MEETING NOTICE
AND AGENDA

REGIONAL PLANNING TECHNICAL WORKING GROUP
The Regional Planning Technical Working Group may take action on any item appearing on this agenda.

Thursday, May 14, 2009

1:15 to 3:15 p.m.

SANDAG, 7th Floor Conference Room
401 B Street, Suite 800
San Diego, CA 92101-4231

Staff Contact: Carolina Gregor
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AGENDA HIGHLIGHTS

• RECOMMENDATION ON ALTERNATIVE GROWTH SCENARIOS FOR THE 2050 REGIONAL GROWTH FORECAST FOR USE AT PUBLIC WORKSHOPS

• STATUS OF NEXT REGIONAL HOUSING NEEDS ASSESSMENT (RHNA)/HOUSING ELEMENT CYCLE AND SB 575

• DEMONSTRATION OF WEB-BASED SMART GROWTH PHOTO LIBRARY

• SUSTAINABLE REGION PROGRAM ACTION PLAN AND TOOLKIT

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<td>PUBLIC COMMENT AND COMMUNICATIONS COMMENT</td>
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<td>Members of the public will have the opportunity to address the Regional Planning Technical Working Group (TWG) on any issue within the jurisdiction of the group. Speakers are limited to three minutes each.</td>
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**CONSENT ITEM 3**

+3a. SUMMARY OF APRIL 9, 2009, TWG MEETING  APPROVE

The Working Group should review and approve the April 9, 2009, TWG meeting summary.

+3b. SUMMARY OF APRIL 30, 2009, TWG SPECIAL WORKSHOP ON THE REGIONAL GROWTH FORECAST  APPROVE

The Working Group should review and approve the April 30, 2009, TWG meeting summary.

**REPORT ITEMS (4 through 11)**

4. REPORTS FROM THE TWG MEMBERS  DISCUSSION

Members of the TWG may report on their activities, upcoming events, and/or planning-related conferences.

+5. ESTABLISHING THE REGIONAL PLANNING STAKEHOLDERS WORKING GROUP (Jane Clough-Riquelme)  APPOINT

The SANDAG Transportation and Regional Planning Committees have recommended that the SANDAG Board of Directors approve the establishment of a Regional Planning Stakeholders Working Group to participate in the development of the 2050 Regional Transportation Plan (RTP) and to set the stage for a future update to the Regional Comprehensive Plan (RCP). Attached is the report to the Regional Planning Committee (RPC). The Board is scheduled to take action on this item on May 22, 2009. Pending Board approval, the TWG is asked to appoint two members to serve on the selection committee.
ITEM #: RECOMMENDATION

6. RECOMMENDATION ON ALTERNATIVE GROWTH SCENARIOS FOR THE 2050 REGIONAL GROWTH FORECAST FOR USE AT PUBLIC WORKSHOPS (Beth Jarosz)

Recommend

At the Special TWG Workshop held on April 30, 2009, the Working Group discussed and analyzed the draft results of the various 2050 alternative land use scenarios for Phase 2 of the 2050 Regional Growth Forecast. The attached minutes (Item 3b) reflect a summary of the discussion. A handout and materials proposing a recommendation (based on discussion from the TWG workshop) will be distributed at the meeting. The Working Group is requested to discuss the proposal and make a recommendation to the SANDAG RPC on preferred scenarios for additional analysis and for use at the upcoming growth forecast workshops to be held this summer.

+7. STATUS OF NEXT REGIONAL HOUSING NEEDS ASSESSMENT (RHNA)/HOUSING ELEMENT CYCLE AND SB 575 (STEINBERG) (Genevieve Morelos and Susan Baldwin)

Discussion/ Possible Action

Staff will update the TWG regarding the discussions and legislation that will affect the next RHNA/housing element cycle for the San Diego region. Senator Steinberg is the author of SB 575, which is a bill that is proposing changes to SB 375 (Steinberg). SANDAG is asking that SB 575 align the next RHNA/housing element with the update of the next RTP. The report that was prepared for the May 8, 2009, SANDAG Executive Committee meeting is attached.

8. DEMONSTRATION OF WEB-BASED SMART GROWTH PHOTO LIBRARY (Carolina Gregor)

Information

SANDAG has uploaded a sampling of photos from the Smart Growth Photo Library to the SANDAG Web site and will be producing CDs and/or flash drives containing all of the photos taken by the professional photographer for this project. Staff will provide a demonstration showing how to access the photos on the Web site and will circulate an order form for jurisdictions that wish to order the entire photo library, which contains approximately 4,000 images throughout the region. The images can be used in local presentations and brochures.
+9. SUSTAINABLE REGION PROGRAM ACTION PLAN AND TOOLKIT (Susan Freedman)  INFORMATION

As part of the California Energy Commission (CEC) agreement, SANDAG was tasked with developing transferable tools and resources based on our energy planning efforts. The Sustainable Region Program (SRP) Action Plan and Toolkit provide guidance that other regional governments can use if they wish to implement an energy-saving program for local governments. These documents were developed in partnership with the CEC, California Center for Sustainable Energy, and San Diego Gas and Electric (SDG&E). They will be used in the region when SANDAG expands the SRP to all local governments through a Local Government Partnership with SDG&E.

+10. REGIONAL ENERGY STRATEGY UPDATE (Susan Freedman)  DISCUSSION

Staff will present progress on the Regional Energy Strategy Update and seek input on the draft strategic goals and policy measures.

11. ADJOURNMENT AND NEXT MEETING  INFORMATION

The next TWG meeting will be held on Thursday, June 11, 2009, from 1:15 to 3:15 p.m.

+ next to an item indicates an attachment
SUMMARY OF APRIL 9, 2009, REGIONAL PLANNING TECHNICAL WORKING GROUP (TWG) MEETING

Agenda Item #1: Welcome and Introductions

Jon Brindle, City of Escondido and TWG Vice-Chair, presided. Self-introductions were conducted.

Agenda Item #2: Public Comments and Communications

Stephan Vance, SANDAG, announced the upcoming ceremony for the Bayshore Bikeway extension in Imperial Beach at 10 a.m. Saturday, April 18, 2009.

CONSENT ITEMS (#3 through #4)

Agenda Item #3: Summary of the March 12, 2009, TWG Meeting

The TWG approved the minutes.

Agenda Item #4: Status of Proposal for On-Call Visual Simulation Services

The SANDAG Service Bureau is working to provide "on-call" visual simulation services for "2-D" simulations. The Service Bureau is developing a Request for Proposals and will report back to the TWG when the service becomes available.

REPORT ITEMS (#5 through #10)

Agenda Item #5: Reports from TWG Members

No reports were made.

Agenda Item #6: Announcement: Special Workshop on the 2050 Regional Growth Forecast

Beth Jarosz, SANDAG, reported that a special workshop on the 2050 Regional Growth Forecast will be held on Thursday, April 30, 2009, from 12 noon to 3 p.m., focused on Phase 2 of the Forecast. Participants will have the opportunity to discuss the alternative growth scenarios in detail and recommend alternatives with which to move forward.

She added that the first draft capacity numbers are complete and that jurisdictions will receive a hard copy and an electronic version of a census tract map. She reminded the TWG if there are any questions about the housing or employment capacities that members should contact her and fellow staff member Ed Schafer to schedule a time to review the process and address any potential errors. Ms. Jarosz handed out the hard copies of the maps at the end of the meeting.
Ms. Jarosz also reported that an Expert Review Panel will meet in mid-April to review the assumptions for the regionwide growth forecast and preliminary results. These results will be shared at the April 30 Special TWG workshop.

**Agenda Item #7: TransNet Smart Growth Incentive Program: Project Priority Recommendations**

Stephan Vance, SANDAG, announced that forty-three project applications were received by SANDAG for the TransNet Smart Growth Incentive Program. Twenty-six capital projects and seventeen planning projects were submitted by fourteen agencies; however, seven applications were disqualified for eligibility reasons. The projects were evaluated by a Review Panel based on the pre-established criteria and the recommendations were included in the staff report. The recommendations will be presented to the Regional Planning Committee (RPC) in May.

Mr. Vance thanked Melanie Kush of Santee for her work in reviewing the applications. He reported that agencies applied for $25 million in capital projects and $4.5 million in planning projects, and that there is sufficient funding for one-third of the requested amount. The funding covers two fiscal years in one cycle, beginning in FY 2009. Requirements call for 80% of the funding to be allocated to capital and 20% for planning. Staff will recommend 79% for capital projects and slightly over 20% for planning. Contingent on approval by the RPC and SANDAG Board, projects are scheduled to begin in June.

Mr. Vance reported that the Independent Taxpayers Oversight Committee (ITOUC) found all of the recommended projects eligible for funding. Unallocated funds of $175,000 is on reserve to offer the next project on the list, provided that no additional funding is needed for recommended projects and as approved by the RPC.

Question: Can we find out how our projects scored and where they may have been deficient?

Mr. Vance responded yes.

Question: If any of these funded projects did not work out, would you go down to the next on the list?

Mr. Vance replied that selection of additional projects would depend on the timing of the project fallout and amount of funding available and that the RPC would need to review the project. Mr. Vance reminded the TWG that a requirement of the program is that the projects must be “ready to go.”

Comment: Perhaps it is better to change the name to Smart Growth Reward Program? Most cities that received funding were large cities with denser urban areas. It would be useful to examine whether the criteria are acting as an incentive for smaller and less urban cities to apply the smart growth principles.

Mr. Vance responded that staff was concerned about the issue of geographic distribution. It was not a requirement in the program, but one of the goals was to have a variety of places.

Comment: It was difficult for smaller jurisdictions to compete with the City of San Diego. The criteria should be re-examined for the next round.
Question: Do you find that these projects have been through the entitlement process or that these projects were developed for this program?

Mr. Vance replied that it was clear that some of these projects already had work done for them. There were two scales of projects: $2 million projects and some smaller pedestrian enhancement projects. The larger projects seem to have a considerable amount of work behind them, and the smaller projects have been through a community planning process. However, there has not been a considerable amount of design work for either type.

Question: Do you see any need to revise the criteria?

Mr. Vance responded that we should hold judgment on the criteria until more details have been worked through. Since this is the first cycle, some of the projects were picked from existing capital improvement program (CIP) lists. Some of the projects will clearly have more impact on development in an area than others. Funding smaller projects means getting more projects on the ground, but this is a policy issue that should be discussed by the RPC. Overall, the quality of the projects was extremely good.

Question: Particularly for capital pedestrian and bike projects, it seems that funding may be available from other competitive sources; however, there are no other funding sources directly for smart growth. Can any of the criteria be refined to focus more directly on funding “smart growth” projects?

Mr. Vance replied that staff is aware of the funding issue, but at this point, staff is unsure how to address it. It might be a question of scale. It is an issue to which staff will give some thought as the program develops.

**Agenda Item #8: Long-Range Regional Plans and Forecasts: A Work Plan to Comply with Senate Bill 375**

Coleen Clementson, SANDAG, reported that the passage of Senate Bill (SB) 375 and provisions included in the 2008 Regional Transportation Plan (RTP) Settlement Agreement over the 2050 Regional Transportation Plan Environmental Impact Report (EIR) significantly change how SANDAG will prepare the next RTP and Regional Housing Needs Assessment (RHNA). Both also set the stage for a future update of the Regional Comprehensive Plan (RCP). SANDAG staff has responded to these new requirements in the draft FY 2010 Budget and Overall Work Program. This informational report was presented to the RPC and Transportation Committee on April 3, 2009.

SANDAG will work with jurisdictions and policy officials over the next two and half years on long-range planning efforts to comply with SB 375. Generally, the law requires that the California Air Resources Board (CARB) establishes Greenhouse Gas (GHG) reduction targets for each region in California. There is a Regional Targets Advisory Committee to set the targets, of which Gary Gallegos of SANDAG is a member. The Committee is working to come up with methodology and targets for each region this fall. San Diego is unique in that it will be the first metropolitan area subject to this legislation and will receive the GHG reduction target fairly late in the RTP Update process, which presents a challenge. The next step is to come up with a Sustainable Communities Strategy (SCS) that will become a new chapter in the RTP. The SCS must show how land use plans and transportation investments and measures can come together to meet GHG reduction targets. If those targets are not met, then SANDAG will have to come up with an Alternative Planning Strategy (APS).
At the same time, RHNA allocations must be consistent with the SCS. Additionally, more outreach must be conducted, specifically with the forecast process and enhancing the involvement of environmental justice communities. Also, additional analysis is required in order for local jurisdictions to take advantage of the California Environmental Quality Act (CEQA) streamlining processes.

The 2008 Settlement Agreement requires SANDAG to complete a study on impediments to transit and reasons as to why people are not taking public transit. A draft has been completed and will be presented to the SANDAG Board later this month. That plan and the Urban Core Transit Strategy are the two main elements of the Settlement Agreement that will play a role in the next RTP.

Ms. Clementson added that staff informed the policy committees on the regional growth forecast and the work of local jurisdictions with planning for a longer-range horizon year, and then looking beyond the horizon year of the local plans to do a two-phase forecast, with the goal of having a draft forecast available for planning purposes early next year.

She also clarified that the goals of the Urban Core Transit Strategy are: 1) fulfill the terms of the Settlement Agreement on the RTP EIR, and 2) make a significant increase in the transit mode share in the urban core. This will provide significant assistance in developing the SCS.

Question: What is the Urban Core?

Ms. Clementson responded that in the Settlement Agreement, the Urban Core is defined as the “Trolley Ring” area. Staff has defined the Urban Core in two phases: the Downtown trolley ring area mentioned above and additional areas where SANDAG has made other transit investments, including the additional trolley routes in the region, the SPRINTER, the COASTER, and the I-15 managed lanes where SANDAG has made bus rapid transit (BRT) investments. SANDAG will ask a consultant to develop a series of progressive transit networks for the Urban Core and evaluate how they could change mode shift. Part of the scope of work is to help refine Urban Core boundaries.

SANDAG is working with the Regional Airport Authority on developing the Regional Aviation Strategic Plan and is taking the lead in developing a multi-modal accessibility plan to look at the ground access to the airports in the region. This Strategic Plan will be a major input in the RTP.

Another component of the SCS requires SANDAG to observe the habitat planning areas. The Smart Growth Concept Map, which shows habitat planning areas, is a good starting point for developing the SCS. Additional inputs such as transportation demand management (TDM) measures and enhancements for transit will also result in GHG reductions.

Staff will be coming forward with a more detailed work plan on the 2050 RTP and plan for its adoption in 2011. There are several new inputs into this process, including an economic impact analysis. The new requirements for the RTP environmental analysis call for a review of baseline GHG emissions and projections, and forming subsequent mitigation measures. The new requirements also call for a greater look at environmental justice issues and concerns.

SANDAG is in the process of putting together a public participation plan. One of the key elements of the plan is a Regional Planning Stakeholders Working Group comprised of citizens to meet on a monthly basis and advise SANDAG on the planning process. The proposal calls for the group to be chaired by a SANDAG Board member, with two co-chairs: one as advisory member to the RPC and one as advisory member to the Transportation Committee. Staff will soon be asking jurisdictions to
encourage people to apply. Members must make a two-year commitment. It will be an open application process and staff will provide special outreach to members of environmental justice communities.

Ms. Clementson distributed a rough outline of the timeline for the long-range plan to respond to SB 375 for the next two years. Staff will be bringing a more detailed overview of the RTP work plan, RHNA integration plan, and other elements to the TWG in the next few months.

Question: How will we know if the RHNA is consistent with the SCS?

Ms. Clementson responded that staff is concerned about that issue and is considering policy-level discussions around the principles of the RHNA allocations and the roles of the TWG and the Regional Housing Working Group. In a way, it is like getting two RHNAs at once – there is one number from housing and another from the CARB for GHG reductions, with a goal to find how they fit into the SCS. There will be many policies to balance.

Comment: Most of the jurisdictions have to submit housing elements in 13 months, and many are undergoing general plan updates. The calibration of the RHNA, as well as the SCS and RTP is good, but the timelines are causing a dilemma. As we embark on the housing updates we want to make sure that we are calibrating all of the information that is in the RTP Update and the SCS in order to align the general plans.

Comment: In the past, the forecast seemed like a very technical issue. My concern is that the public outreach will not cause de facto changes to the local general plans.

Ms. Clementson responded that in taking technical information out into the public sphere, the focus is on figuring out how to time the input on the forecast with the other projects so it is looked at in a broader context.

Agenda Item #9: Aligning the Regional Housing Needs Assessment and Regional Transportation Plan in the San Diego Region (Action Item)

Kim Kawada, SANDAG, discussed proposed “clean-up” state legislation (SB 575) that would align the timing of the fifth revision of the RHNA in the San Diego Region with the upcoming 2050 RTP update in 2011, as a follow-up to SB 375. Also proposed is that jurisdictions that have not completed their 2005-2010 housing element updates by January 1, 2010, be required to complete all necessary site rezoning programs by July 1, 2011. The TWG was asked to make a recommendation to the Executive Committee regarding this proposal.

The TWG proposed the following revisions to the staff recommendation:

1. Change the date for the housing element deadline for jurisdictions that have not completed their housing elements from January 1, 2010, to July 1, 2010.
2. Change the date for completion of rezoning programs for jurisdictions that have not completed their housing elements by July 1, 2010, from July 1, 2011, to January 1, 2012.
3. If third-party litigation regarding a housing element has been initiated following receipt of a letter of compliance from HCD and approval of a housing element by the local jurisdiction, the jurisdiction shall not be deemed out of compliance for the purposes of this section.
4. The jurisdictions that are currently out of compliance with state housing element law should report on the circumstances of their lack of compliance to SANDAG.

The TWG proposed these revisions based on their assessment of the reasonableness of the timeframe needed to complete housing elements, which includes sufficient time for collaborating with necessary agencies such as the California Coastal Commission, balancing the needs of jurisdictions which have and have not yet completed their housing elements, and the need to demonstrate action that will lead to compliance with the Department of Housing and Community Development (HCD).

The TWG unanimously approved a motion to forward the revised recommendation to the SANDAG Executive Committee.

**Agenda Item #10: SANDAG Service Bureau Product and Services**

The Service Bureau, the consulting arm of SANDAG, provides informational and technical services to member agencies, other public and private organizations, and individuals. Cheryl Mason, SANDAG, presented an overview of the Service Bureau’s areas of expertise, products, and services.

Ms. Mason said although there are about eight core Service Bureau staff, the Bureau has the flexibility to negotiate with other SANDAG managers and bring in additional staff with specific expertise when needed for a particular project. Areas of emphasis include: economic and demographic data and analysis, census data and customized profiles, transportation modeling, GIS mapping, survey design and analysis, strategic planning, and visual simulations (on-call services being developed). More information is available on the SANDAG Web site under “Service Bureau.”

**Question:** Does the Service Bureau offer assistance with housing elements?

Ms. Mason replied that a consultant has been used for that purpose in the past, so that is open to discussion.

**Question:** What about tribal government consultation?

Ms. Mason responded that staff is working to develop a scope for that service, which needs to be worked out internally before offering it as a service.

**Agenda Item #11: Adjournment and Next Meeting**

The next regularly-scheduled TWG meeting will be held on Thursday, May 14, 2009, from 1:15 to 3:15 p.m. at SANDAG. The special workshop on the 2050 Regional Growth Forecast will be held on Thursday, April 30, 2009, from 12 noon to 3 p.m.
SUMMARY OF APRIL 30, 2009, REGIONAL PLANNING TECHNICAL WORKING GROUP (TWG) SPECIAL WORKSHOP ON THE REGIONAL GROWTH FORECAST

Agenda Item #1: Welcome and Introductions

Bill Anderson, City of San Diego and TWG Chair, and Jon Brindle, City of Escondido and TWG Vice-Chair, presided. Self-introductions were conducted.

Agenda Item #2: Public Comments and Communications

Bill Chopyk, City of La Mesa, announced the San Diego American Planning Association (SDAPA) Awards Ceremony on May 7, 2009, and encouraged TWG members to attend.

REPORT ITEM (#3)

Agenda Item #3: 2050 Regional Growth Forecast: Alternative Growth Scenarios for Phase 2

Presentation

Beth Jarosz, SANDAG, presented the regional growth forecasting process-to-date, draft results for Phase 1, draft results of the various 2050 alternative land use scenarios for Phase 2 identified by the TWG, and new requirements in the forecasting and planning process based on Senate Bill (SB) 375.

Highlights of the presentation included:

- The purpose of SANDAG’s forecast is to assist in the development of the Regional Transportation Plan (RTP), Regional Comprehensive Plan (RCP), Regional Housing Needs Assessment (RHNA), and public facilities planning.

