impacts.

Goal:

By January 2011, Bay Area leaders from government, business, academic, and non-profit sectors will clearly understand:

- The most important climate/energy threats facing the Bay Area.
- How planning now to address this series of threats is absolutely essential to protecting our economy, public health, and ecosystems.
- Options for how to “mainstream” this information into Bay Area planning processes—general plans, disaster preparedness, sustainable communities strategy, regional/local investment programs, economic development plans, etc.

Task 1:

Summarize Bay Area Climate and Energy Impacts (July-September)

Summarize the best information available on expected climate and energy changes in the Bay Area. This work will be conducted by an independent Science Consultant. The consultant will draw on SPUR's *Climate Change Hits Home*, UC Berkeley's Bay Area impacts research, LBL energy research, the State of California's Climate Adaptation Strategy, and relevant studies by public health departments, water agencies and other stakeholders. Topic-specific advisory groups will be formed as needed.

- How will changes in global climate systems affect the Bay Area? What shifts have already been observed? What do scientists project for our region, e.g., sea level rise, temperature, rainfall/snowfall, extreme events, and ocean acidification.
- What are the most likely scenarios for long-term changes in prices and supplies for energy used by Bay Area residents and businesses—gasoline, natural gas, coal, solar, wind, geothermal, etc.
- What are the expected short- and long-term impacts in the Bay Area?
 - Economy—infrastructure damage, job losses, energy shortages and price increases, water shortages, agriculture damage, etc.
 - Public Health—air pollution, heat waves, wildfires, vectors, food prices, etc.
 - Ecosystems—sea level rise/storm surge, habitat and species loss, etc.
- Which populations, assets and geographic areas may be most vulnerable?
- Which impacts will be most important to the Sustainable Communities Strategy and other regional and local planning processes?

Task #2:

Map Current Bay Area Resilience Efforts and Facilitate Collaborations (July-August)

There are a number of entities in the Bay Area who are already planning for climate and energy impacts. These include water agencies, energy utilities, public health departments, cities and counties, regional agencies, and groups working to protect marine and terrestrial ecosystems. This task will summarize the current status of Bay Area planning efforts to address each topic area, e.g., water supply, infrastructure, public health, etc. and will bring together topic-specific advisory groups for information-sharing discussions. This work will be performed by the JPC Climate Consultant and will build on the “mapping” project conducted by Climate Bay Area over the past year. A Project Advisory Committee will assist the JPC consultant.

- Who are the key stakeholders for each topic area?
- What planning efforts are already completed, underway or planned?
- What are the key barriers and lessons learned to-date?
- What are the most important unmet research needs?
- Where will multi-stakeholder collaborations improve planning?

Task #3:

Identify, Review and Discuss Potential Bay Area Strategies (September – November)
Identify the range of Bay Area solutions or approaches for each topic area. This work will be led by the JPC Climate Consultant with assistance from regional agency staff. The information will be primarily collected through literature review and interviews with key Bay Area individuals and organizations. Topic-specific advisory groups will discuss and develop sets of potential strategies. The Project Advisory Committee will assist the consultant, focusing on overall and cross-sector strategies.

- What is the range of solutions for each topic area?
- Which solutions cut across topics and provide multiple benefits?
- Which solutions would help Bay Area adaptation and GHG mitigation?
- Which solutions will provide equity, economic and environmental co-benefits ?

Task #4:

Identify Potential Structures and Resources: Lessons Learned from Other Regions (July-September)

Identify and analyze the key lessons learned on structure/process and resources from urban climate and energy planning efforts already underway in New York City, Chicago, King County (WA), London and other regions. Identify possible models for regional collaboration previously used in the Bay Area. This work will be conducted by an independent consultant with the assistance the JPC Climate Consultant. The information will be collected through literature review and expert interviews.

- What planning structure and process was used? Leadership? Stakeholders? What decision-making process was employed?
- What implementation processes are being used? General plans? Disaster preparedness plans? Joint Powers Agreements? Legislation and regulation? What incentives and support will be required to get local adoption of various measures?
- What resources were needed for the four basic phases of the planning and implementation process—analysis of impacts/vulnerabilities, strategy selection, implementation, on-going monitoring and strategy revision?

Task #5:

Produce Summary Report and Bay Area Resilience Symposium (October-January)
The findings from Tasks 1-4 will be summarized in a report for Bay Area leaders. In Part I of the report, the scientific community will present the findings on Bay Area climate/energy changes and impacts on specific areas (Task 1). In Part II of the report, the Joint Policy Committee and its partners will present the findings on current planning efforts, potential strategies and lessons learned from other urban areas (Tasks 2-4).

The report will be used in two primary ways. First, it will provide the content for the Bay Area Resilience Symposium in January 2012. The symposium will bring together Bay Area leaders from science, business, government, educations, foundations, and community-based organizations. The goal of the symposium will be to create a shared regional understanding of resilience and to gain broad support for resilience planning to create a

vibrant, healthy and prosperous Bay Area. Second, the JPC and its partners will take the report “on the road,” conducting a series of sub-regional or county workshops to review and discuss the findings with local governments, utilities, special districts and others.

JPC Resources required:

- 1. JPC Climate Consultant and regional agency staff (subject to availability and funding)*
- 2. \$40,000-\$50,000 for consultant assistance with Tasks 1, 4 and 5.*

Note: Public and private partners will share in the costs of Tasks 4 and 5.