- The Series 12 Forecast will have a Horizon Year of 2050. Staff has been working with the local jurisdictions on land use inputs for Phase 1 of the forecast, which extends to approximately 2020 or 2025. Staff is currently focusing on Phase 2 of the forecast, which will extend to 2050 in order to be aligned with the upcoming 2050 Regional Transportation Plan (RTP). Phase 2 consists of alternative land use scenarios to bridge the gap. Staff has prepared 11 “alternative land use scenarios” based on previous TWG input. These scenarios will be reviewed and discussed at today’s workshop.
• The draft 2050 regional forecast projects a regional population of 4.5 million, and anticipates the need for approximately 450,000 additional housing units (above the approximately 1.1 million units in existence today). The planned capacity (based on the land use inputs from existing plans and policies gathered through Phase 1 of the forecasting process) is approximately 354,000 housing units, leaving an expected minimum net deficiency of approximately 96,000 housing units. The alternative growth scenarios to be reviewed today provide a range of methods and strategies for addressing the 96,000 unit deficit.

• SB 375 requires regions to develop a Sustainable Communities Strategy (SCS) to reduce greenhouse gas (GHG) emissions to 2020 and 2035 targets to set by the California Air Resources Board (CARB) later this year.

• When reviewing alternative land use scenarios, the Working Group is asked to keep in mind the following points:
  o The San Diego region has changed dramatically over the past 40 years in terms of growth patterns, transit infrastructure, transportation networks, and technological advances;
  o Most growth will occur in the 55 and older segment of the population;
  o Multi-family housing units use, on average, half as much water, energy, and natural gas as single-family detached homes;
  o The RCP contains guiding principles centered around smart growth and sustainability concepts;
  o Increased density in existing developed areas relieves future development pressure in sensitive habitat and agricultural areas;
  o Per SB 375, if the region is not able to produce a SCS that meets the GHG emission reduction targets, the region will need to prepare an Alternative Planning Strategy (APS).

**Review of Each Alternative Land Use Scenario**

The Working Group broke out into four discussion groups to review, analyze, and rank each of the eleven 2050 alternative land use scenarios, and to propose several scenarios or combinations of scenarios to the SANDAG Regional Planning Committee for additional analysis and for use at the upcoming growth forecast workshops to be held this summer. Ideas from the workshop will be reviewed and refined at the May 14, 2009, TWG meeting prior to their presentation to the Regional Planning Committee.

Generally, the breakout sessions produced the following recommendations:

• Move forward with the following scenarios:
  o **Scenario 1 (100% of plan density regionwide):** This scenario could be used as a base case for comparison purposes. (Some groups felt that Scenario 1 was unrealistic because jurisdictions would never achieve full build-out, while other groups felt that Scenario 1 was desirable because it would not require policy makers to change densities in their jurisdictions. Other groups felt that SANDAG should have discussions with the jurisdictions about where the 100% density can be achieved, and where there might be...
potential for even higher densities, above and beyond the 100% build-out. Despite these differences, there seemed to be overall support for using Scenario 1 as a base case scenario.)

- **Scenario 3 (increase density in the Transit Priority Area):** Use this scenario with some caveats, such as excluding historic districts, excluding high-noise areas and airports, excluding areas with an abundance of condominiums, and removing the 1/10 acre provision.

- **Scenario 4 (incorporate draft plan updates):** Use this scenario to the extent feasible to gain additional capacity.

- **Scenario 6 (convert commercial lands to mixed use within one-mile of high-frequency transit stations):** Use this scenario but consider the following modifications: focus the conversions of commercial lands in the Transit Priority Area first, increase/decrease the one-mile radius (for further discussion by the TWG), and apply a minimum of 25 dwelling units per acre.

- **Scenarios 7, 8, and 9 (increasing density in Smart Growth Areas):** There was support for using these scenarios because the smart growth areas were developed with local and regional consensus. The groups suggested using a combination of these scenarios, but first applying the “Overarching Idea” discussed below to determine the capacity gain before applying the density increases in Scenarios 7, 8, and 9. (Of the three scenarios, some groups expressed preference for Scenario 9 because it applies the increases to all areas equally. However, other groups ranked it lower because it spread the density increases over too large of an area and may be unrealistic due to sensitivities of construction types associated with higher densities.)

- Potentially move forward with the following scenarios:

  - **Scenario 2 (allow second dwelling units in the Transit Priority Area):** Most working group members felt that second dwelling unit rules are already on the books, but that this scenario could be considered with constraints such as large lots and other factors, and/or combined with Scenario 9.

- Not move forward with the following scenarios:

  - **Scenario 5 (convert mobile home parks to higher-density multi-family):** This scenario was found to be impractical for two reasons. First, California state law restricts the conversion of mobile home parks to other uses. Second, in converting these parks, an important source of lower-income housing would be lost and not recovered through the resulting redevelopment.

  - **Scenario 10 (upgrade place-types and related density assumptions for selected Smart Growth Areas):** It was felt that the jurisdictions have put so much work into defining their smart growth areas that changes to the jurisdictions’ smart growth designations may not have political support.

  - **Scenario 11 (residential infill in Existing Major Employment Areas excluding industrial sites):** This scenario was very similar to Scenario 6, and most working group members expressed preference for the approach in Scenario 6, or combining it with Scenario 6.
Additional ideas:

- **Principle-Based Approach:** The focus of the alternative land use strategies selected for discussion at the public workshops should be on the smart growth principles and concepts included in the RCP. The scenarios should focus the additional capacity in the Transit Priority Area and should promote transit-oriented development, jobs-housing balance, growth near other major infrastructure networks such as existing freeways and regional arterials, and avoidance of growth in rural areas for GHG reduction reasons. In addition, it is important to pay attention to factors beyond “running the numbers,” such as diversity of jobs and housing types, and reducing subregional commutes. The following constraints should be applied: exclude development in environmentally-sensitive areas, preserve historical areas, and reserve land availability for parks, schools, and other urban infrastructure necessary to maintain quality of life for areas that will intensify. Another potential constraint is disaster mitigation related to flooding and earthquakes.

- **Overarching Idea for the Smart Growth Scenarios:** In order to gain additional capacity, the following overarching idea should be applied to Scenarios 7, 8, and 9. Assume that the “potential” Smart Growth Areas build out to minimum place type densities, and assume that all existing or planned Smart Growth Areas meet the minimum Smart Growth place type densities or the maximum planned densities allowed by the local jurisdiction (whichever is greater).

- **Tool Box Approach:** Determine reasonable capacity increases for each jurisdiction based on Scenario 3, and use those targets as a baseline for each jurisdiction. Then create a “Tool Box” menu and allow each jurisdiction to tailor its approach to meet the target if it does not already do so through Phase 1.

- **Form-Based Approach:** Use a form-based approach that does not constrain land use. In other words, set minimum and maximum density restriction zones for each use type. Each zone type would cover the entire jurisdiction, so each jurisdiction would have a commercial, residential, industrial, etc. zoning layer with zones that set density restrictions. Then the market could decide whether a zone goes commercial, residential, or something in between. This would allow the region to meet an organic equilibrium between jobs and housing.\(^1\)

- **Coordinate with School Districts:** When increasing the density/intensity of residential development, the scenarios should incorporate the additional need for schools, parks, and other public facilities associated with the residential growth. In the future, local jurisdictions should work more closely with the school districts to modify the suburban school standards to a more urban standard for the smart growth areas.

**Phasing for Phase 2 of the Regional Growth Forecast**

In addition to these recommendations, the TWG discussed the phasing, or timing, for Phase 2 of the Regional Growth Forecast, with the question under consideration being when (2015, 2020, 2025, etc.) the selected alternative growth scenario should be phased in. It was pointed out that the sooner the alternative scenario is phased in, the more time the region will have to make progress toward meeting the GHG reduction targets. TWG suggestions included: restrict the phasing of Phase 2 for a

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\(^1\) This approach is not possible given SANDAG’s current modeling tools. However, SANDAG is updating its modeling tools. The new tools may be able to accomplish this in Series 13 Forecast.
minimum of 10 years; tailor the phasing to strategic areas, such as smart growth areas; tie the phasing to cycles of local general plan updates since jurisdictions need to update their plans every 10 years; and/or consider site-specific plan amendments in addition to comprehensive general plan updates.

**Agenda Item #12: Adjournment and Next Meeting**

The workshop was adjourned at 3 p.m. The next regularly-scheduled TWG meeting will be held on Thursday, May 14, 2009, from 1:15 to 3:15 p.m. at SANDAG.
REGIONAL PLANNING COMMITTEE

May 1, 2009

AGENDA ITEM NO.: 7

Action Requested: RECOMMEND

ESTABLISHING THE REGIONAL PLANNING STAKEHOLDERS WORKING GROUP  
File Number 3000200

Introduction

The passage of Senate Bill (SB) 375 and provisions included in the 2008 RTP Settlement Agreement (Settlement Agreement) regarding the 2030 Regional Transportation Plan Environmental Impact Report (EIR) significantly change how SANDAG will prepare the next Regional Transportation Plan (RTP) and Regional Housing Needs Assessment (RHNA). Both also set the stage for a future update of the Regional Comprehensive Plan (RCP). SANDAG staff has responded to these new requirements in the draft FY 2010 Budget and Overall Work Program.

SANDAG regularly involves the public in regional planning efforts. A public participation plan is being prepared to involve the public in every step along the way to develop the 2050 RTP and set the stage for a future RCP update. Among other public involvement efforts, the plan will include the establishment of a new Regional Planning Stakeholders Working Group (SWG) to provide input on the development of key work elements in the planning process, including the public participation plan itself. Additionally, there will be a series of public workshops and other means for involving the public and receiving input on the work products and the draft 2050 RTP.

The purpose of this report is to outline the proposed roles and responsibilities for the SWG and the proposed process for selecting and appointing members.

Discussion

Consistent with adopted policies, SANDAG promotes active public participation in the development and implementation of our regional plans and programs. Typical public participation tools used include open houses, community workshops, websites, and public meetings. SANDAG also has routinely used working groups as one of the components of an effective public participation program.

In February 2005, the Board of Directors appointed a stakeholders working group to advise and provide input on the 2030 RTP, approved in November 2007. Similarly, in December 2002, the Regional Planning Committee (RPC) appointed a working group to directly involve regional stakeholders interested in contributing to the preparation of the RCP; that group completed its work with the adoption of the RCP in July 2004.

Recommendation

The Regional Planning Committee is asked to recommend that the Board of Directors approve: the establishment of the Regional Planning Stakeholders Working Group and its charter; issue the call for membership applications; and appoint two members to serve on the selection committee.
Relationship among SANDAG Board, Policy Advisory Committees, and Working Groups

The proposed Regional Planning SWG would act in an advisory capacity to both the RPC and Transportation Committee on the development of the 2050 RTP and its components, and laying the foundation for the next RCP update. The following figure illustrates the relationships among the Board, Policy Committees, and Working Groups, and their primary responsibilities leading to adoption of the 2050 RTP.

**Board of Directors**
- Accept 2050 Regional Growth Forecast
- Approve 2050 RTP and SCS
- Approve RHNA

**Regional Planning Committee (RPC)**
- Oversight for preparation of the 2050 Regional Growth Forecast, Sustainable Communities Strategy (SCS), RHNA, and future RCP updates

**Transportation Committee**
- Oversight of 2050 RTP development, SCS, and transportation evaluation criteria

**Tribal Transportation Working Group**
- 17 Tribal Nations in San Diego region

**Regional Planning Technical Working Group**
- Local Planning Directors

**Regional Planning Stakeholders Working Group**
- Citizen Representatives

**Cities/County Transportation Advisory Committee**
- Local Public Works Directors

A Unique Role

The purpose of the SWG will be to review and provide input into development of the 2050 RTP leading to adoption of the 2050 RTP in July 2011 and setting the stage for a future update of the RCP. Specific activities are listed in Attachment 2. Additionally, the SWG members will be asked to assist with public outreach to help inform and encourage active public participation by outside groups with which they may be affiliated.

The SWG provides a unique opportunity for SANDAG to involve citizens with expertise in policy areas of regional interest as well as individuals who reflect the demographics of the region, with particular emphasis on communities that are not traditionally involved in the regional planning processes. Most of the SANDAG working groups are comprised of representatives from local jurisdictions, appointed by those jurisdictions based on their position (e.g., local planning directors make up the Regional Technical Working Group and local public works directors make up the Cities/County Transportation Advisory Committee).

Although there are now federal and state laws in place to ensure compliance with Title VI of the 1964 Civil Rights Act, the spirit and purpose of Executive Order 12898 (Environmental Justice) was to
encourage federal, state, regional, and local governments to go beyond basic legal requirements. SANDAG defines environmental justice as ensuring that regional plans, policies and actions do not disproportionately negatively affect low income and minority communities. The guidelines set forth encourage public agencies to be proactive and continually improve their programs and processes to support the involvement of minority and low income populations in the planning process. Good regional planning should be inclusive. As SANDAG is constantly striving to be more inclusive, some methodological innovations to the structure of the SWG are being proposed as described below.

**Recommended Membership**

It is proposed that the SWG include up to 25 members and that the structure include two categories of membership:

1. **At-Large Citizen Representatives (16-18 members):** The at-large citizen representatives with experience in various subject matter areas will provide broad input on a wide variety of areas through their individual experience in multiple types of organizations. These individuals will not be representing a specific organization, but rather will be drawing on their civic or professional expertise in a set of subject matters areas relevant to this planning process (e.g., transportation, housing, environmental health, economic prosperity, public health, and urban form). Up to 4 at-large members should be appointed from various minority organizations with countywide constituent bases (e.g., Chicano Federation of San Diego County, Council of Native American Organizations of San Diego County, San Diego Alliance for Asian Pacific Islanders). This will serve as a nexus to incorporate the issues and concerns of minority communities on a regional basis in the planning process, one of the objectives of federal Title VI and environmental justice requirements.

2. **Individuals from Community-based Networks in communities identified as low-income/minority (5-7 members):** Individuals from a community-based network or collaborative would serve as a conduit for coordinated outreach to the selected communities and provide a community-based perspective. A community-based network or collaborative is made up of a variety of social institutions, including social service providers, ethnic associations, schools, churches, chambers of commerce, and other community-based organizations within the identified low-income/minority communities (See Attachment 3). In an effort to engage these communities early in the planning process, SANDAG staff is working to establish a mini-grant program to tie the SWG directly to their concerns and opinions in a timely and meaningful way. These five to seven slots are being reserved for successful competitors in the mini grant program. One of the tasks in the mini grant scope of work for the outreach grant will be to participate as members of the SWG.

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1 To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Marian islands.

2 The criteria for the identification of Environmental Justice communities are based on the current forecasting model for the 2030 RTP with Trip Distribution Zones (TDZ) as the unit of analysis. Those TDZs with a minority population of at least 65 percent were classified as ‘minority’ TDZs. Low-income TDZs were defined as those where at least one-third of the households are projected to have an income of less than $30,000 per year in 2030. This methodology resulted in approximately 17 percent of the households in the region classified as low-income in 2030.

3 Funding for the proposed mini-grant program is included in the $150,000 set aside for outreach for SCS/RTP process included in the draft FY 2010 Budget.
Selection Process

Recruitment – Staff recommends that membership applications and credentials be solicited from groups that have shown an interest in the RTP, RCP, and other related projects; groups identified by the RPC and Transportation Committee; and from the general public through advertisements in community newspapers, postings at local jurisdictions, public service announcements on TV, and Internet postings.

Applications – A sample application form is attached for the Regional Planning Committee’s consideration (Attachment 4).

Selection Criteria – Criteria should include balancing the group by geography and interests, maximizing the number of groups the member is associated with, skills and abilities, experience with regional planning issues, and a demonstrated commitment to serve.

Selection Committee – The RPC and the Transportation Committee would each appoint two of its members to review applications. In addition, two members each from RPTWG and CTAC would review applications. The RPC and Transportation Committee would be asked to recommend the SWG slate to the Board of Directors.

Reappointment Process – A waiting list for possible replacements will be developed at the same time as the selection process. If an SWG member misses three meetings, s/he would be replaced by someone on the waiting list. All efforts will be made to ensure that the profile of the replacement reflects similar characteristics as the original member.

Termination of Working Group – The group would complete its work with the adoption of the comprehensive 2050 RTP (anticipated in the summer 2011).

Leadership – The Chair of the SWG would be an elected official appointed by the Board of Directors. The SWG will be asked to appoint two Co-Chairs that will serve as the advisory members to the RPC and Transportation Committee.

Next Steps

If recommended for approval by the RPC and Transportation Committee, the Board of Directors will be asked to approve the Charter for the Regional Planning SWG and authorize a call for membership applications at one of its May meetings. Applications would be reviewed during June and the RPC and Transportation Committee would be asked to recommend the SWG slate to the Board of Directors at the July meetings.

BOB LEITER
Director of Land Use and Transportation Planning

Attachments: 1. Draft Regional Planning Stakeholders Working Group Charter
2. Proposed Regional Planning Stakeholders Working Group Summary of Activities
3. Map of Environmental Justice Communities in San Diego Region
4. Draft Regional Planning Stakeholders Working Group Application

Key Staff Contact: Jane Clough-Riquelme, (619) 699-1909, jcl@sandag.org
DRAFT- Charter for Regional Planning Stakeholders Working Group

PURPOSE
The purpose of the Regional Planning Stakeholders Working Group (SWG) is to review and provide input into key activities associated with the development of the 2050 Regional Transportation Plan (RTP) and its components, and laying the foundation for the next Regional Comprehensive Plan (RCP) update. The SANDAG Board of Directors approved the creation of the SWG on (insert date).

LINE OF REPORTING
The SWG will act in an advisory capacity to both the Regional Planning Committee (RPC) and Transportation Committee on specific 2050 RTP activities, as discussed in the next section. The RPC and Transportation Committee in turn report to the SANDAG Board. The SANDAG Board makes final decisions on the 2050 RTP and its components.

RESPONSIBILITIES
The SWG will review and provide input into development of the 2050 RTP and activities that will lead to the adoption of the 2050 RTP and lay the foundation for the next RCP update. These activities include but are not limited to the development of the 2050 Regional Growth Forecast, Sustainable Communities Strategy (SCS), Regional Housing Needs Assessment (RHNA), Urban Core Transit Strategy and the RTP/SCS Public Participation Plan. The SWG will also assist with associated public outreach and help inform and encourage active public participation by outside groups. In general, the SWG's focus will be on regionwide planning activities.

MEMBERSHIP
The SWG has up to 25 voting members. The voting members were approved by the Board on (insert date). The members were selected based on either their individual qualifications as citizen experts or their role as a community leader. Voting members do not have alternates. If a member misses three meetings in a row or four meetings over the course of one year, s/he will be replaced. In the event that any members need to be replaced, new members will be selected from the approved waiting list.

MEETING TIME AND LOCATION
The SWG will meet on a monthly basis. Meetings will typically be held on the third Tuesday of the month from 4 - 6 p.m. at the Caltrans District 11 offices on Taylor Street in San Diego.

WORKING GROUP LEADERSHIP
The Chair of the SWG was appointed by the SANDAG Board of Directors on (insert date). The SWG will elect co-chairs by a majority vote who will serve as advisory members to the RPC and Transportation Committees, respectively.

DURATION OF EXISTENCE
The SWG will complete its work with the adoption of the 2050 RTP (anticipated in summer 2011).
Proposed Regional Planning Stakeholders Working Group (SWG)
DRAFT- Summary of Activities

2050 Regional Transportation Plan (RTP)
In accordance with state and federal guidelines, the 2050 RTP is slated for adoption by the SANDAG Board of Directors in July 2011. The SWG will be asked to provide input on development of the 2050 RTP and its key components, including the vision, goals, and objectives; transportation project evaluation criteria; and performance measures. Other major tasks include input on the development of network alternatives and economic analysis of investment strategies.

2050 Regional Growth Forecast
The 2050 regional growth forecast is being produced to reflect the most current economic, demographic, land use and transportation data for use in the RTP. The SWG will be asked to review the results of the draft Forecast and to weigh in on the alternative growth scenarios that will be produced as part of the forecast process.

Urban Core Transit Strategy
An Urban Core Transit Strategy will be developed that evaluates possible regional transit strategies that maximize peak-period transit mode share in the urban core. The strategy will result in three to four long-range strategic transit network alternatives that will be factored into the 2050 RTP. The SWG will be asked to provide input on the network alternatives.

Sustainable Communities Strategy (SCS) / Regional Housing Needs Assessment (RHNA)
The SCS will be a new element of the RTP, as required by Senate Bill 375, to show how regional greenhouse gas targets would be achieved through development patterns, infrastructure investments, and/or transportation measures or policies that are determined to be feasible. Additionally, the SCS must be consistent with the RHNA and must address protection of sensitive resource areas, including areas protected under Habitat Conservation Plans (HCPs). The SWG will be asked to assist in the development of the SCS and provide input on its various elements.

Public Participation Plan
The SWG will be asked to provide input on a public participation plan for the 2050 RTP. The goal of the plan is to involve the public in every step along the way to develop the 2050 RTP and set the stage for a future RCP update. There will be a series of public workshops and other means for involving the public and receiving input on the work products and draft 2050 RTP.

May 1, 2008
APPLICATION FORM FOR SANDAG’S
2009-2011 REGIONAL STAKEHOLDERS WORKING GROUP

(due XXXXX, 2009)

| Name: _________________________________ | Return to: |
| Address: ______________________________ | Jane C. Riquelme, Senior Regional Planner |
| ______________________________________ | San Diego Association of Governments |
| Phone:________________________________ | 401 B St., Suite 800 |
| E-mail:_______________________________ | San Diego, CA 92101 |
|______________________________________ | jcl@sandag.org |
|______________________________________ | (619) 699-1909 |

☐ Citizen Expert in Policy Area(s)  ☐ Representative of Minority Organization  ☐ Representative of Community Collaborative/Network/Council

(Please make responses as concise as possible; applications will not be judged on length of response)

1. Why are you interested in serving on the Regional Planning Stakeholders Working Group?

2. What skills and abilities would you bring to the Stakeholders Working Group?

3. Which of the following topics are of interest to you? (please select no more than three)

| ☐ Urban Form (land use & community design) | ☐ Social Equity & Environmental Justice | ☐ Transportation |
| ☐ Housing | ☐ Economic Development/Prosperity | ☐ Public Facilities |
| ☐ Climate Change/Environmental Protection | ☐ Border Issues (binational, tribal, and interregional) | ☐ Other |
4. Have you participated in any activities related to the areas of interest selected in Question 3? If so, briefly describe the activity/ies.

5. What would you hope to accomplish by your participation?

6. What zip code(s) do you work in and/or live in?

7. List any civic organizations to which you belong now, or have in the past.

The Regional Stakeholders Working Group will meet the third Tuesday of each month from 4 to 6 p.m. at the Caltrans District 11 offices in Old Town. There will be childcare available.

Members of the working group will be replaced if they miss three consecutive meetings or five over the course of one year. Please only apply if you can make this commitment to the process.
STATE LEGISLATIVE STATUS REPORT: SENATE BILL 575

Introduction

Periodic status reports on legislative activities are provided to the Executive Committee during the year. This report summarizes recent activities regarding the SANDAG proposal to align our next Regional Housing Needs Assessment (RHNA) with the 2011 Regional Transportation Plan (RTP) update through Senate Bill 575 (SB 575) (Steinberg, D-Sacramento).

At its April 10, 2009, meeting, the Executive Committee discussed SB 575 and directed staff to report back with additional information about possible amendments to the bill. SANDAG is seeking to eliminate an “interim” RHNA/housing element cycle (due June 30, 2010) and to allow the region to focus its resources on developing the next RHNA, Sustainable Communities Strategy (SCS), and RTP in accordance with goals of SB 375 (Steinberg, 2008). Acceptance of our proposal, however, has been complicated by the fact that a number of local jurisdictions have not completed their 2005-2010 housing elements, which were due June 30, 2005.

Since the April meeting, staff has surveyed the local jurisdictions, and this report summarizes the current status of the outstanding 2005-2010 housing elements. The report also includes possible options for amendments to SB 575 for Executive Committee discussion.

Discussion

Background

SB 375 (Steinberg, 2008) requires the 19 local jurisdictions within the San Diego region to adopt their next housing elements (fifth revision) no later than June 30, 2010. In addition, the law requires the local jurisdictions to complete their sixth housing element revisions no later than 18 months after the adoption of the next SANDAG update to the RTP. The next RTP update is scheduled for Board adoption in July 2011, which in turn would require the subsequent housing elements (sixth revision) to be due by December 31, 2012 (two and a half years after the 2010 housing element updates). The sixth revision of the housing elements would cover an eight-year period per SB 375 – from January 1, 2013, to December 31, 2020 (Attachment 1).
SB 575 was introduced on February 27, 2009, and was last amended on April 15, 2009. This bill is the vehicle for technical amendments to SB 375, including the SANDAG proposal to align the upcoming RHNA and 2011 RTP update.

Survey of Local Jurisdictions

As noted above, one of the challenges that we are facing with our proposal is that eight of the 19 local jurisdictions in the region have not completed their 2005-2010 housing element updates. Housing advocates are concerned that the lack of these housing elements and progress on associated rezoning programs are limiting the availability of sites for affordable housing. Attachment 2 summarizes the survey information received from the eight jurisdictions with incomplete 2005-2010 housing elements.

Five of the eight jurisdictions expect to complete their 2005-2010 housing elements by the end of calendar year 2009 (Carlsbad, Del Mar, Imperial Beach, Oceanside, and Santee). The remaining three expect to complete their 2005-2010 housing elements in March 2010 (Vista), by fall 2010 (County of San Diego), and by mid- to late 2011 (Encinitas). These three jurisdictions are in the process of updating their housing elements in conjunction with general plan updates.

Seven of the eight jurisdictions need to undertake and complete rezoning programs in order to identify adequate sites to address their very low and low (lower) income RHNA goals. Of these seven, six would be able to complete their rezoning programs by fall 2010. The remaining jurisdiction (Encinitas) expects to complete any necessary rezoning after the approval of its general plan update that is scheduled to occur in mid- to late 2011.

Options

Based on the discussion during the April 10, 2009, Executive Committee meeting, the following options have been developed for the Executive Committee to consider as we seek amendments to SB 575.

### Table 1 - Summary of Possible Amendments to SB 575

<table>
<thead>
<tr>
<th>Option</th>
<th>Issues</th>
</tr>
</thead>
</table>
| A - No change to current law                | • Would require all 19 local jurisdictions to complete two housing elements within a two and a half year period:  
  o Fifth housing element revision due June 30, 2010, and sixth revision due December 31, 2012 (18 months after adoption of 2011 RTP update) |
| B - Align fifth revision of the housing element with 2011 RTP update | • Would eliminate an “interim” housing element requirement for all 19 local jurisdictions (due June 30, 2010)  
  • Unlikely to be accepted, as it does not address concerns raised by housing advocates about jurisdictions with noncompliant 2005-2010 housing elements and availability of sites for affordable housing |
<table>
<thead>
<tr>
<th>Option</th>
<th>Issues</th>
</tr>
</thead>
</table>
| **C1 - Align fifth revision of the housing element with the 2011 RTP update, **AND **Require jurisdictions that have not completed their 2005-2010 housing elements by January 1, 2010, to complete any necessary rezoning programs by July 1, 2011** | • Would eliminate an “interim” housing element requirement for all 19 local jurisdictions (due June 30, 2010)  
• Requirement for noncompliant jurisdictions to complete necessary rezoning programs by a date certain (July 1, 2011) would help partially address the concerns of housing advocates about the availability of sites for affordable housing  
• May not fully address housing advocate concerns as other proposals, such as Options C3 and D, because housing element law requires rezonings to be completed before the end of the housing element cycle  
• Likely that at least 7 of 8 noncompliant jurisdictions could meet these deadlines |
| **C2 - Align fifth revision of the housing element with the 2011 RTP, **AND **Require jurisdictions that have not completed their 2005-2010 housing elements by July 1, 2010, to complete any necessary rezoning programs by January 1, 2012** | • Same concept as Option C1, but provides less stringent deadlines for noncompliant jurisdictions  
  o Regional Planning Technical Working Group (planning directors) recommendation  
• Requirement for noncompliant jurisdictions to complete 2005-2010 housing elements (July 1, 2010) and any necessary rezoning programs (January 1, 2012) fall outside of original 2005-2010 housing element cycle  
• Likely to be opposed by housing advocates, which propose more stringent deadlines and requirements, such as in Options C3 and D  
• Likely that at least 7 of 8 noncompliant jurisdictions could meet these deadlines |
| **C3 - Align fifth revision of the housing element with the 2011 RTP, **AND **Require jurisdictions that have not completed their 2005-2010 housing elements to complete any necessary rezoning programs by July 1, 2010, **AND **Jurisdictions that do not meet deadline would need to prepare 2010-2012 housing elements, **AND **Change Board Policy No. 033 requirements regarding eligibility for SANDAG discretionary funding** | • Same concept as Option C1, but with more stringent deadlines and requirements for noncompliant jurisdictions  
  o San Diego Housing Federation recommendation (Attachment 3)  
• Would require noncompliant jurisdictions to complete any necessary rezoning programs by July 1, 2010 (1 year earlier than Option C1 and 1½ years earlier than Option C2)  
• Likely that at least 6 of 8 noncompliant jurisdictions could meet these deadlines  
• Jurisdictions that do not meet July 1, 2010, deadline would need to prepare 2010-2012 (2.5 year) housing elements  
• Also would change internal SANDAG Board Policy No. 033 to require an approved (compliant) housing element in order to be eligible to apply for SANDAG discretionary funding (e.g., Smart Growth Incentive Program and Bicycle/Pedestrian Program funding). |
### Option Issues

<table>
<thead>
<tr>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>D – Eliminate the requirement for SANDAG to conduct a RHNA, but require all 19 local jurisdictions to complete a “mini” housing element for the fifth revision (2010-2012)</td>
</tr>
</tbody>
</table>

- Proposal by statewide housing advocates that were part of original SB 375 coalition (Housing California and Legal Services of Northern California)
- Would eliminate “interim” RHNA cycle for SANDAG
- In lieu of full RHNA, it is likely that this proposal would entail annualizing the 2005-2010 RHNA numbers for the period between the end of the current housing element cycle (June 30, 2010) and December 31, 2012
- Would require all 19 local jurisdictions to complete a “mini” housing element and to identify adequate sites (zoning capacity) for the annualized numbers noted above
- Though not specifically defined, a “mini” housing element would require more local resources than completing the rezoning of sites as in Options C1, C2, and C3.

### Next Steps

Staff will continue to work with the author’s staff and interested stakeholders as SB 575 makes its way through the legislative process. SB 575 passed out of Senate Transportation and Housing on Tuesday, April 28, 2009, by a vote of 6-3 and will now move to Senate Appropriations.

KIM KAWADA
Policy and Legislative Affairs Program Manager

Attachments:
1. SB 375 and Housing Element Cycles
2. 2005-2010 Housing Element Status Report
3. San Diego Housing Federation Letter dated April 24, 2009

Key Staff Contacts: Genevieve Morelos, (619) 699-1994, gmo@sandag.org
Susan Baldwin, (619) 699-1943, sba@sandag.org
SB 375 and Housing Element Cycles

Current Law (SB 375)
- 4th Revision (July 2005 - June 2010)
  Due June 2005
- 5th Revision (July 2010 - June 2015)
  Due June 2010
- 6th Revision (January 2013 - December 2020)
  Due January 2013

SANDAG Proposal
- 4th Revision (July 2005 - June 2010)
  Due June 2005
- 5th Revision (January 2013 - December 2020)
  Due January 2013

RTP Timeline

- New Growth Forecast / Jan-Feb 2010
- SCS / RTP Scenarios / June-Sept 2010
- Draft GHG Targets / June 2010
- Final GHG Targets / Sept 2010
- Final RTP and RHNA / July 2011

February 2009
### 2005-2010 Housing Element Status Report
**Housing Elements in Review or Out of Compliance**
April 28, 2009

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Date of Most Recent Draft</th>
<th>Expected Date of Final Council or Board Action</th>
<th>CEQA Document Type</th>
<th>Rezoning Required?</th>
<th>Expected Date of Approval</th>
<th>Reason(s) for Delay in Housing Element Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad</td>
<td>12/08</td>
<td>9/09 or 10/09</td>
<td>Mitigated Negative Declaration</td>
<td>Yes</td>
<td>Rezoning by 5/10</td>
<td>Change from self-certification to state certification; difficulty in identifying sites for lower income RHNA goals; staff turnover; time needed to address HCD comments; iterative CEQA process and threat of litigation</td>
</tr>
<tr>
<td>Del Mar</td>
<td>6/07</td>
<td>Fall/Winter 2009</td>
<td>Negative Declaration or Mitigated Negative Declaration</td>
<td>Yes</td>
<td>Rezoning by 10/09</td>
<td>Continued discussions with HCD regarding modifications needed for the previously approved draft to gain certification; limited funding and procedural requirements associated with amending the zoning code and Local Coastal Program to allow a higher allowable residential density in areas of the city to help achieve RHNA goals and related HCD requirements.</td>
</tr>
<tr>
<td>Encinitas</td>
<td>7/07</td>
<td>Mid-late 2011 (with General Plan Update)</td>
<td>Negative Declaration originally; EIR will be prepared for General Plan update</td>
<td>Yes</td>
<td>Rezoning to occur after G.P. update</td>
<td>Difficulty in identifying sites for lower income RHNA goals; decision to include housing element as part of General Plan update</td>
</tr>
<tr>
<td>Imperial Beach</td>
<td>9/08</td>
<td>8/5/09</td>
<td>Negative Declaration</td>
<td>No</td>
<td></td>
<td>Difficulties with housing element consultant; staff turnover and lack of responsiveness to HCD comments</td>
</tr>
</tbody>
</table>

(11/21/08 – HCD compliance letter issued)
(New draft to be completed and sent to City Council for review 7/09 and, following adoption by City Council, submitted to HCD for certification)
(Final HCD letter expected 11/09)
(Final letter expected from HCD 12/09 or 1/10)
(Final HCD letter expected late 2011 – early 2012)
(Final HCD letter expected 11/09)
<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Date of Most Recent Draft</th>
<th>Expected Date of Final Council or Board Action</th>
<th>CEQA Document Type</th>
<th>Rezoning Required?</th>
<th>Expected Date of Approval</th>
<th>Reason(s) for Delay in Housing Element Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oceanside</td>
<td>2/09</td>
<td>Summer 2009</td>
<td>Negative Declaration</td>
<td>Yes</td>
<td>Rezoning by 6/10</td>
<td>Needed to address a number of comments from HCD relating to the need to rezone in order to identify sites for lower income RHNA goals</td>
</tr>
<tr>
<td>Santee</td>
<td>3/09</td>
<td>11/09 or 12/09</td>
<td>Negative Declaration</td>
<td>Yes</td>
<td>New High Density Residential Zone to be adopted by 10/09</td>
<td>Difficulty in identifying sites for lower income RHNA goals; need to rezone for higher density residential; staff turnover</td>
</tr>
<tr>
<td>Vista</td>
<td>2/08</td>
<td>3/10</td>
<td>Negative Declaration</td>
<td>Yes</td>
<td>Rezoning to mixed use at 30-40 du/ac to be adopted by 1/10</td>
<td>Needed to rezone for lower income RHNA goals and decided to wait until downtown specific plan/rezone was adopted before submitting adopted housing element to HCD.</td>
</tr>
<tr>
<td>County of San Diego</td>
<td>11/08</td>
<td>Fall 2010 (or sooner w/ General Plan update)</td>
<td>Programmatic EIR for General Plan update and housing element</td>
<td>Yes</td>
<td>Rezoning will be concurrent with General Plan and housing element adoption in fall 2010</td>
<td>Link to General Plan update (which has been delayed because of the complexity of issues involved) and the need to rezone to meet lower income RHNA goals</td>
</tr>
</tbody>
</table>
April 24, 2009

Mr. Gary Gallegos  
Executive Director  
San Diego Association of Governments  
401 B Street, Suite 800  
San Diego, CA 92101

Dear Mr. Gallegos:

We have closely followed the discussions between SANDAG and the California Department of Housing and Community Development regarding how to best implement the intent of SB375 regarding the housing element schedule.

We recognize the burden that would be imposed by jurisdictions having to do two housing elements in such a short timeframe, and the Federation Board of Directors has supported a revised schedule for the fifth element revision (18 months after the adoption of the RTP). We agree that SANDAG should focus its resources on developing the next RHNA, Sustainable Communities Strategy and the RTP to meet the goals of SB375.

SDHF wants to ensure, however, that there is adequate residential land zoned for the development of affordable housing in the interim. Given the long and serious delays by jurisdictions that have not met the state requirement for the fourth housing element revision, we see no reason for being so generous in setting the deadline for needed site rezoning at July 1, 2011. Instead, it should be July 1, 2010. This is more than a year from now and we do not believe there is any reason a jurisdiction acting in good faith could not accomplish needed rezoning by that date.

Furthermore, SANDAG should use whatever measures it has at its disposal to provide incentives for adhering to state law and completing housing elements in a timely way. The allocation of the TransNet funding is the best opportunity to reward those that have bitten the bullet and adopted universally unpopular housing element in their cities. Unfortunately, the requirement to have an approved housing element was removed from the Smart Growth Incentive Fund program and cities without an approved element have been awarded funds.
We will be happy to work with SANDAG and the statewide housing advocates to approve an extension to the current housing element cycle to coincide with SB 375 if SANDAG agrees to the following concessions:

1. All zoning required by unapproved housing elements be completed no later than July 1, 2010. Cities that do not meet this deadline will be required to complete a 2010-2013 housing element using RHNA numbers extrapolated from the current RHNA numbers.
2. Change Policy 33 to require an approved housing element in order to apply for Smart Growth Incentive Funds and other discretionary TransNet funding.

If you wish to discuss this issue further, please feel free to call me at 619-239-6693.

Sincerely,

Tom Scott
Executive Director

CC: Senate Pro Tem Darrell Steinberg
    Cathy Creswell, Housing & Community Development
    Julie Snyder, Housing California
    Susan Baldwin, SANDAG
SAN DIEGO ASSOCIATION OF GOVERNMENTS
REGIONAL PLANNING TECHNICAL WORKING GROUP

May 14, 2009

AGENDA ITEM NO.: 9

Action Requested: INFORMATION

SUSTAINABLE REGION PROGRAM ACTION PLAN AND TOOLKIT

File Number 3003002

Introduction

SANDAG and the California Energy Commission (CEC) entered into a multi-year agreement that assists SANDAG with developing, expanding, or updating our energy planning products in order to meet mutual state and regional energy goals. The Energy Working Group (EWG) oversees the product development. SANDAG also was tasked with developing transferable tools and resources, based on our energy planning efforts, which could be used by other metropolitan planning organizations or councils of government to address regional energy issues.

The Sustainable Region Program (SRP) Action Plan and Toolkit are the first set of tools delivered to the Energy Commission as part of our agreement. The Energy Commission accepted the documents for use in the state to provide guidance that other regional governments can use to implement similar energy-saving programs. The Action Plan and Toolkit were developed in partnership with the Energy Commission, California Center for Sustainable Energy (CCSE), and San Diego Gas and Electric (SDG&E). They also will be used in the region when SANDAG expands the Sustainable Region Program to all member agencies through a Local Government Partnership with SDG&E (anticipated January 2010).

Discussion

The SANDAG SRP is an energy-saving program that provides technical assistance and staff support to member agencies that either have not participated or have minimally participated in regional energy efficiency, renewable, and green building programs available to them. The SRP addresses energy-saving measures for existing buildings and new construction as well as policy measures that local governments can adopt. Policy measures have expanded to include potential ways to integrate energy efficiency, renewable energy, and climate change considerations into General Plan elements, municipal codes, and other standards. A final product for each local government is an energy management plan, or “energy roadmap,” tailored to their needs.

SRP is an expansion of a pilot program undertaken with the City of Carlsbad in 2005 and 2006. The program was developed in partnership with CCSE and implemented by SANDAG with CCSE and SDG&E. Through the SANDAG-CEC partnership, the SRP expanded to assist three additional cities in 2007 and 2008. SANDAG is eager to expand the SRP to assist all member agencies once supplemental resources are acquired.
In addition to the SRP, the Energy Commission partnership helps SANDAG:

- Update the San Diego Regional Energy Strategy,
- Develop a Regional Climate Action Plan, and
- Prepare an assessment of alternative fuels, vehicles, and infrastructure for local government fleet applications.

As these products are developed, they will be brought forward to the Technical Working Group, Regional Planning Committee and the Board of Directors.

Attachments: 1. SANDAG Sustainable Region Program Action Plan  
2. SANDAG Sustainable Region Program Toolkit

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SANDAG Sustainable Region
Program Action Plan

CEC Agreement Number: 160-06-002
SANDAG OWP: 3003002

Submitted by the San Diego Association of Governments
to the California Energy Commission

November 4, 2008
Revised April 1, 2009

ACKNOWLEDGEMENTS

The SANDAG Sustainable Region Program is a joint effort with San Diego Gas & Electric, the California Center for Sustainable Energy (CCSE), and the California Energy Commission (CEC). It provides technical assistance and staff support to local governments that either have not participated or have participated minimally in regional energy efficiency, renewable and green building programs available.

This Action Plan was developed with assistance from CCSE and the CEC. It was prepared with the advice and assistance of the SANDAG Energy Working Group and the CEC State Advisory Task Force.
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Sustainable Region Program Action Plan

I. INTRODUCTION AND PROGRAM HISTORY

Energy is a major operating cost for most local governments; it also is a cost that can be mitigated through planning and the creation of best practices. Local governments can achieve lower energy costs without adversely affecting their staff or their ability to serve their constituents through participation in the Sustainable Region Program (SRP).

The SRP is offered by SANDAG, the San Diego region’s Metropolitan Planning Organization (MPO), to its Member Agencies. The SRP was designed to assist local governments in developing energy management plans and in implementing cost-saving energy measures. SANDAG has facilitated the SRP in the San Diego region with the help of the California Center for Sustainable Energy\(^1\) (CCSE) and San Diego Gas & Electric (SDG&E). The SRP addresses energy-saving measures for existing buildings through building energy audits and new construction through plan review, as well as energy and greenhouse gas (GHG) reducing policies. Policy measures can range from a recommendation for a green building program to ways to integrate energy efficiency and GHG reduction measures into General Plans or municipal codes and standards. A final product for each local government is an energy management plan, or “energy roadmap,” tailored to its needs.

SANDAG developed the SRP Action Plan and SRP Toolkit as part of its contract with the California Energy Commission (CEC). The SRP Action Plan and SRP Toolkit were developed as resources for other MPOs and Councils of Government (COGs) to use if they were interested in developing a similar energy-saving program in their region. This document also is distributed in the San Diego region to local governments interested in taking part in the SRP. The SRP Action Plan works in concert with the SRP Toolkit to provide both general guidance (SRP Action Plan) and specific tasks and templates (SRP Toolkit) to achieve program success.

Identifying and maintaining reliable funding is essential to long-term program sustainability and success. Local governments have responded to this need for consistent funding in a variety of traditional and creative ways. It is, however, important to realize that while there is fluctuation in the regional, state, and national economy, energy conservation, and climate change measures include economic benefits that accrue even for small investments.

Sustainable Region Program Background

The SRP was designed to assist local governments in developing energy management plans (roadmaps) and implementing cost-saving energy measures. It has been targeted at local governments without full-time energy staff and that have had little to no participation in the myriad of state public goods charge (PGC)-funded energy-efficiency programs available.

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\(^1\) SANDAG has utilized the services of the CCSE through a Memorandum of Understanding entered into in 2004 under the CCSE original name, the San Diego Regional Energy Office.
For each local government, the SRP focuses energy and GHG reduction measures in three areas:

1. Existing municipally owned or occupied buildings
2. New municipal construction
3. Local government policies

The SANDAG Sustainable Region Program began in 2005–2006 with the City of Carlsbad Pilot. With assistance from the CEC, SANDAG was able to continue the SRP Pilot and offer services to two more member agencies in 2008. Subsequent to the CEC contract, the local utility, SDG&E, contributed additional staff and financial resources for SANDAG to again expand the SRP to two additional member agencies for a total of five over the course of the SRP to date. The participating cities are Carlsbad (2005–2006), Poway (2007–2008), Solana Beach (2007–2008), Imperial Beach (2008–2009), and Coronado (2008–2009).

The original SRP Pilot was a collaborative effort among SANDAG, CCSE, SDG&E, and the City of Carlsbad. SANDAG facilitated the effort and sought input and direction from its Energy Working Group (EWG). It was targeted at local governments that traditionally had not engaged in energy management activities. The SRP Pilot:

- Provided free technical and policy support to develop an energy management plan
- Assessed municipal energy needs
- Facilitated building energy audits at local government facilities
- Assisted in project development for energy efficiency installations
- Identified appropriate rebate and financing programs available to the city

Carlsbad received technical, policy, and educational assistance from SANDAG, CCSE, and SDG&E and participated successfully in each aspect of the program. The SRP Pilot assessed Carlsbad’s energy performance and identified almost $200,000 in available energy savings from feasible measures on existing buildings and new construction. Policy education also played a role in identification of potential savings for the municipality. Subsequent to the SRP Pilot, the City of Carlsbad has saved 489,571 kilowatt-hour (kWh) in energy consumption through local energy efficiency programs like the CCSE Tax Exempt Customer program.

Except for the staff time of the SRP Pilot facilitator, the majority of staff time from CCSE and SDG&E was utilized at no direct expense to SANDAG. The SRP Pilot’s time fell within its respective PGC-funded program parameters for various energy efficiency, demand response, onsite generation, green building, renewable energy, and energy education programs. The SRP Pilot facilitator sought input from the EWG throughout the SRP Pilot development and as the SRP Pilot progressed.

It should be noted that while the state and local governments face financial constraints due to various factors, the SRP Action Plan and accompanying SRP Toolkit offer ideas, solutions, and opportunities of value to local governments in terms of real savings to the extent energy conservation measures and policies are implemented.
The Sustainable Region Program Today

In keeping with recommendations in the 2007 CEC Integrated Energy Policy Report (IEPR) and the California Public Utilities Commission (CPUC) Energy Efficiency Strategic Plan, the SRP policy component now includes an assessment of energy and GHG reduction measures in General Plan elements and Coastal Plans. This effort began in 2008 with the City of Imperial Beach. SANDAG has sought long-term funding to expand the SRP to all of its member agencies and has been included in the Local Government Partnership (LGP) portfolio of SDG&E for the 2009–2011 program cycle. LGPs are part of the PGC-funded programs regulated by the CPUC. The “PGC” is a line item on ratepayer electric and gas bills and part of the ratepayer-funded PGC goes to energy efficiency programs through each utility. The funding iterations of the SRP are detailed in Step 1 of the SRP Toolkit, “Financing an SRP for Local Governments.”

Recommended Initial Steps

Several initial steps can prepare the MPO for a successful SRP rollout. They include the following tasks:

- Engage stakeholders
- Set regional and local energy priorities
- Public Education Process
- Feedback Mechanisms

Engage Stakeholders

Engagement of local stakeholders is critical to SRP success. Utility-based and third-party energy programs will provide valuable support to the local government’s energy retrofit project work. Relationships with staff in other municipalities will enable the local government to learn from peer experiences. Utility expertise in energy and load management, billing and accounts, and general familiarity with the energy business can prove invaluable in the planning and implementation of the SRP. Third-party providers of energy efficiency and other energy saving programs are valuable resources outside of the utility that also can guide the local government through the energy management process. Utility and third parties often offer incentives for energy installations and retrofits, reducing not only ongoing retrofit costs for the local government, but also the costs of developing an energy management program in the first place.

By leveraging existing program and staff resources, the SRP has been able to expand to address a wider range of energy issues and a larger number of local governments. SANDAG has strong working relationships with both the utility and CCSE and has partnered with both to ensure appropriate technical assistance. CCSE is a nonprofit based in San Diego, but it runs some statewide energy programs and can be contracted to assist entities across the state.
Set Regional and Local Energy Priorities

A participating local government should form a cross-departmental Energy Team and conduct preliminary research on regional and local energy, climate, and/or sustainability goals. The “energy team” is further detailed in Section II: Getting Started. Preliminary research can offer a clear sense of the energy picture in a service area and community, and enable the local government to better articulate its energy goals and priorities.

In 2003, SANDAG adopted its Regional Energy Strategy 2030 (RES) that set nine goals for saving energy and diversifying regional energy resources. SRP activities in each municipality are consistent with the RES. If no regional energy plan exists, beginning with the State’s Energy Efficiency Strategic Plan would be valuable. Regional and local energy policy should be consistent with state law and policy. The United States Department of Energy’s Energy Efficiency and Renewable Energy (USDOE EERE) Web site is another valuable resource.

Clearly defined goals will shape the structure of the local government’s energy roadmap, the structure of its Energy Team, and the resources needed. To be effective, the SRP should investigate:

- The larger vision and mission of the region and local government
- Regional attitudes and behavior toward energy use
- General information on energy efficiency, conservation, and clean onsite generation
- Any previous energy programs pursued by the local government
- Any existing resources, programs, and organizations that can be leveraged

Public Education Process

To guarantee SRP success, the MPO and participating local government should gain and maintain public support for the effort. As part of the Program, the local government should keep detailed information on energy savings and tangential benefits like utility bill reductions and associated GHG reductions. The SRP participants can compile that information into reports that can be disseminated to the appropriate local government staff, including those that can present the information to the public. Staff members tasked with marketing and outreach functions should relay the program benefits in lay terms. Education can be achieved through public education forums that showcase the progress and successes of the Program. Methods of delivery could include:

- Press release with quarterly updates on savings achieved
- E-Bulletins
- Conducting educational forums at Chambers of Commerce, Economic Development Councils, other inter-regional agencies, out-of-region agencies, trade associations, education (K-12 and college) staff meetings, and others
- Presentations to local government decision makers, including city councils and county boards of supervisors
Performance Indicators

The "energy roadmap" involves the requisite details needed to measure the success or failure of the SRP while allowing the Energy Team to make decisions to address challenges and opportunities. The establishment of benchmarks or performance indicators as a way to track progress can include such things as regional attitudes and behaviors towards energy, current energy efficiency rates, current conservation rates, GHG rates, etc.

II. GETTING STARTED

This Action Plan provides a framework from which a local government can develop an energy roadmap or energy management plan as part of its participation in the SRP. The activities recommended will help set the course for effective and sustainable energy management, as well as provide flexibility to implement activities that best meet local government needs. The SRP Toolkit contains specific tasks and templates to assist in this process.

Forming an Energy Team

One challenge facing any energy program is obtaining general staff buy-in, as this topic falls outside the focus of most or all participating staff. Meeting this challenge requires a team of key participants who can reach a unified vision of the kind of energy activities the organization should undertake. This core group will form the local government’s Energy Team.

Successful teams increase collaboration, help build consensus, and allow those who will be affected to participate in the decision-making process. The team can help avoid problems by identifying difficulties during the project development stage and by ensuring that everyone who may be affected by a project understands the anticipated benefits.

In addition to local government staff, it is essential to build long-term political support for the SRP by including elected officials in the process. This will help develop reliable, ongoing support for energy planning.

A successful team should involve personnel from different departments. A team leader also should be chosen. Key participants include representatives from the following:

- Local Government Administration/Management Office – To facilitate policy changes and communications, especially with top-level decision makers and between departments.

- Facilities Management Specialist – To provide experience with the local government’s building stock and with current maintenance practices. This may be Public Works Department staff.

- Finance Department – To provide budgetary, accounting, and economic analysis. For example, if finance pays the local government’s energy bills, they can help identify buildings with the highest energy use.
• Engineering Department – To ensure high-levels of energy efficiency in facility planning, new construction and major retrofit projects, and to provide technology assessments.

• Site/Project Planning Department – To ensure that proposals are consistent with General Plans, codes and standards, or to identify any barriers to implementing energy efficiency and renewable energy measures. For example, building height limits sometimes present obstacles to the use of renewable energy systems.

• Redevelopment or Economic Development Functional Entities – To ensure that staff engages the Energy Team from a business and economic perspective.

Other Energy Team members may be added on a project or activity-specific basis. These members may be from legal, planning, human resources, purchasing and contracts, environmental, public works, and transportation and traffic departments. Outside of the Local Government Team, additional members should include a utility account executive, relevant third-party energy efficiency program administrators, and/or other specialists and consultants. (For more information on forming a Team, see SRP Toolkit Section 4, “Guide to Forming an Energy Team”)

Identifying an Energy Manager

The decision to hire an Energy Manager can happen subsequent to the SRP energy roadmap being completed, or concurrently. Smaller local governments with few municipal facilities and relatively uncomplicated needs can often allocate their energy management activities to existing facilities maintenance staff. This approach can be successful with assistance from energy engineering consultants and the local utility. Larger local governments that occupy multiple facilities will benefit from hiring an Energy Manager.

An Energy Manager is a full-time staff member whose responsibilities include:

• Researching, evaluating, and developing recommendations to address local government energy use

• Coordinating energy management activities within the local government’s subdepartments

• Championing new energy policy development and implementation throughout the local government

• Providing liaison with the local government’s energy providers

• Reporting back to local government decision makers

Typically, an Energy Manager will save more money through avoided energy costs than will be required to support the position. The best location within the local government for an Energy Manager is usually in a facilities management department, but there are examples of successful energy managers being located within other departments. However, it should be a prerequisite that the department where the Energy Manager is located is committed to actively supporting the local government’s energy goals.
Developing Energy Priorities and Goals

It is common for energy programs to have multiple priorities, such as reducing energy costs, saving energy, “greening a region,” improving local air quality, promoting renewable energy use, and conserving resources. While these priorities may change from year to year, the three priorities recommended for the Sustainable Region Program are:

- Reduce energy costs and increase efficiency by retrofitting existing facilities
- Ensure that all new facilities are built to a high standard of energy performance
- Local governments take ownership of their energy future

The challenge is to translate general priorities into specific program goals. Energy program goals should encompass what a local government wants to achieve from measured energy management efforts. Goal definitions are usually high-level and long-term; unfortunately, they often are defined so loosely that they appear abstract and open to interpretation. Clearly defined goals with metrics better serve an organization, for example:

“The Federal Government established an overall energy management goal that required all federal agencies to reduce the energy consumed in their buildings by 30 percent by the year 2005, and by 35 percent by 2010, compared to a 1985 baseline.”

This goal defines the target area (all federal local government buildings), a quantified result (30% below the 1985 level), and provides a stated time period in which the goal is to be achieved (by the year 2005). It is important, however, to recognize that goals are only as good as the implementation programs that support them and make them happen.

Programs and Projects

In order to support an organization’s energy management goals, it will be necessary to set up individual energy projects or develop multi-project implementation programs. Through SRP participation, a local government is able to identify energy projects, timelines, and resource needs.

Implementation programs and projects focus on achieving a municipality’s energy goals through measurable terms, with defined time periods for completion. When designing an energy program, it is important to clearly identify a strategic or long-term goal and short-term objectives. Typical quantifiable terms for measuring progress include: dollars saved, reductions in energy consumption and electric demand, percent of inefficient lights retrofitted, operation and maintenance time saved, program participation levels, etc.

III. MANAGING ENERGY INFORMATION

Developing a process to record, track, analyze, and report both the amount and cost of various energy resources is a critical component of local government energy management. Energy-related resources include electricity, electric demand, natural gas, propane, steam, compressed air, water and wastewater, and transportation fuels.

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2 USDOE Order DOE 0 432.2A, April 15, 2002.
An effective energy accounting system can help identify areas with the greatest savings potential, indicate trends in energy use, help manage programs, measure progress towards goals, identify billing errors, and support better decision making. All of these items will help the energy program gain support. Two examples of energy tracking programs are Energy Star® Portfolio Manager and kWickview, which are discussed under the Energy Bills subheading shortly.

There are three major categories of activities associated with energy accounting systems:

- Collecting and tracking data
- Analyzing data
- Reporting data

**Collecting and Tracking Data**

The Team Leader should compile existing energy related information from all available sources. The objective is to collect, track and maintain the following information:

- Energy bills
- Building and facility data
- Energy supply information
- Local government policies and applicable government regulations

The tasks included in this section should be discussed in the Kickoff Meeting. They will involve interaction between the Team Leader, the energy engineer, and the utility representative. For a sample meeting agenda, see SRP Toolkit Section 5, “Kickoff Meeting.”

**Energy Bills**

The Team Leader should collect from the utility service provider the past one to three years of energy bills (more years if possible) for all facilities. The bills will provide information on energy use and costs, utility rates, and other charges, and utility metering practices. The Team Leader can contact the utility account representative or customer service department for assistance in interpreting the data. (See SRP Toolkit Appendix B. II. “Sustainable Region Program Questionnaire” and B. III. “Preliminary Assessment Questions for examples of collection procedure.)

The Team Leader should select a mechanism to track building energy use, costs, and savings. CCSE assisted the local government in tracking and analyzing energy data. In the San Diego region, SDG&E offers a free online tracking program (kWickview) to graph and review historic energy use. The SRP and local governments in San Diego will be provided training on the Energy Star® Portfolio Manager once the SDG&E 2009-2011 energy efficiency programs are adopted by the CPUC. Portfolio Manager is an interactive energy management tool that allows you to track and assess energy and water consumption across an entire portfolio of buildings in a secure online environment. It can help identify under-performing buildings, verify efficiency improvements, and receive Environmental Protection Agency (EPA) recognition for superior energy performance.
Developing an energy accounting and tracking software program can be a time-consuming activity, so consideration should be given to commercially available energy accounting software systems including those mentioned above. Most proprietary systems will track energy, as well as non-energy utilities such as water, wastewater, and municipal solid waste. Utilities and utility accounting software developers have responded to this problem by offering systems that enable utility billing data to be entered electronically into the energy accounting system. This simplifies the process of entering utility billing information and ensures that energy use and cost data are kept up to date.

To help a local government track and maintain energy data:

- Consider either network-based or proprietary desktop energy accounting systems. [Energy Calculators & Software](#) at USDOE.
- Ensure that the new billing and energy use data is added to the historical database as it becomes available.
- Inquire about electronic data interchange (EDI) from the utility, which allows for the transfer of billing data electronically.
- In the San Diego region, use SDG&E kWickview service to review historic energy use.

**Building and Facility Data**

Building and facility data requirements include information on age, size, occupancy, energy equipment, building envelope, past energy assessments, renovations or equipment upgrades, and any future changes planned.

**Energy Supply Information**

Compile contractual and other information relating to the local government’s purchasing arrangement for energy commodities, water, sewer, and related services.

**Local Government Policies and Government Regulations**

The appropriate local government staff member should collect any policy or regulatory information pertaining to energy-related equipment purchases, building design codes and standards, and local government planning policies. All of the historical data should be tracked and recorded in an organized and accessible format.

**Analyzing Data**

Once data is compiled and being tracked, analyze it for opportunities for energy and cost savings. Most purchased utility billing software can be set up to provide the following formats and will help determine which buildings to focus on:

- Determine for each building (or by utility meter if this is different) the year-round base loads, seasonal loads, load factor, anomalies, and billing errors.
- Determine benchmark data and energy use intensities (i.e., annual kilowatt-hours per square foot [kWh/sq ft-yr], Watts per square foot [Watt/sq ft], therms per square foot [therms/sq ft], and annual millions of British Thermal Units per square foot [MBTU/sq ft-yr]). Compare each facility against established energy use indices for similar facilities. This will give a preliminary indication of how well a building is performing.

- Review existing utility metering arrangement; assess its suitability for the local government’s energy management needs. Additional metering could be needed to provide adequate information.

**Reporting Data**

Determine who currently reviews energy bills and related expenses and who should receive reports on energy use and related issues and devise a plan for reporting. This involves the following:

- Determine what information requires review and when that should occur.

- Consider how providing regular information on energy use and costs can help support the energy program.

- Adapt reports to the audience. For example: the Finance department may need information regarding any sudden spikes in energy costs; building operators may require information about building efficiency compared to other similar buildings; building managers may want early warning on unexpected trends in energy use.

- Establish an organized filing system for keeping records and information relating to energy usage, energy rates and costs, technical information, equipment and facility status, energy assistance opportunities, and other key data.

**IV. FACILITY ENERGY MANAGEMENT**

In many local governments, building energy costs are the second largest annual expense after employee salaries. In spite of this, some local governments do not know their energy cost data. Energy costs may be distributed across departmental budgets and not accumulated even at budget time. In addition, public agencies may budget energy cost as a fixed cost and not realize that there are opportunities to reduce that expense.

Energy costs can be managed through a range of energy conservation measures and initiatives. Most local governments initially focus their efforts on improving energy efficiency in their existing facilities. There are a number of major issues to consider when developing a program to retrofit existing buildings, including:

- Assessing existing facilities

- Long-term assessment planning

- Developing projects

- Operation and maintenance
Assessing Existing Facilities

Program facilitators should start the energy plan process by reviewing the local government’s energy bills and keeping the 80/20 rule (Pareto Principle) in mind. In their experience, energy experts at CCSE have found the Pareto Principle applies to energy usage at local government buildings: it is likely that less than 20 percent of the facilities are using 80 percent of the energy.

There is more than one way to consider possible projects. One option is to pick “low hanging fruit,” e.g. a gym that contains several dozen 500-Watt incandescent lamps. This type of project can provide great savings with a short payback. With this approach however, it is rarely cost-effective to pursue projects that have longer paybacks like chiller replacements. These projects with more upfront cost face a tougher time moving forward once the more economical projects have been completed.

An alternative and more cost-effective practice is to develop comprehensive projects where short payback projects can subsidize projects with longer payback periods. Comprehensive projects like these can provide an acceptable overall project payback time and also will maximize the efficiency of all energy-using systems in the facility.

There are a number of steps in putting together a retrofit project. Apart from the acquisition of initial funding, these steps include: energy assessment, project design, construction, commissioning, project evaluation, and assembling an appropriate operations and maintenance plan for all energy systems.

Assessments can be a key piece of the initial project selection process. It is helpful to understand that there are different kinds of assessments, each equipping the Energy Manager for different kinds of decision-making. Basically, an Energy Manager makes an assessment of the energy using systems already in a building, and then makes recommendations on what can be done to improve building performance. For a complete explanation of assessments, see SRP Toolkit Step 6, “Guide to Municipal Building Energy Assessments” and Step 7, “Assessment Report Meeting.”

Long-Term Assessment Planning

The assessment of a local government’s facilities will help identify energy conservation and self-generation opportunities and enable the local government to prepare a long-term plan to complete comprehensive energy retrofits of all its facilities. However, it is not necessary to delay getting started on energy retrofit projects at some facilities while others still are being audited. As mentioned above, an examination of the local government’s energy bills will quickly reveal the big energy users. Staff can complete assessments for the remainder of the local government’s facilities as resources become available.

A typical building energy audit includes recommendations on the following features:

- Heating, ventilation, and air-conditioning (HVAC)
- Lighting
- Energy Management Systems (EMS)
• Building envelope
• Plumbing fixtures
• Self-generation opportunities
• Equipment scheduling
• Operation and maintenance improvements

The SRP Toolkit contains several Templates in Appendix B that identify relevant energy-efficiency opportunities and preliminary energy-assessment items. To prepare for energy audits or assessments, you will need to:

• Compile any previous assessments or surveys that have been performed in the past.
• Contact building managers or maintenance personnel to arrange audit and interview times.

**Developing Projects**

Once a building’s energy use and costs are well understood, the energy assessment is likely to reveal energy equipment upgrades that are good business decisions. The assessment recommendations may cover measures such as lighting system and HVAC upgrades, cool roof project potential, controls that save energy, or adding a renewable energy generating system. The Energy Manager can determine which measures make economic sense, are technically sound, and whether or not they will maintain or improve system performance and reliability. Having identified good retrofit measures, the following additional factors also should be considered as the project moves forward:

• Determine the availability of funding for implementing the proposed project.
• Take advantage of utility, state, and regional technical assistance programs.
• Identify the projected lifetime and proposed future uses for the building.
• Identify any other potential projects that can be combined in the contract to reduce the overall project cost.
• Non-energy considerations, such as the presence of asbestos which might affect the cost of the project.
• Determine who will be responsible for implementing the project.
• Consider the most appropriate contracting method. This might vary from a traditional design-spec-bid-construct contracting method, in which each of the required services is separately contracted out, to contracting out a whole project to an energy service company (ESCO) that will provide a complete ‘turnkey’ project.
• Identify available funding programs.
• Obtain the support of top management and include all departments affected by the project, including administration, finance, contracts, public works, engineering, maintenance, and planning.

The Federal Energy Management Program (FEMP) provides extensive information resources on developing energy projects, including downloadable software for identifying energy improvements, simulating energy use in buildings, identifying opportunities for renewable energy use, life cycle costing, and many others.

**No-Cost and Low-Cost Modifications**

In many cases, the assessment will identify no-cost or low-cost modifications to equipment or to its operation that can have immediate beneficial impact. These include instructions on office equipment shutdowns, thermostat settings, lighting use recommendations, better switching or other controls, motion sensors, and behavioral modifications that will not impact office productivity.

**Operations and Maintenance**

Improved operation and maintenance of the energy equipment in a building can provide energy saving opportunities, often at low cost to the local government. It is not unusual for the operation and maintenance savings from a retrofit project to exceed the energy savings. Successful projects require that the Team Leader work closely with maintenance staff; this also may have the additional benefit of recruiting additional advocates for sound energy management practices.

**Commission or Re-commission Facilities**

Commissioning a newly constructed building and re-commissioning an existing building are procedures to ensure that building energy systems closely match the actual energy needs. The process provides significant opportunities to improve energy use and should be done on a periodic basis in conjunction with the building maintenance staff. Also, consider the following measures:

• Adjust temperature set points and operation schedules of HVAC system

• Test and balance HVAC air distribution system

• Perform recommended maintenance on HVAC systems

• Perform appropriate lighting delamping, relamping, and/or re-design

• Proactive building operation and maintenance

After re-commissioning, there are often further energy and costs savings that can be obtained through a proactive building operation and maintenance program. The Energy Team should meet regularly with building operation and maintenance staff to explore improvements. Ideally, maintenance operations will progress from a preventive maintenance process, to a predictive maintenance process, and from there to a reliability-centered maintenance program. Consider doing the following:
• Participate in Utility Demand Reduction Programs
• Educate staff on workplace energy efficiency measures
• Provide an effective employee operation and maintenance problem reporting procedure
• Ensure that lights and equipment are turned off when not needed
• Ensure HVAC and other equipment is properly maintained to minimize energy losses

V. NON-BUILDING INFRASTRUCTURE RECOMMENDATIONS

Energy management plans also should include local government infrastructure and other measures. When well managed, these can reduce energy use as well as have environmental benefits. These opportunities include examination of exterior lighting, water and wastewater, recycling programs, and land use and transportation planning.

Exterior Lighting

Measures to improve the energy efficiency of outdoor lighting near buildings, in parking lots, and along streets offer energy savings opportunities since these systems have significant costs for energy and operations and maintenance. Outdoor lighting also has a major impact on the appearance of a facility or of a neighborhood at night. These two issues – cost and appearance – are the key issues in outdoor lighting. In exterior lighting projects, also consider the following:

• Traffic lights. Use light emitting diode (LED) lights for red, green, and flashing yellow lights. Consider battery backups at critical traffic intersections.

• Streetlights. Energy efficient compact fluorescent and LED fixtures suitable for lower wattage street lighting applications now are available. Induction and LED street-lighting demonstrations are being tested by SDG&E and the City of San Diego.

• Parking lot lights. In parking lots, consider bi-level (high/low) lighting with a motion sensor system and/or energy efficient compact fluorescent fixtures.

• Small or remote lights and remote communications and call boxes. Consider using photovoltaics with energy storage to supply lower wattage lights and those remote from the electric grid.

Water and Wastewater

There is a strong relationship between water and energy use. Water-related energy uses annually account for roughly 20 percent of the state’s electricity consumption, one-third of non-power plant natural gas consumption and about 88 million gallons of diesel fuel consumption. Any measure that saves water also saves energy and potentially funding. Agencies should consider the following measures:
• Review local government irrigation and landscaping systems. Over watering of planted areas is common—drought tolerant, low-water-use plants, and xeriscaping should be used where possible.

• Evaluate the opportunity to shift water-pumping operations to off-peak hours.

• Implement water conservation programs.

• Water conservation measures, such as porous parking lot design, that provide for water infiltration and lowering temperatures.

• Ensure that a leak reporting system is established and effective.

• Take advantage of state and utility programs to improve water and energy efficiency; references to these programs are available through CCSE.

• Take advantage of incentives, rebates, and technical assistance available from local water authorities and other sources.

Recycling

Recycling programs have indirect energy and cost-saving benefits for local governments. In addition, they also can be a source of revenue. To increase the success of recycling programs:

• Encourage recycling through awareness programs

• Provide clearly marked recycle material containers

• Local governments can charge variable rates for garbage collection bins to reward recycling

• Promote backyard composting programs

VI. LAND USE AND TRANSPORTATION PLANNING

California energy laws have a great effect on land use and transportation planning, since the majority of GHG emissions in California are the result of infrastructure and development decisions. Based on state and local policies, local governments should consider:

• How to build buildings and how to retrofit existing buildings

• Where to locate buildings

• The quality and types of infrastructure required to serve these buildings

• Enhanced telecommunications infrastructure that would support telecommuting (California Emerging Technology Fund)

• Develop business case across industries (police, health care, education, etc.) that demonstrate energy expense savings
Compatibility with Regional Comprehensive Plan or Regional Blueprint Plan

The Energy and Climate Change Connection

The state’s largest contributors to greenhouse gas (GHG) emissions are on-road transportation, electricity use, and natural gas use. The way local governments plan for transportation and land use, ranging from General Plans to council policies to internal soft policies and local government energy usage, all have significant impacts on a local government’s energy use choices and related GHG emissions. Therefore, addressing GHG reductions primarily is achieved from modifying energy choices and use. There are several state laws and Executive Orders from the California Governor that have been passed or issued with respect to energy conservation and climate change issues:

- Governor’s [Executive Order S-03-05](#) – Created the [Climate Action Team](#).


- California Senate Bill (SB) 97 (Chapter 185. Statutes of 2007) – requires the Governor’s [Office of Planning and Research to develop California Environmental Quality Act (CEQA) guidance](#) to local agencies to address the potential environmental effects of GHG emissions from proposed projects.

- California [Assembly Bill 811](#) (Levine, Chapter 159, Statutes of 2008) – California’s Clean Energy Municipal Financing Law (AB 811) authorizes a legislative body to allow property owners to enter into contractual assessments to finance installation of energy efficiency improvements and distributed generation renewable energy sources. Property owners would pay for the upfront costs of renewable and energy efficiency projects over 20 years as a line item on their property tax bills. If the property is subsequently sold, the repayment obligation remains on the property tax bill and transfers to the new owner.

- California [Senate Bill 375](#) (Steinberg, Chapter 728, Statutes of 2008) – SB 375 was signed into law by Governor Schwarzenegger on September 30, 2008, and requires the [California Air Resources Board](#) (CARB) to establish a Regional Targets Advisory Committee (RTAC) and to establish regional GHG remission reduction targets for agencies. The law requires the integration of regional transportation planning, regional housing needs assessment planning, and GHG planning while streamlining aspects of CEQA. The success of SB 375 with respect to the development of a Sustainable Communities Strategy (SCS) will be public engagement akin to the Department of Transportation’s [Regional Blueprint Planning](#) process.

- California [Senate Bill 732](#) (Steinberg, Chapter 729, Statutes of 2008) – The law establishes the Strategic Growth Council and would, among other things, encourage sustainable land use planning including implementing energy efficiency planning.

It should also be noted that there are many energy-related informational sources of interest to the local government including the ICLEI – Local Governments for Sustainability, an international association of local governments as well as national and regional local government organizations that have made a commitment to sustainable development. The [CARB Local Government Protocols](#) and the [State Attorney General’s Office (Energy Efficiency)](#) are also sources of information.
General Plans, Coastal Plans and Codes and Standards

Local governments have authority over land use within their boundaries, and land use decisions affect energy use. Integrated land use and transportation plans enable residents to utilize a variety of energy-efficient transportation options. In the SRP, SANDAG uses its blueprint plan, the Regional Comprehensive Plan (RCP), and its adopted regional Smart Growth Concept Map, which was an outcome of the RCP, when assessing existing local plans. The RCP integrates regional land use and transportation planning with local land use and transportation plans to better plan for future growth in the region. To date, sixteen MPOs and 50 of 58 counties in California are participating in Regional Blueprint Planning supported by the Department of Transportation to develop Regional Blueprints such as the SANDAG RCP. The goal of Regional Blueprint Planning is to better integrate land use and transportation planning in an open and broadly engaging process that preserves local land use authority while improving mobility, housing, air quality, farm and open space land preservation, resource use efficiency, and community quality of life.

The choices made by regions and local governments have energy consequences. For example, smart growth development that is by definition mixed-use and near mass transit nodes is inherently more energy efficient by providing opportunities to conveniently walk, bike, or use mass transit. Consider the following smart growth practices to reduce transportation GHG emissions and energy consumption:

- Promote transit-oriented design (TOD) by increasing housing and job density near transit nodes.
- Promote mixed use development.
- Increase connectivity of new developments, i.e., reduce the number of cul-de-sacs and increase the number of through streets.
- Integrate safe bikeways and pedestrian paths into the transportation mix and provide bicycle parking and other facilities to encourage bicycling.

The SANDAG RCP identifies various smart growth measures and densities for urban centers and university centers to main streets of smaller towns. Begun in 2008 as a pilot, SANDAG is working with the City of Imperial Beach and SDG&E to assess its General Plan and Coastal Plan to identify ways to integrate energy efficiency and GHG reduction measures into various plan elements. As of March 2009, SANDAG and SDG&E have begun efforts with the Cities of Santee and Encinitas in San Diego County to identify measures that integrate energy and climate change considerations into general plans. Additionally, in March 2008, the City of San Diego adopted a General Plan Update that included significant measures to address climate change and energy efficiency in its conservation element and other elements. Based on lessons learned over 2009, SANDAG will update the SRP Action Plan and SRP Toolkit to incorporate final results of land use planning efforts with the above-mentioned cities.

In January 2009, the Governor’s Office of Planning and Research (OPR) issued “Preliminary Draft CEQA Guideline Amendments for Greenhouse Gas” per SB 97. The OPR is in the process of conducting public workshops on the draft document and is expected to send the final document to the Resources Agency for certification and approval before January 1, 2010. The final document, a
technical advisory, will assist professional planners, land use officials, and CEQA practitioners with informal guidance to public agencies as they address the issue of climate change in their CEQA documents.

The Local Government Commission (LGC) has prepared guidelines on general plan measures to reduce community energy use. Local governments should consider the following energy-related elements of land-use planning and design that create cooler, more energy efficient neighborhoods, and reduce household energy consumption:

- Reduce the “heat island effect” through such measures as reducing street widths, limiting paved areas, and using light colored roofing and paving materials.
- Plant trees to shade houses.
- Orient streets and buildings for renewable energy systems and passive solar heating.
- Designate areas for higher density attached housing, which reduces the area of the building envelope that is exposed to the exterior climate.
- Siting, design, and construction of school facilities by the Division of the State Architect.

**Transportation Initiatives**

Local jurisdictions are positioned to be leaders in adopting new technologies. The USDOE Alternative Fuels Data Center provides useful information. In the area of transportation initiatives, the following measures should be considered:

- Purchase alternatively powered vehicles, such as electric, hybrid electric, neighborhood electric vehicles and natural gas vehicles
- Install alternative fuel vehicle refueling stations
- Consider making vehicles available for car and van pooling
- Consolidate trips involving local government vehicles
- Provide incentives for riding public transportation
- Encourage telecommuting and teleconferencing
- “Safe Routes to Schools” Program

SANDAG has a regional alternative fuels assessment underway that plainly identifies alternative fuel options for municipal vehicle classes, identifies funding and procurement options, and includes model ordinances. SANDAG will update the SRP Action Plan and SRP Toolkit to incorporate assessment results.
VII. DEVELOPING ENERGY SAVING POLICIES

The policies and practices adopted by a local government can have a major influence on its energy use. In many instances, these policy measures can be implemented at little or no cost to the local government and can have an immediate and a sustained impact on energy use. The recommended policies and management actions described below are grouped into three categories:

- Energy program funding
- Promoting energy efficiency and/or reducing GHGs
- Adopting policies that impact energy supply

Energy Program Funding

Identifying and maintaining reliable funding is essential to long-term Program success. Local governments have responded to this need for consistent funding in a variety of ways. Some energy programs depend heavily on outside support from state agencies or local utilities. Others rely on the local government’s own annual budgeting process. This can make the programs vulnerable to changes in perception of the importance of saving energy. Step 8 in the SRP Toolkit details various ratepayer and local government funding mechanisms to implement conservation projects, such as:

- Public goods charge funds are regulated by the California Public Utilities Commission (CPUC). The charge is a line item on ratepayer electric and gas bills that goes to funding energy efficiency programs (among others) at each utility across the state.
- Utility on-bill financing can cover the up-front capital costs of energy efficiency improvements by financing the improvements on a customer’s utility bill over a certain number of years at low or 0-percent financing.
- Revolving funds are internal pools of money designed to recycle a portion of energy cost savings from energy-efficiency improvements into capital for new projects. A local government can reinvest a certain percent of documented annual energy savings into a revolving fund that would provide capital for future energy efficiency projects.
- One percent for energy imposes a fee of 1 percent on all local government energy bills to finance an energy management program for that local government’s facilities.
- State energy loans programs, like the CEC Energy Efficiency Financing Program, provide financing for schools, hospitals and local governments through low-interest loans for feasibility studies and the installation of energy-saving measures.

Promoting Energy Efficiency and/or Reducing Greenhouse Gases

A local government’s general business practices and policies can have a powerful influence on energy use. It is important to identify potential practices that may have an impact on energy consumption and costs, or that present barriers to increased energy efficiency. If local government business practices or policies do not address reducing GHGs, the local government should work to incorporate saving energy and reducing GHG emissions into policies and business operations.
It also should be noted that there are several organizations that can assist local governments in there GHG quantification including ICLEI and the CARB Local Government Protocols. When the CPUC approves the statewide energy efficiency programs for the years 2009 through 2011, a program with ICLEI, LGC, and the Institute for Local Government (ILG) will be run in each Investor-Owned Utility service territory (SDG&E, PG&E, SCE, and SoCalGas) to provide help to local governments with addressing climate change.

Purchasing

The best-known program for promoting energy efficient purchases is Energy Star®, originally developed as a joint government/industry marketing and labeling program. All Energy Star® labeled products are in a Web-based list that is easily accessible. Local governments can choose to enact a policy that when purchasing any energy using equipment, the selection shall be made from the list of Energy Star® products. The challenges in this sector now rest more on ensuring that the energy management features of Energy Star® equipment are properly enabled and fully operational. As part of the technical support for the Energy Star® program, the Energy Star® Web site is a powerful implementation tool, with downloadable software.

Short-Term Versus Long-Term Planning

When purchasing equipment that is not part of the Energy Star® program, decisions should be made based on the total cost to purchase, operate, and maintain the equipment, rather than only the up-front capital cost. This type of life-cycle cost analysis assesses the relative costs of competing equipment choices over their anticipated lifetimes. Local governments should encourage or mandate the use of life cycle cost analysis to select high initial cost and/or high energy-using equipment, and continue to search for other ways to encourage long-term thinking for all investment decisions.

Determining total equipment costs can be more difficult when first implementing life cycle cost assessments if the equipment purchased is funded out of a capital improvement budget, while the operation and maintenance costs are funded out of an annual departmental operating budget. The local government will need to recognize the budget impacts from both areas.

The fiscal climate to today clearly dictates that traditional financing mechanisms and asset management approaches to energy and GHG reductions will need to rely on mix of solutions and partnerships. Organizations like California Forward, the Legislative Analyst’s Office (LAO), and the Center for a New Orange County can provide information and actions that can help local government move beyond conventional solutions.

New Construction

Many local governments are owner-occupiers of their buildings. As such, they have both the opportunity to influence a building’s performance during the design and construction phase and the incentive to minimize its long-term operating costs. There are a number of steps that can be taken to ensure a new facility is built to the highest standards of performance. For example, when selecting an architect and engineering team, the team should ensure that they have previous experience with the design of energy efficient buildings and make sure that the designers understand that operating efficiency is a priority for the new facility. Staff then should ensure that
it remains a high priority as the design work moves forward, and that this is reflected in the construction specifications. At the end of the design phase, the team should make sure that operating efficiency is not ‘value engineered’ out of the project, if unexpected budget constraints require cost cutting.

California’s state energy code, Title 24, already requires energy efficient construction standards in new residential and non-residential buildings. Local governments should consider enacting policies to require that their new facilities be designed to exceed the state code requirements, and take advantage of incentive programs designed to encourage higher performance. It also should be noted that there are design assistance programs available from the CEC and utility companies that may or not have funds available for these purposes.

To further enhance long-term building energy performance, local governments should consider adopting a comprehensive building performance approach that considers other design and operating factors for a new facility in addition to energy. One approach is to require Leadership in Energy and Environmental Design (LEED) certification (U.S. Green Building Council) or Energy Star® certification for all new buildings or major retrofit projects. The LEED program provides third-party certification of building economic and environmental performance. The Cities of San Diego, Seattle, and Portland, for example, have adopted LEED criteria for their new buildings.

If the local government leases or rents its buildings, the energy efficiency of a potential property should be one selection criteria. In some cases, building owners may be open to negotiating energy efficiency upgrades to the facility. For more information on New Construction guidelines, see SRP Toolkit Section 8, “New Construction Considerations”.

Policies That Impact Energy Supply

In recent years, local jurisdictions have become increasingly concerned about issues of energy supply and reliability, especially for critical facilities. Local governments can promote policies that help ensure energy reliability to their facilities by examining issues of delivery reliability, security, price volatility, and the diversity of energy supplies.

Distributed Generation

A more diversified mix of energy supplies will generally increase supply reliability. Local governments should assess the potential for clean onsite generation at their facilities, particularly for critical/emergency uses. The SANDAG RES and the CEC IEPR both emphasize the important role of renewable energy in meeting local and state energy goals. Other sources for information on distributed generation (DG) benefits are found on the CCSE Web site.

California Assembly Bill 2466 (Chapter 540, Statutes of 2008) was enacted and authorizes a local government entity to receive a credit on their electric bill for power generated from a renewable energy facility that generates more energy than is needed to serve the electrical load of governmental entity owned or controlled site where the facility is located. This option also could be useful to local governments.
One other option to consider is under the authority of AB 1659 (Farr, Statutes of 1984; Local Government Commission) that authorizes the formation of a Community Energy Authority, whereby “local governments working alone or in concert with other local governments can access tax-exempt financing for energy efficiency or renewable energy projects.”

**Aggregation and Municipalization**

Local government agencies also can evaluate options for the aggregation of energy loads and its impact on rates as well as evaluate the options for forming a municipal utility. Legislation and proceedings on Community Choice Aggregation (CCA) have made it easier for cities and counties to aggregate local consumers. The LGC has significant online resources about CCA. According to the LGC, CCA enables California cities and counties – or groups of cities and counties – to supply electricity to the customers within their borders. Unlike a municipal utility, such as the Los Angeles Department of Water and Power or the Sacramento Municipal Utility District, a CCA does not own the transmission and delivery systems (i.e., the poles and wires). Instead, a CCA is responsible for providing the energy commodity (i.e., the electrons themselves) to its constituents – which may or may not entail ownership of electric-generating resources. A high-level of political commitment is necessary over the long-term.

Additionally, it should be noted that there may be Local Economic Development strategies and synergies that local governments can pursue not only to encourage green businesses to locate in a given region, but also to provide disincentives for GHG-producing industries or practices. Further review of the deliberations of the Regional Targets Advisory Committee (RTAC) under SB 375 will address economic development analysis of certain business clusters and the benefits of certain industries over others.

**Cross-Sectoral Analysis**

Local governments are tremendously diverse and may benefit from the use of existing planning efforts such as water management plans, regional blueprint plans, telecommunications plans, and homeland security plans to name a few. Furthermore, there may be opportunities to leverage funding in these areas that contribute to SRP success.

**VIII. PROVIDING EMPLOYEE EDUCATION**

Educating a workforce about how they can save energy can have a measurable impact on local government energy use at a fairly low cost to implement. The USDOE has estimated that employee energy awareness programs can reduce energy consumption by up to 10 percent. These gains can be short-lived without consistent and continuing employee education. The Team Leader should consider the following ways of providing training for personnel and recognizing their achievements:

- Employee education
- Recognition and awards
- Energy Team training
**Employee Education**

Staff members that have been educated in the importance of reducing energy use and equipped with the necessary resources can make a significant contribution to saving energy. Education also can play a vital role in linking together multiple energy reduction strategies into a local government-wide effort. Training in energy awareness that ties energy saving in the workplace to energy saving at home is likely to have a stronger and more lasting impact. It also will reduce community and employee energy costs. The Team Leader should consider the following when planning employee energy education:

- Determine the best way to communicate energy information to employees (e.g., newsletters, posters, meetings, e-mail, Web).
- Determine the level of information appropriate for the various audiences. Illustrate potential contributions from various groups. Give managers detailed energy use statistics, energy use trends in their departments, and information on how comparable facilities are doing.
- Conduct training for all local government employees on energy usage.
- Conduct energy training for staff involved in project permitting.

Staff resources to assist with energy education are available from USEPA, USDOE, local nonprofits, and the local utility.

**Recognition and Awards**

Employees can be recognized in the form of awards or ceremonies that:

- Recognize departments and individual key personnel responsible for energy savings;
- Publicize successful energy projects or measures, including cost savings and environmental benefits; and
- Sponsor contests to promote saving energy and energy awareness and reward the winners with simple prizes.

These actions can provide a further incentive for managers to encourage energy efficiency by their staff. In addition, some local governments tie departmental energy performance into the manager’s and/or individual’s annual personnel evaluation.

**Team Training**

A program to provide continuous learning for members of the Energy Team is important for their effectiveness and motivation. Members of the Energy Team should be encouraged to consider the following opportunities:
• Send key employees to energy seminars; workshops are often held by the region’s utility.

• Use the USDOE “Energy Savers Virtual Tour” for staff training and as an individual’s personal reminder of simple energy saving measures they can implement themselves. For copies of the CD call (877) 337-3463.

• Join and participate in energy industry trade associations, such as the Association of Energy Engineers (AEE) and American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), and in green building associations like the U.S. Green Building Council (USGBC).

• Establish a building energy monitor program where one person who works in the building is responsible for monitoring energy practices and is responsible for correcting wasteful practices. These monitors should receive basic levels of energy management training.

• Obtain professional certification for energy management leaders such as the AEE’s Certified Energy Manager designation or the LEED Accredited Professional designation.

IX. ADDITIONAL RESOURCES

Various cities’ Climate Action Plans are located at the Cool Cities Web site.

The Institute for Local Government (ILG) has instituted a program that provides information about the latest climate action resources, case studies, and best practices.

The nonprofit group Natural Capitalism Solutions (NCS) has developed an online Climate Protection Manual for Cities. NCS states that its mission is “to educate senior decision-makers in business, government, and civil society about the principles of sustainability.”

In cooperation with USEPA, LGC has produced a booklet discussing the benefits of density and providing case studies of well-designed, higher density projects throughout the nation. Creating Great Neighborhoods: Density in Your Community (2003).

The Pew Center on Global Climate Change was established in 1998 as a nonprofit, non-partisan, and independent organization. The Pew Center has published a series of reports called Climate Change 101. These reports cover climate science and impacts, technological solutions, business solutions, international action, recent action in the U.S. states, and action taken by local governments.

In 2007, USEPA issued the report, Measuring the Air Quality and Transportation Impacts of Infill Development, which summarized three regional infill development scenarios in Denver, Boston, and Charlotte. The analysis shows how standard transportation forecasting models currently used by MPOs can be modified to capture at least some of the transportation and air quality benefits of brownfield and infill development. More compact and transit oriented development was projected to substantially reduce vehicle miles traveled. As the agency found, “the results of this analysis suggest that strong support for infill development can be one of the most effective transportation and emission-reduction investments a region can pursue.”
In 2007, The Urban Land Institute (ULI) produced a report entitled, “Growing Cooler: The Evidence on Urban Development and Climate Change,” which reviews existing research on the relationship between urban development, travel, and GHG emitted by motor vehicles. It further discusses the emissions reductions that can be expected from compact development and how to make compact development happen.

The California Department of Housing and Community Development has many useful resources related to housing policy and housing elements and specific recommendations for creating higher density and affordable communities.

In May 2008, the California Transportation Commission (CTC) adopted an Addendum to the 2007 Regional Transportation Plan Guidelines: Addressing Climate Change and GHG Emissions.

The California Energy Commission’s Public Interest Energy Research (PIER) Program supports energy research, development, and demonstration projects designed to bring environmentally safe, affordable, and reliable energy services and products to the marketplace.

The California Air Pollution Control Officers Association (CAPCOA) has a climate change Web site with documents such as a white paper entitled “CEQA and Climate Change” (January 2008).

The Department of Justice Office of Attorney General’s Global Warming Web site includes a section on CEQA and the Attorney General’s public comment letters.

The SANDAG Web site includes numerous planning documents and resources including the RCP, RES, Smart Growth Concept Map, smart growth visual simulations. Smart Growth Design Guidelines are under development as part of the Smart Growth Tool Box to assist local jurisdictions.

**Additional Energy Web sites**

California “Flex Your Power”
www.fypower.org/

California Department of Community Services and Development and LIHEAP
www.csd.ca.gov

Lawrence Berkeley National Laboratory – Buildings Technology Department
http://btech.lbl.gov/

Minnesota Sustainable Design Guide
www.sustainabledesignguide.umn.edu

Savings By Design
www.savingsbydesign.com
ACKNOWLEDGEMENTS

The SANDAG Sustainable Region Program is a joint effort with San Diego Gas and Electric (SDG&E), the California Center for Sustainable Energy (CCSE), and the California Energy Commission (CEC). It provides technical assistance and staff support to local governments that either have not participated or have participated minimally in regional energy efficiency, renewable and green building programs available.

This Toolkit was developed with assistance from CCSE, SDG&E, and the CEC. It was prepared with the advice and assistance of the SANDAG Energy Working Group and the CEC State Advisory Task Force.
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Introduction to Sustainable Region Program Steps

Energy is a major operating cost for most local governments; it also is a cost that can be mitigated through planning and the creation of standard practices. Local governments can achieve lower energy costs without adversely affecting their staff or their ability to serve their constituents or ratepayers by following the practices outlined in the Sustainable Region Program (SRP).

SANDAG developed the SRP Action Plan and SRP Toolkit as part of its contract with the California Energy Commission (CEC). The SRP Toolkit was created as a resource to assist a public agency facilitator, like a Metropolitan Planning Organization (MPO) or Council of Governments (COG), with implementing its own SRP. It is a set of “tools” to aid in the development and execution of the SRP, with an emphasis on energy assessment tasks that lead to the installation of energy-saving measures, actual cost savings, and greenhouse gas (GHG) reductions. The SRP supports state mandates for energy planning including California’s preferred loading order. The loading order gives highest priority to energy efficiency measures, followed by renewable energy systems, and clean distributed generation (DG) (like fuel cells and combined heat and power systems) that reduce our demand on the utility grid. If a region’s resource needs or other requirements cannot be met through these measures, then new transmission or utility-scale fossil-fuel-based generation must be developed.

Twelve tasks and four appendices containing templates for completing tasks are included in this Toolkit. Presented in order of implementation, they are:

Step 1: Financing a Sustainable Region Program for Local Governments
Step 2: Program Announcement from Agency to Local Government
Step 3: Sustainable Region Program Questionnaire
Step 4: Guide to Forming an Energy Team
Step 5: Kickoff Meeting
Step 6: Guide to Municipal Building Energy Assessments
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Appendix A: Program Participation Timeline
Appendix B: Sustainable Region Program Templates
Appendix C: Links to Other Toolkits and Guides
Appendix D: SAMPLE Local Government Energy Assessment Report

Step 1: Financing a Sustainable Region Program for Local Governments

Securing initial funding for the SRP is the first step to a successful program rollout. The SRP Toolkit uses the three methods of financing that SANDAG employed from 2004–present as examples. Step 8 details how local governments can obtain funding for conservation projects and planning.
This section is not intended to identify the myriad of federal, state, and local funding programs available to local governments; other organizations have released guides for this purpose. For example, the Local Government Commission’s Energy Funding Web site (LGC) is a free online resource.

How a Regional Government can Finance the SRP

In its development, the SANDAG Sustainable Region Program has gone through three different funding iterations. Our experience has led us to recommend the funding mechanism used for the final SRP iteration: a local government partnership with the local utility. Each program funding method is detailed below.

First Iteration (2005-2006):

Pilot City

The SANDAG Energy Working Group (EWG) requested that a pilot energy efficiency program be developed to assess the effectiveness of a comprehensive energy management approach for local governments. The SRP Pilot pooled existing California Public Utilities Commission (CPUC)-funded program resources from the California Center for Sustainable Energy (CCSE) and San Diego Gas & Electric (SDG&E) to provide both technical and policy assistance to the SRP Pilot city. The intended result was to create a comprehensive energy management strategy, facilitate energy savings projects, and assist with optimization of current and potential city policies by creating a service to assist cities that had minimal participation in energy efficiency programs.

The SRP Pilot was able to succeed on a shoestring budget for three reasons:

1. A high level of interest and active participation from the selected city.

2. A strong desire from all parties involved to have the project succeed. In-kind support from the CCSE and SDG&E was provided to fill in any gaps in service not provided through existing CPUC-funded energy programs.

3. A program facilitator capable of leveraging resources from multiple energy saving programs to package them into one delivery mechanism for the city. The facilitator was familiar with the portfolio of energy programs and services available and had the ability to pull in the appropriate resources at the appropriate time. This required a high level of coordination behind the scenes.

Through a Memorandum of Understanding, SANDAG funded the CCSE to develop and implement the Pilot in cooperation with SDG&E. The CCSE, in consultation with SDG&E and SANDAG staff, recommended to the EWG that the City of Carlsbad participate in the SRP Pilot. The EWG selected the city during its March 2005 monthly meeting and the SRP Pilot began.

The City of Carlsbad was responsible for its own staff participation time. This consisted of time for four to six project meetings at key decision points, staff time to allow access to municipal buildings by outside technical staff, and time to prepare and present findings to City Council.

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1 CCSE was formerly called the San Diego Regional Energy Office.
SANDAG staff time (under 5% of one staff person) was covered by its energy planning program. The CCSE Pilot facilitator’s time (approximately 30% of one staff person) also was covered by SANDAG. The facilitator served as the primary point of contact; coordinated efforts with the city, multiple SDG&E program staff, and multiple CCSE program staff; and developed the comprehensive plan provided to Carlsbad and the EWG. The SANDAG energy planning budget was funded through member agency dues and an annual contract with SDG&E.

The majority of technical assistance provided by CCSE and SDG&E was covered by existing energy efficiency programs. A minimal amount of technical staff time was required for the SRP Pilot that was not covered by existing programs and it was provided by CCSE at a reduced rate to SANDAG.


**Pilot Expansion: Four More Cities**

In 2006, SANDAG sought funding to expand the SRP Pilot to two additional member cities. The existing energy budget remained constant so there were insufficient funds to continue without external help. SANDAG entered into a 2-year energy planning contract with the CEC that would enable the SRP Pilot to expand. Interest letters were mailed to SANDAG member agencies in September 2007 and the Cities of Poway and Solana Beach were selected to participate beginning in 2008.

With the goal of further leveraging the SANDAG and CEC commitment to an SRP expansion, SDG&E offered staff and consultant support to assist two more local governments during this phase: the Cities of Imperial Beach and Coronado.

In FY 2008, SANDAG dedicated approximately 10 percent (or $34,000) of its annual energy budget in staff and consultant (CCSE) time to the SRP, with the CEC contract providing an additional $30,000 in annual funding. The SRP Pilot progressed well during this time. In FY 2009, the SANDAG energy budget decreased to $239,000, of which the SRP remained at 10 percent of the budget (or $24,000) plus the approximately $30,000 from the CEC. The FY 2009 budget and staff constraints caused some stop-start in delivery of services to each of the participating cities. To remedy these barriers, SANDAG sought a dedicated funding source for the SRP.

At the time of the final SRP Toolkit released in April 2009, efforts are completed at the Cities of Solana Beach and Poway, 85 percent done in Imperial Beach and 25 percent done in Coronado.

**Third Iteration (2009–2011)**

**Local Government Partnership with the Investor-Owned Utility**

In 2008, SANDAG applied to SDG&E for a Local Government Partnership (LGP) contract to formalize the SRP. The LGPs are part of the public goods charge (PGC) funded programs regulated by the CPUC.

- The “PGC” is line item on ratepayer electric and gas bills.
- Part of the ratepayer-funded PGC goes to energy efficiency programs through each utility.
- Each utility develops an “energy efficiency program portfolio” that the CPUC approves.
- Eighty percent of funds are for utility in-house programs and partnership programs.
- Twenty percent is awarded to third parties to administer energy-saving programs.
- The portfolio of energy efficiency programs are to span January 1, 2009, through December 31, 2011.

SDG&E accepted the SANDAG LGP and has included it in their portfolio of energy programs filed with the CPUC for 2009–2011. The proposed program is expanded in scope, outreach, and budget. The proposed budget is $1.7 million over three years and will cover several expenses not included in the SRP Pilots. The budget will cover at least two SANDAG staff at 50 percent time, relevant SANDAG staff at lesser levels, and all engineering and technical services previously funded through other energy efficiency programs. The engineering component is expected to be one of if not the highest budget cost. The program will provide services to all SANDAG member agencies. Please note that the CPUC must still approve all energy program portfolios in the state and that process is significantly late. As of the writing of this report, the utilities re-filed their portfolios to the CPUC in March 2009 with the expectation that the CPUC will make its decision before 2010.

**Reasons to Apply for Local Government Partnership Funding**

Although the aforementioned near-term delays cause some program delivery issues, SANDAG believes that the long-term benefits of an LGP will outweigh any initial difficulties. One of the weaknesses identified in the SRP Pilots has been a sliding timeline for participation and products. This is in part due to the flexibility needed to work across departments at the local government. It also is due to the lack of continuous resources (whether staff or financial) to maintain momentum at each city and participate in available energy efficiency programs. Since technical assistance on new construction and auditing existing buildings has been derived from existing PGC-funded programs, delays can occur. Sometimes there is a wait list for energy programs and services in high demand and the SRP Pilot participants must wait their turn. This then can create delays for subsequent steps in the timeline. Also, staff facilitation time has had to compete with other important projects, so the LGP funding will enable us to maintain dedicated facilitation time to keep the program on schedule.

**Sustainable Region Program Need Established Through Pilots**

Through lessons learned from the SRP Pilot efforts in 2005–2008, the need for a program that enables local governments that have little or no energy expertise to participate in energy efficiency programs has been reinforced.

To some extent, a few cities in the San Diego region have access to LGP resources (e.g. City of San Diego, City of Chula Vista, and County of San Diego). The SANDAG Partnership will provide a comprehensive and standardized approach to bringing energy saving measures and plans to its member agencies. This will ensure an equitable approach to the opportunities that can be presented to local governments, as well as a deeper set of opportunities from which to create reliable energy savings. There is no such support for the jurisdictions at this current time. The funding of this partnership will enable the partners to deliver significant energy savings that would not otherwise be captured. The partnership will provide training for these municipalities with an objective that some will be able to undertake their own programs in the future.
Step 2: Program Announcement from Agency to Local Government

The initial step in the process is to choose an interested and eligible local government to participate in the SRP. To gauge interest in completing the tasks of the SRP, the agency should send a letter to interested local governments that clearly describes the goals, benefits, and staffing obligations of the SRP. (For a sample announcement, see Appendix B: I. “Program Announcement from Agency to Local Government”)

Step 3: Sustainable Region Program Questionnaire

Because the SRP is designed to assist local governments that have not completed significant energy management activities, the selected local government should have:

- No full-time Energy Manager
- Minimal current participation in energy efficiency programs
- Available funds or willingness to finance energy projects
- Staff capacity to manage projects

The questionnaire is designed to elicit information from interested local governments so that the agency can assess candidates’ viability for participation in the SRP. (For a sample application questionnaire, see Appendix B, II. “Sustainable Region Program Questionnaire” and III. “Preliminary Assessment Questions”)

Step 4: Guide to Forming an Energy Team

When a local government has been selected to participate in the SRP, the next step is to them form a local government energy team (Energy Team). This Energy Team should be comprised of the local government’s staff members whose future SRP tasks are described here.

Energy Team Leader (Initial and Main Contact)

- Works with their local government’s staff to compile and disseminate instructions, correspondence, data, etc. among all departments.
- Acts as liaison with the agency, contractors, and local government.
- Schedules first energy assessment with local government staff subsequent to identification of buildings with highest energy consumption, highest utility bill or by request. The contractors/engineers/utility staff can assist with this determination (see Facilities/Engineering section).

Management/Engineering

- Assists with identification and definition of (in writing) specific goals for local government. This can be based on internal staff assessments or other local government best practice guides. The goals should address what the local government is looking for in terms of
energy savings and/or other policy to improve local government functions. The agency or its contractor will be available to assist in this process. Goals should be based on a review of existing principles and practices in local government facilities (by technology and by staff), the priorities of top-level decision-makers, and interaction across departments.

- Once a written set of goals is established, works with the agency or its contractor to create a personalized checklist of potential problems/constraints that will help pinpoint where progress/savings/changes can be made.

**Facilities**

- Allows for straightforward and productive facility energy assessments with access to facilities. Obtains the following data:
  - Meter-facility identifications (ID) for each meter and facility.
  - List of city buildings including consumption data, from highest to lowest.
  - List of any construction/building projects.
  - List of current energy projects and practices.
  - Identification of contact for building access, identify building hours, staff hours.

**Finance**

- Reviews budgets for energy (electricity and natural gas)
- Identifies structures with high energy costs (potential high consumption). Reviews the rate/tariff structure(s) the city is currently subject to. This information will be reviewed by the agency or its contractor to ensure the city is on the most optimal utility rate schedule. The agency representative should start (or continue) a dialogue with the local government’s utility account executive.

**Planning**

- Identifies existing local government codes that mandate energy practices within the local government’s General Plan, Energy Plan (if applicable), and codes and charters (if applicable).
- Creates a list of current practices that promote or impede energy efficiency and conservation strategies and technologies (e.g. energy consumption, building code, procurement, other).

**Step 5: Kickoff Meeting**

After the Energy Team is formed, the agency representative should schedule an initial meeting to introduce the agency, local government, and contractor Energy Team members to each other and
inform the Energy Team of first steps in the SRP process. (For a sample kickoff meeting agenda, see Appendix B. IV. “Kickoff Meeting Agenda”)

**Step 6: Guide to Municipal Building Energy Assessments**

At the initial meeting, Energy Team members should designate the appropriate Facilities Team member to work with the agency’s Energy Engineer (or a contractor) on energy assessments. The Energy Engineer makes an assessment of the energy consumption at a site using currently installed systems to make recommendations for improvements to energy efficiency, conservation, GHG emission reductions and renewable potential, called Energy Conservation Opportunities (ECO).

- Several assessment types exist and each equips the Energy Team Leader for different kinds of decision-making. Objectives of energy assessments are:
  - Improved leverage of energy dollars spent
  - Maximum utility incentives
  - Short-, mid-, and long-term implementation options
  - Operating cost reduction
  - Enhanced staff/occupant comfort
  - Reduced equipment maintenance costs

Preparations for assessments include securing access to the buildings as well as compiling adequate utility data for the engineer. Two years of utility usage data is recommended to facilitate an effective assessment. To retrieve this data, the Energy Engineer can either ask the Energy Team Leader acquire data that already is available to them (where applicable), or request access to the building’s usage data. For example, in the SDG&E territory, the kWickview software system allows access to load profiles and interval data which are critical to evaluate which efficiency practices and tools will be most beneficial at the site level. (Information obtained by Appendix B. II. “Sustainable Region Program Questionnaire” should be made available to the Energy Engineer.)

At the initial stage, a “checklist” assessment is often the appropriate tool. This assessment is a snapshot of potential buildings to determine which of them to examine further. The Energy Engineer identifies potential energy efficiency measures, but does not provide project cost or savings estimates. The process can be helpful for the Energy Team’s early decision-making stages.

A more detailed level of assessment is a “preliminary assessment.” Here the Energy Engineer will include preliminary estimates of savings and the approximate costs of implementing the proposed energy efficiency measures. The information normally will be sufficiently well-developed for the building owner to decide whether to pursue a retrofit project or not.

The most detailed assessment is an “investment grade” assessment—the type of assessment you can literally “take to the bank.” It provides the most detailed and well-worked out assessment of costs and savings, and has a high level of accuracy.
To maximize the efficiency and effectiveness of any energy assessment, the Energy Engineer must possess the appropriate checklists from which to base his/her investigation. (For a sample assessment checklist, see Appendix B. V. “Energy Efficiency Opportunity Checklist.”)

**Step 7: Assessment Report Meeting**

Following the energy assessments and Energy Engineer’s compilation of the Energy Assessment Report, agency staff should arrange for a follow-up meeting. (For a sample assessment report meeting agenda, see Appendix B. VIII. “Assessment Report Meeting Agenda.”) At this stage, the agency should invite the local utility Account Executive or Energy Efficiency Programs Manager to participate. This meeting gives the agency, Energy Engineer, utility representatives, and local government an opportunity to:

- Review the report together
- Introduce utility representative into the process
- Ask clarifying questions of the engineer
- Determine next steps in the Program

(For sample Energy Assessment Report and Templates, see Appendix B. VI. “Energy Conservation Opportunities Table,” Appendix B. VII. “Energy Conservation Opportunities,” and Appendix D. “Energy Assessment Report.”)

Prior to the meeting, the agency representative should distribute copies of the completed Energy Assessment Report to all attendees via e-mail. This step enables facilitation of a comprehensive yet efficient discussion of the ECOs identified by the energy engineer.

Following this meeting, the agency representative should create and distribute a summary of the meeting. While summaries are a helpful tool for each meeting, it is critical as a follow-up to the Energy Assessment Report meeting so that the “Next Steps” discussed at the meeting are on paper and clear to all participants. (For a sample meeting summary, see Appendix B. IX. “Assessment Report Meeting Summary.”)

**Step 8: Funding Conservation Projects**

Identifying and maintaining reliable funding is essential to long-term SRP success. Local governments have responded to this need for consistent funding in a variety of ways. Some energy programs depend heavily on outside support from state agencies or local utilities. Others rely on the local government’s own annual budgeting process. This can make the programs vulnerable to changes in perception of the importance of saving energy. Two mechanisms for funding projects include:

- Ratepayer funding sources
- Local government funding sources
Ratepayer Funding Sources

Public Goods Charge Funds: Local Government Partnerships

The PGC funds are regulated by the California Public Utilities Commission. The PGC is a line item on ratepayer electric and gas bills that goes to funding energy efficiency and other programs through each utility across the state. There are several types of energy efficiency programs, including utility-run programs, third-party programs, and LGPs. Local and regional governments can apply for energy efficiency funds through an LGP with their utility.

In coordination with the SANDAG SRP, SDG&E has proposed a supplemental funding opportunity for participating local governments. Once an SRP plan is approved by a City Council or Board of Directors, the local government will be able to apply for mid-cycle partnership funds from the IOU to initiate their program. For example, under the umbrella of LGPs, SDG&E has proposed to make available seed funding to municipalities that successfully complete the SANDAG SRP. This funding would enable a local government to undertake one or more energy projects that were identified through the SRP. The goal is to build the institutional knowledge at each local government and achieve energy savings. A similar partnership effort could be proposed with utilities across the state.

State Energy Program Loans

Some local governments also have benefited from state energy loans, usually provided at relatively favorable terms. The funds normally are used to support retrofit projects in departmental facilities. The CEC Energy Efficiency Financing Program provides financing for schools, hospitals, and local governments through low-interest loans of up to three million dollars for feasibility studies and the installation of energy-saving measures. While the loan is made to the local government as a whole, internally each department using a portion of the funds may be made responsible for the debt and interest payments. The department may be required by the local government’s Financial Officer to agree to make repayments without requesting an increase in their annual budget. In return, the department retains the savings from the reduction in their monthly energy bill, plus any maintenance savings derived from operating new, more efficient equipment.

On Utility Bill Financing

On-Bill Financing programs facilitate the purchase and installation of qualified energy efficiency measures by customers (e.g. municipalities, who might otherwise not be able to act given capital constraints and administrative and time burdens to participation). On-bill financing from SDG&E offers eligible customers 0-percent financing for qualifying energy-efficient improvements. Ratepayers who participate in these programs typically are able to take part in other incentive programs as well, but at a reduced rate of incentive.

Utility and Third-Party Administrator Rebate/Incentive Programs

Through legislation passed by federal and state legislatures and implemented by California’s regulatory agencies, municipalities are able to participate in energy conservation, efficiency, renewable energy, and demand response incentive and rebate programs. Municipalities also can take advantage of utility rate structures that support green energy practices.
The following incentive programs types can be used to facilitate energy efficiency and renewable energy measures. Typically, there is a range of programs offering varying incentive levels and services depending on the customer’s needs and unique issues. Although energy efficiency programs and their administrators vary throughout the state, California has one of the most progressive mandates to promote energy efficiency in the country. Therefore, all municipalities can benefit from the programs offered through their utility.

Energy efficiency and renewable energy incentive programs typically are defined by the market sector for which they serve (e.g. residential, commercial, industrial, as well as new and existing infrastructure).

**Solar Programs**

Subsequent to the passage of Senate Bill 1 (SB 1) in 2006, the state of California has a mandate to install 3,000 megawatt (MW) of solar electricity within the state. SB 1 decrees that all energy corporations need to offer a program to incentivize their ratepayers to install solar systems that offset their electricity load. Most utilities currently use one of the following types of incentives:

- **Performance-based incentive:** The administrator provides a bill reduction based on the production of electricity from the site.
- **Capacity-based incentive:** The administrator provides a one-time credit to the customer to offset a portion of the system installation costs.

**Energy Efficient Technologies Incentive Programs**

Energy efficient technology installation programs offer incentive payments for the installation of new, high-efficiency equipment or systems for non-residential customers including municipalities. A project may consist of the retrofit of existing equipment/systems or the installation of equipment associated with new added load. Software or engineering calculations are used to estimate the energy savings and incentive depending on the type of energy efficiency measure installed. Incentives are paid based on the quantity of kilowatt-hour (kWh) or therms saved resulting from the installation of the new equipment or system.

**Nonresidential New Construction Programs**

New facilities can benefit from a program that provides technical and financial resources to aid them in the design phase of new facilities to the most cost-effective energy efficiency standards. These programs target municipalities among other ratepayers who are planning new buildings, including expansions, additions, and major remodels, as well as their selected design professionals who are providing building plans and specialty consulting regarding energy or environmental quality.

**Nonresidential Educational/Incentive Programs**

By using indicators such as energy simulation modeling, life cycle cost analysis and long term operating cost reduction goals; these programs will educate, demonstrate, and encourage energy efficiency and demand reduction above and beyond Title 24 California Energy Code. These
programs are also designed to work in conjunction with other programs that provide more robust financial incentive for energy efficiency installations.

**Local Government Funding Sources**

**Revolving Funds**

Revolving funds are internal pools of money designed to recycle a portion of energy cost savings from energy-efficiency improvements into capital for new projects. A local government can reinvest a certain percent (or all) of documented annual energy savings into a revolving fund that would provide capital for future energy efficiency projects or to fund the salary of an energy manager.

When the program is funded, fully operational and dollar savings are accumulating in the fund, the money can be left in the energy account, used to repay some of the accumulated money back to the general fund, or shared with other departments within the local government. Funding for the SRP still must go through the local government’s annual appropriation process, so program staff must continue to make sure that information on program successes is transmitted to the proper individual for the budget.

**One-Percent for Energy**

Some local governments have adopted a unique method of financing staff and individual energy projects, sometimes referred to as “One-percent for energy.” The local government imposes a percentage surcharge on departmental energy bills. The money goes into a central fund to support an energy manager, or to support energy efficiency projects.

**On Tax Bill Financing (Assembly Bill 811)**

*California’s Clean Energy Municipal Financing Law* (Assembly Bill [AB] 811) authorizes a legislative body to allow property owners to enter into contractual assessments to finance installation of energy efficiency improvements and distributed generation renewable energy sources at residential, commercial, industrial, or other real property. The capital required to pay for work may include funds available from any source, including the sale of bonds.

In March 2009, the CityFIRST program was announced by the California Statewide Communities Development Authority (California Communities). California Communities is a joint powers authority created by the California League of Cities and the California Association of Counties, and CityFIRST is their statewide AB 811 clean energy financing program. California Communities has partnered with Renewable Funding, Royal Bank of Canada, CCSE, and Ecomotion to offer this program to municipalities.

CityFIRST is a voluntary program that allows property owners to pay for the upfront costs of renewable and energy efficiency projects over 20 years as a line item on their property tax bills. If the property is subsequently sold, the repayment obligation remains on the property tax bill and transfers to the new owner.

The on-property-tax-bill funding mechanism is designed to overcome a significant barrier to pursuing major energy efficiency upgrades and clean renewable generation: high up-front costs or
initial project capital outlay versus the lifecycle cost/benefit. Municipal programs are currently being pursued by the Cities of Berkeley and Palm Desert.

**Power Purchase Agreements**

As well as receiving incentives for the installation of solar, new and creative ownership structures are paving the way for increased penetration of solar with municipalities and other solar customers. The power purchase agreement option allows municipalities to install solar panels owned by a third party at their facilities. The third party then charges the municipality for the electricity used at a rate lower than would be charge to receive electricity from the utility. Using this funding option, municipalities avoid the up-front cost of the solar installation and reap the benefits of the installation which include zero emission electricity and lower electricity bills.

**Step 9: Recommendations Meeting**

At the recommendations meeting, the Energy Team Leader should facilitate a review of the local government’s preferred action items and needs of the local government. (For an agenda, see Appendix B. X. “Recommendations Meeting Agenda.”) These recommendations should be discussed with the attending utility representative to determine incentive programs and utility assistance available for implementation of the items.

**Step 10: New Construction Considerations**

Many local governments own and occupy their buildings. As such, they have both the opportunity to influence a building’s performance during the design and construction phase, and the incentive to minimize its long-term operating costs. There are a number of steps that can be taken to ensure a new facility is built to the highest standards of performance. For example, when selecting the architect and engineering team, the Energy Team should ensure that the candidates have previous experience with the design of energy efficient buildings. In addition, the designers should guarantee the use of technologies and practices that will create the most efficient operating facility possible. At the end of the design phase, the Energy Team must verify that operating efficiency is not ‘value engineered’ out of the project if unexpected budget constraints require cost cutting. In other words, the agency and local government should make every effort to emphasize the increased value of energy efficient technologies in the design and installation phases.

**Title 24**, California’s state energy code, requires energy efficient construction standards in new buildings. Local governments should consider enacting policies to require that their new facilities be designed to exceed the state code requirements and take advantage of incentive programs designed to encourage higher performance. Title 24 focuses on the energy performance of a building. To further enhance long-term building energy performance, agencies should consider adopting a whole building performance approach that considers other design and operating factors for a new facility in addition to energy. One approach is to require LEED certification (Leadership in Energy and Environmental Design, administered by the U.S. Green Building Council), which mandates third-party certification of building economic and environmental performance. Another standard specifically related to efficiency is the Energy Star® certification process. Other programs like Build It Green also emphasize energy efficiency measures in buildings.
The Cities of San Diego, Seattle, and Portland, for example, have adopted LEED criteria for their new buildings. If a local government leases or rents its buildings, involved Energy Team members must be sure to name energy efficiency as one of the selection criteria when reviewing potential properties and find sellers (and owners) open to negotiating energy efficiency upgrades to the facility.

A discussion of new construction should be included within each meeting and be facilitated by the Agency representative. Discussion points are:

- New building plans, including timeline, budgets
- Detailed description or plan for building as currently proposed
- Contact information

**Step 11: Policy Considerations**

California energy laws have a great effect on land use planning, since the majority of GHG emissions in California are the result of infrastructure and development decisions. Based on state and local policies, local governments should consider:

- How to build buildings and how to retrofit existing buildings
- Where to locate buildings
- The quality and types of infrastructure required to serve these buildings
- Compatibility with the Regional Comprehensive Plan or Blueprint plan that considers the interrelationship of jobs, housing, population, and transportation choices

**The Energy and Climate Change Connection**

The state’s largest contributors to GHG emissions are on-road transportation, electricity use, and natural gas use. The way local governments plan for transportation and land use, ranging from General Plans to council policies to internal soft policies and local government energy usage, all have significant impacts on a local government’s energy use choices and related GHG emissions. Therefore, addressing GHG reductions primarily is achieved from modifying energy choices and use.

**Assembly Bill 32**, “The Global Warming Solutions Act of 2006,” is a California law that commits the state to GHG emissions to 1990 levels by 2020. **Senate Bill 375** was signed into law by Governor Schwarzenegger on September 30, 2008, and requires the California Air Resources Board (CARB) to establish regional GHG reduction targets for Agencies. SB 375 calls for the integration of regional transportation planning, regional housing needs assessment planning, and GHG planning while streamlining aspects of California Environmental Quality Act (CEQA). **Assembly Bill 811**, related to on Tax Bill Financing of Energy Efficiency and Renewable Energy Projects, was signed by the Governor in July 2008. It will authorize California cities and counties to designate areas within which city officials and willing property owners may enter into contractual assessments to finance the installation of distributed generation renewable energy sources and energy efficiency improvements.
Climate Change and Local Governments

Most California local governments have been charged with combating the existence and creation of GHGs and climate change with the passage of AB 32 and successive state policies and legislation. The California Attorney General has assumed a role in assisting local government entities with implementing these state legislative actions through local general plans and building codes and standards for increased energy efficiency. The Attorney General’s office holds that local governments have a requirement under the CEQA to provide policies, actions, and mitigation measures that combat GHG and climate change. For example, in a letter dated June 11 to the City of San Diego the state’s position regarding a city’s responsibility towards mitigation for climate change, global warming and GHG emissions per AB 32 is stated: “The city as lead agency is required under CEQA to adopt all feasible alternatives and mitigation measures.” (Goldberg, 2007) To this end the Attorney General is assisting local government with suggested policies, educational resources, and review of draft documents as they pertain to the reduction/elimination of GHG and climate change in compliance with CEQA.

How Will AB 32 be implemented?

CARB is the lead agency for implementing AB 32. The key elements on which CARB will focus are:

- Expansion and strengthening of energy efficiency programs and building and appliance standards,
- Expansion of the Renewable Portfolio Standard to 33 percent
- The renewable energy expansion will include “placing solar arrays and solar water heaters on houses throughout California and an increase in building standards for energy efficiency

Currently, CARB is developing a toolkit of recommended measures and best practices for local governments and small businesses to reduce their GHG emissions. Some proposed measures include adoption of some of the following changes:

- Increasing Energy efficiency
- Green building
- Cool community practices
- Water conservation
- Renewable energy generation
- Climate-friendly procurement of goods and services

How Will SB 375 be implemented?

The law authorizes CARB to set regional GHG emissions reductions targets for regions of the state. It requires agencies to create Sustainable Communities Strategies (SCS) as part of the Regional Transportation Plan (RTP) process. The SCS will need to demonstrate if a region will meet its GHG
reduction target given current projected financial means and constraints or if an Alternative Planning Strategy (APS) that is not financially constrained will have to be developed to show what it would take for a region to meet its goals. The APS would be prepared if the region has to make different assumptions about how the region will meet its GHG emissions target. SB 375 also will link the Regional Housing Needs Assessment (RHNA) process to the SCS process. SB 375 creates CEQA exemptions and other streamlining provisions for housing projects located near transit and in areas targeted by the “SCS” when it can be demonstrated that the GHG targets can be reached.

SB 375 preserves local land use authority. There is explicit language that states that an SCS will not supersede or interfere with local land use plans. CEQA streamlining/exemptions will be available to certain development projects that promote compact development. Specifically, projects that conform to the SCS or that are designated “transit priority projects” are available for CEQA exemptions. These projects are residential projects that are located near transit and meet certain density and floor area ratio requirements.

CARB likely will base its targets and recommendations on areas that can achieve the greatest reductions for the lowest cost. CARB is required to set its regional GHG emission targets by September 30, 2010, and MPOs will be required to include their SCS or APS in the next RTP following the setting of targets.

How Will AB 811 be implemented?

AB 811 will address climate change through energy conservation efforts by authorizing local governments to provide up-front financing to property owners to install solar or other renewable energy-generating devices or make energy efficiency improvements to their properties. The local government would provide the up-front funds for the project, and the property owners pay an annual assessment until those funds, plus interest, are repaid. An underlying purpose is to create a means by which a project that provides both a public benefit and an incidental benefit to particular property owners can be financed without imposing the cost on property owners in other parts of the city who derive no benefit. The CityFIRST program by California Communities, Renewable Funding, Royal Bank of Canada, CCSE, and Ecomotion is a statewide AB 811 clean energy financing program for municipalities and is further detailed in Step 8: Funding Conservation Projects.

In conjunction with or independent of state and federal laws, local policy statements can influence decisions within a local government. To make the benefits of energy investments more apparent, the policy component may include a review and proposal of energy efficiency and GHG reducing measure amendments to the General Plan, city ordinances, city charter, and other local government documents to fulfill the local government’s environmental or energy strategic goals. This review should culminate in creation of energy-saving measures for existing buildings and new construction as well as policy measures that local governments can adopt based on legislative and regulatory mandates like those described below and others specific to the region.

Step 12: Presentation to City Council or Board

Once a local government energy plan is completed with the above components addressed, the MPO should work with the local government staff to prepare necessary staff reports and/or a presentation of findings for the City Council or Board. The leadership should be given a high level briefing of the project and asked to approve or endorse associated energy goals and/or projects.
Appendix A: Program Participation Timeline

Activities within the Program will progress at different paces as best fit local government and program needs. The initial focus should be on identification and assessment existing buildings in which energy-saving measures could be realized. Other components, New Construction and Policy Measures, should follow. The following table provides a possible timeline for local government action.

### Sustainable Region Program Timeline

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<tr>
<td>Recommendations Meetings</td>
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</table>

Appendix B: Sustainable Region Program Templates

I. Program Announcement from Agency to Local Government
II. Sustainable Region Program Questionnaire
III. Preliminary Assessment Questions
IV. Kickoff Meeting Agenda
V. Energy Efficiency Opportunity Checklist
VI. Energy Conservation Opportunities Table
VII. Energy Conservation Opportunities Sample
VIII. Sustainable Region Program Assessment Report Meeting Agenda
IX. Sustainable Region Program Assessment Report Meeting Summary
X. Recommendations Meeting Agenda
I. Program Announcement from Agency to Local Government

DATE

Dear LOCAL GOVERNMENT REPRESENTATIVE:

SUBJECT: Invitation to Take Part in AGENCY’s Sustainable Region Program

We are writing to inform you of a unique opportunity to participate in the expansion of an energy-saving pilot program for local governments sponsored by the AGENCY. The AGENCY will provide technical and policy support to a local government to develop an energy management plan, assess energy needs, conduct assessments of city facilities, assist in developing projects, and identify appropriate rebate and financing programs. Energy efficiency and conservation projects generally pay for themselves in three to five years. The main goal of this effort is to help local governments that have not performed significant energy management to complete energy projects and reduce their operating costs.

The AGENCY hopes that the Sustainable Region Program will develop new program delivery mechanisms for local governments to take advantage of regional energy saving programs.

The AGENCY will select a city based upon the following criteria:

• No full-time energy manager
• Minimal current participation in energy efficiency programs
• Available funds or willingness to finance energy projects
• Staff capacity to manage projects

If you are interested in being considered for this innovative Program, please contact CONTACT NAME, E-MAIL, and PHONE NUMBER by DATE.

Thank you for your interest in this program.

Sincerely,
II. Sustainable Region Program Questionnaire

Thank you for your interest in participating in AGENCY’s Sustainable Region Program (SRP), which in YEAR will provide XXX local governments in AGENCY region with services and resources for significantly improving the energy performance of their facilities. The selection process consists of analysis of your responses to the following questionnaire that will provide AGENCY with better information on your local government’s involvement and interest in energy efficiency.

Please complete the questionnaire and return to AGENCY by DATE. Applicants will be notified whether they were selected for the SRP in DATE. Questions may be directed to AGENCY REPRESENTATIVE at E-MAIL ADDRESS and PHONE NUMBER. Your completed questionnaire should be submitted to her/his email address no later than close of business, DATE.

1. Please describe your government’s participation in any existing energy efficiency programs.

2. Please describe how any current energy efficiency programs or projects are staffed and financed.

3. Please describe how potential energy efficiency projects identified in the recommendations of the SRP might be staffed and financed.

4. Please briefly describe the nature of your government’s interest in and commitment to energy management.

5. Please provide the total square footage of local government facilities and data on your energy consumption. Energy data should be provided to the finest level of detail available, such as by building, by department, or cumulatively for all facilities. Provide kilowatt-hour (kWh) for annual electricity consumption and British thermal unit (BTU) for annual natural gas consumption.
III. Preliminary Assessment Questions

1. Total Number of Facilities/Buildings:
   a. Number of Electric Accounts for These Buildings:
   b. Number of Natural Gas Accounts for These Buildings:

2. Have you conducted a government-wide energy intensity study (e.g., kWh/sq ft) to determine your highest energy users? If yes, please provide AGENCY a copy.

3. Brief summary of recent energy improvement projects (last 1 year):
   a. Completed projects (attach if necessary):
   b. Pending projects (attach if necessary):

4. How many energy assessments have you conducted in the past three years? Please provide AGENCY a copy of assessment reports.

5. Do any of your facilities use an energy management system (EMS)?
   a. How many?
   b. What type of EMS do they use?

6. Who is involved in energy project planning and implementation in your government?

7. Do you have an energy management team? (Yes/No) If yes, who is on the team?

8. Do you have a comprehensive energy management plan? (Yes/No) If yes, please provide AGENCY a copy of the Plan.

9. Do you have an education program for government personnel? (Yes/No)

10. Do you have a newsletter for personnel? (Yes/No)

11. How do you track energy costs/usage?
IV. Kickoff Meeting Agenda

Sustainable Region Program Kickoff Meeting

Date and Location

1. Introduce Key Staff and Local Government Representatives

<table>
<thead>
<tr>
<th>Project Administrator (Agency)</th>
<th>Engineer (Agency or Contractor)</th>
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<tbody>
<tr>
<td>Name</td>
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<td>Address</td>
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<td>Phone</td>
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<td>E-mail</td>
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<table>
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<tr>
<th>Energy Team Leader</th>
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<tbody>
<tr>
<td>Name</td>
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<tr>
<td>Address</td>
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<tr>
<td>Phone</td>
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<td>E-mail</td>
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</tbody>
</table>

2. Introduce Representatives to Sustainable Region Mission

Program agency representative will explain the SRP Concept and Program Goals.

3. Discuss Local Government Needs

Local government representatives will have the opportunity to raise current and potential issues with local government infrastructure, policy, funding mechanisms, process, staff, etc.

4. Identify Energy Team Members for Local Government

Agency representative will discuss the local government’s decision process in choosing the following Energy Team members:

- Energy Team Leader
- Local government management office staff
- Facilities manager/specialist
- Finance department representative
- Engineering department representative
- Planning department specialist

5. Next Steps

Set dates for follow-up meetings. Local government staff should review current practices and plans to prepare for these meetings detailing the following issues:

- Energy assessments
- ECOs recommendations
- New Construction (as applicable)
Sustainable Region Program Toolkit

- New building plans, including timeline, budgets
- Detailed description or plan for building as currently proposed
- Contact information

- Policy Considerations

Local government review of existing General Plan, Energy Plan (as applicable), municipal charter and other energy policy documents.
## V. Energy Efficiency Opportunity Checklist

<table>
<thead>
<tr>
<th>Heating, Ventilation and Air Conditioning (HVAC)</th>
<th>Yes/No</th>
<th>Notes (Current Model, Year, Size)</th>
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</thead>
<tbody>
<tr>
<td>Air Conditioning Unit Replacement</td>
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<tr>
<td>Variable Speed Drive – Fan</td>
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<tr>
<td>Variable Speed Drive – Pump</td>
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<tr>
<td>High-Efficiency Packaged Direct-Expansion (DX) Unit</td>
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<tr>
<td>High-Efficiency Packaged Heat Pump</td>
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<tr>
<td>Constant Volume (CV) to Variable Air Volume (VAV) Conversion</td>
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<tr>
<td>Use Evaporative Cooling</td>
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<tr>
<td>Indirect Evaporative Cooling</td>
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<tr>
<td>Demand-based Ventilation</td>
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<tr>
<td>High Efficiency Boiler</td>
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<tr>
<td>Economizer Cycle</td>
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<tr>
<td>High-Efficiency Motor Retrofit</td>
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<td></td>
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<tr>
<td>Multi-Speed Motor Retrofit</td>
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<tr>
<td>High Efficiency Compressor</td>
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<tr>
<td>High Efficiency Chiller</td>
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<tr>
<td>Cooling Tower Fan Pony Motor</td>
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<tr>
<td>Fume Hood Airflow Reduction</td>
<td></td>
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<tr>
<td>Attic Exhaust Fans</td>
<td></td>
<td></td>
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<tr>
<td>Add/Increase Duct Insulation</td>
<td></td>
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<tr>
<td>Low Pressure Drop Filters</td>
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<tr>
<td>Reduce Overventilation</td>
<td></td>
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<tr>
<td>Steam Trap Optimization</td>
<td></td>
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<tr>
<td>Add Low Load Boiler</td>
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<tr>
<td>Thermal Energy Storage</td>
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<tr>
<td>Ceiling Fans</td>
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<tr>
<td>Electronically Commutated Motor (ECM) Fan Motor Upgrade</td>
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<tr>
<td>Lighting</td>
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<tr>
<td>Fluorescent Lamp Retrofit</td>
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<tr>
<td>Electronic Ballast Upgrade</td>
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<tr>
<td>Incandescent Lamp Replacement</td>
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<tr>
<td>Metal Halide to CFL Retrofit</td>
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<tr>
<td>Fluorescent Delamping</td>
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<td>Light-Emitting Diode (LED) Exit Lighting</td>
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<tr>
<td>High Efficiency Signage</td>
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<tr>
<td>Controls</td>
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<tr>
<td>Programmable Thermostats</td>
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<tr>
<td>Equipment Timeclock</td>
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<tr>
<td>Energy Management System (EMS)</td>
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<tr>
<td>Selective Switching</td>
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<tr>
<td>Controls (cont.)</td>
<td>Yes/No</td>
<td>Notes (Current Model, Year, Size)</td>
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<tr>
<td>Hydronic Temperature Reset</td>
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<tr>
<td>Temperature Setback</td>
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<tr>
<td>Duty Cycling – Unoccupied</td>
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<td>Boiler Outside Air (OSA) Temperature Reset</td>
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<tr>
<td>Add Occupancy Sensors</td>
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<td>Daylighting</td>
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<tr>
<td>Vending Machine</td>
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<td>Charging Stations</td>
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<td>Demand Limiting Controller</td>
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<td>Process</td>
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<tr>
<td>Office Equipment Sleep Mode</td>
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<tr>
<td>Kiln/Oven Upgrade</td>
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<tr>
<td>Other</td>
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<tr>
<td>Gas Water Heater Upgrade</td>
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<tr>
<td>Electric Water Heater Upgrade</td>
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<tr>
<td>Cooking Appliances Conversion</td>
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<tr>
<td>Cooking Appliances Upgrade</td>
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<tr>
<td>Add Window Film</td>
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<tr>
<td>Install/Add Roof/Wall Insulation</td>
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<tr>
<td>Refrigeration</td>
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<td>Light Colored Roof Surface</td>
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<td>Passive Solar Heating</td>
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<td>Window Replacement</td>
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<td>Roller/BlindsDrapery Shading</td>
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<td>Infiltration Reduction</td>
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<td>Vestibule Air Lock</td>
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<td>Compressed Air Reduction</td>
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<td>Process Vacuum Reduction</td>
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<tr>
<td>Low Flow Plumbing Fixtures</td>
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<tr>
<td>High Efficiency Transformers</td>
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<td>Power Factor Correction</td>
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<td>Optimize Defrost Control</td>
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<tr>
<td>Increase Refrigeration Insulation</td>
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<tr>
<td>Refrigeration Space Doors/Curtains</td>
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<tr>
<td>Compressor Floating Head Pressure Control</td>
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<td>Pool Dehumidification Heat Recovery</td>
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<td>Pool Cover</td>
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<td>Elevator Optimization</td>
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<td>Add Skylights</td>
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## VI. Energy Conservation Opportunities Table

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<tr>
<td>1 Sample Opportunity</td>
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<td>2 Sample Opportunity</td>
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<td>3 Sample Opportunity</td>
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<td>4a Sample Opportunity</td>
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<td>4b Sample Opportunity</td>
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<td>5 Sample Opportunity</td>
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<td>6 Sample Opportunity</td>
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<td>7 Sample Opportunity</td>
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<td>8 Sample Opportunity</td>
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<td><strong>Subtotal</strong></td>
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<td><strong>Totals</strong></td>
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<tr>
<td>9 Sample Renewable Opportunity</td>
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<tr>
<td>10 Sample Green Building Opportunity</td>
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VII. Energy Conservation Opportunities (ECO) Sample

ECO No. 1
Retrofit Outdoor Down Lights

**Recommended Action**

Retrofit 50-Watt outdoor Metal Halide Down lights with 15-Watt compact fluorescent lamp (CFL) down lights.

- Estimated Energy Savings = 1,722 kWh/yr
- Estimated Demand Savings = 0.4 kW
- **Estimated Energy Cost Savings** = **$257/yr**
- Estimated Implementation Cost = $154 (after rebate)
- Simple Payback Period = 7 months
- Return on Investment (ROI) = 166.7%

**Background**

There are twelve (12) 50-Watt Metal Halide Down lights illuminating the exterior of the auditorium. The existing lamp in each fixture may be a candidate for direct replacement with a 15-Watt CFL lamp.
VIII. Sustainable Region Program Assessment Report Meeting Agenda

Sustainable Region Program Assessment Report Meeting

Date
Location
Time

1. Welcome and Introductions

The Agency representative re-introduces the energy engineer, Energy Team staff, and utility staff

2. Energy Assessment Report

The energy engineer will review each Energy Conservation Opportunity listed in the Energy Assessment Report (see Appendix D, “Energy Assessment Report”). This document includes detailed tables of energy savings, cost savings, costs for implementation of strategies, and by payback period.

The utility representative will give an initial assessment of any potential money saving programs available to the local government when considering installation of ECOs projects.

3. Financing Conservation Projects

4. New Construction and Policy Considerations

The Agency representative will lead a discussion on the following items:

• Continue policy/code/regulation issues that may be addressed with Agency representatives
• Plans for new construction, if any, over the next five years, so that the Agency representative may begin study of potential for greening of those buildings

5. Next Steps

The purpose of follow-up meetings will be to:

• Prioritize ECOs action items for projects the Energy Team has identified as feasible
• Review Agency representative recommendations for new construction
• Review Agency representative recommendations for policy
IX. Sustainable Region Program Assessment Report Meeting Summary

Sustainable Regions Program Assessment Report Meetings Summary

Date

Attendees

The Agency representative met with local government staff to discuss the outcome of the building energy assessments conducted in DATE. Prior to this meeting, the AGENCY representatives conducted energy assessments of 13 facilities to identify potential energy savings from energy efficiency, demand response, and renewable energy strategies and options.

Agency representatives

Project Manager
Energy Engineer

Local Government representatives

Energy Team Leader
Facilities representative
Finance representative
Administrative representative

Summary

This meeting began with re-introductions to refresh staff on the engineer and Energy Team Leader. The Agency representative advised the attendees about the purpose of the meetings, which was to review each of the local government’s energy efficiency and renewable energy assessments with the engineers/facility staff. The energy engineer gave a description of the data contained in the introduction to the assessment report folders (provided to the local government staff by the agency representative in paper form and through e-mail prior to the meeting). This document included detailed tables of energy savings, cost savings, costs for implementation of strategies and by payback period. The energy engineer then elaborated on the intricacies of each facility’s assessment and the ECOs associated with each.

Next steps

After each local government energy team has had the opportunity to digest the information disseminated at these meetings, the agency representative will schedule follow-up meetings. The purpose of the follow-up meetings will be to:

- Prioritize ECOs action items for projects that each Energy Team has identified as feasible
- Discuss policy/code/regulation issues that may be addressed with agency representatives
- Plans for new construction, if any, over the next five years, so that the agency representative may begin study of potential for greening of those buildings
• Provide answers to data request posed at meetings, specifically inclusion of incremental cost estimates for some ECOs, potential for newer technologies

X. Recommendations Meeting Agenda

Sustainable Region Program Recommendations Meeting

Date

Location

Introductions and Opening Remarks

The agency representative will open the meeting to re-introduce parties to each other.

Review of ECOs

The Agency representative and/or energy engineer will briefly review the ECOs contained in workbooks previously distributed to the local government staff.

Discussion of Local Government’s Preferred ECOs

The Energy Team Leader will lead a discussion with the energy engineer and AGENCY representative to relay which ECOs best suit the local government’s needs

Short-term (within 12 months)

Mid-term (1 to 4 years)

Long-term (5-plus years)

Discussion of Any Local Government New Construction Plans

The agency representative will discuss any new construction plans and recommendations with the agency (*following the instructions in the Toolkit “New Construction” section).

Next steps

The agency representative will arrange meeting with Energy Team Leader to present final report including ECOs, new construction, and policy recommendations.

Appendix C: Links to Other Toolkits and Guides

Several local governments, agencies, and communities have developed toolkits and guides to suit their unique needs. The following is a partial list of links to toolkits that can be of benefit to an agency during development of its SRP Program. Links already provided in the SRP Action Plan and SRP Toolkit report have not been duplicated.

• City of Chula Vista “Mission Green” Initiatives
่อ• City of San Diego Sustainable Community Program
• County of San Diego’s Green Business Program
• Madison Wisconsin Sustainability Toolkit
• Energy Star Guidelines for Energy Management Overview
• Energy Efficiency Policy Toolkit

Appendix D: SAMPLE Local Government Energy Assessment Report

Appendix D is saved as a separate attachment due to large file size. It is the Energy Assessment Report developed and delivered to the City of Poway.
REGIONAL ENERGY STRATEGY UPDATE  

Discussion

This year, the Energy Working Group (EWG) has been discussing the update of the Regional Energy Strategy (RES) including goals, policies, and guiding principles. Attachment 1 is the set of Guiding Principles recommended by the EWG.

SANDAG adopted its first regional energy plan in 1979. Subsequent regional energy plans were adopted in 1984, 1994, and 2003. The RES Update will set a vision for the region to be met by following a series of guiding principles. The guiding principles identify priorities and standards to guide regional and local planning decisions in a manner that ensures a sustainable energy future.

The RES Update will identify regional energy goals, objectives, policies, and actions to be implemented. The draft goals address energy efficiency, electricity and natural gas demand, renewable and nonrenewable energy resources, the electricity grid, transportation energy, and energy intensity of the built environment (Attachment 2).

Staff is working on three new goals for inclusion in the RES Update:

- Water-energy considerations,
- Border energy considerations (Binational, tribal, and county-to-county), and
- Green economic development

These three issue areas are still under development; therefore, Attachment 3 contains the staff drafts for each. At its April 3, 2009, meeting, the Regional Planning Committee recommended that water issues be emphasized more.

A draft of the 2009 RES Update will be completed for the California Energy Commission (CEC) on June 1, 2009. The CEC will provide staff-level feedback and recommendations for inclusion in a final draft document. A public workshop is planned for the evening of July 7 at the California Center for Sustainable Energy. A final draft is to be considered by the SANDAG Board of Directors in October 2009, with a final report submittal to the CEC by the end of 2009.

Attachments:
1. Energy Working Group Recommended Guiding Principles for the Regional Energy Strategy Update
2. Proposed Regional Energy Strategy Update Goals and Policies
3. Staff Draft - Additional RES Update Goals

Key Staff Contact: Susan Freedman, (619) 699-7387; sfr@sandag.org
Energy Working Group Recommended Guiding Principles for the Regional Energy Strategy Update

Sustainably Meet Future Energy Needs
The region’s energy needs are met while maintaining environmental quality by employing resources efficiently, diversifying our fuel mix, and utilizing supplies that minimize cost.

Reduce Greenhouse Gas Emissions from Energy Use
Climate change is a serious global challenge to public health, the environment and the economy requiring all levels of government to engage in immediate and sustained cost-effective actions to reduce and mitigate greenhouse gas emissions and prepare for the impacts.

Promote Education and Consensus-Building
An open, transparent and inclusive planning process that includes community and business stakeholders, combined with education programs, increases public awareness and responsible energy decision-making in the region.

Foster the Clean Energy Sector
Economic development initiatives and workforce training programs position the region to supply a growing demand for energy efficient and renewable energy products and services.

Promote Social Equity and Environmental Justice
Energy planning and programs promote the principles of opportunity, inclusion, and equal access for disadvantaged populations and ensure fair treatment and meaningful involvement for all people regardless of race, ethnicity, gender, income, national origin or geography.

Acquire Cost-Effective Electricity Resources in a Sustainable Manner
New resources come from energy efficiency, demand response, renewable energy, and distributed generation before resources from new transmission and fossil-fuel based generation are sought.

Implement the Smart Grid
The deployment of smart devices, controls and communications modernize our electricity grid to improve reliability, power quality, and detect problems before service is affected.

Aggressively Pursue Energy Reductions in Existing Residential and Commercial Buildings
Net energy usage and costs from the region’s existing building stock are significantly reduced through targeted energy policies, programs and financing options.

Reduce Energy Demand and Renewable Energy System Cost
Policies and programs promote the integration of energy efficiency at a structure prior to the installation of a renewable energy system in order to reduce the size and cost of the renewable energy system.

Achieve Zero Net Energy Residential and Commercial Buildings
Aggressive strategies, including regulations and incentives, are employed to achieve zero net energy usage in new residential and commercial buildings and communities, and reduce energy usage in existing residential and commercial buildings and communities, through energy efficiency, clean distributed generation, and community planning efforts.

Reduce the Energy Intensity of the Built Environment
The energy intensity of community design, including buildings and travel options, is an integral component of land use and transportation planning.

Ready the Region for Wide-Scale Deployment of Alternative Fuel Vehicles
The region has convenient access to alternative transportation fuels that reduce our dependence on foreign oil supply, reduce local economic impacts from oil price volatility and reduce greenhouse gas emissions.
Proposed Regional Energy Strategy Update Goals and Policies

Energy use is responsible for more than 90 percent of greenhouse gas (GHG) emissions in the San Diego Region. The largest contributors are on-road transportation (46 percent), electricity use (25 percent) and natural gas end use (9 percent). Adopting energy efficiency measures for buildings, accelerating the deployment of alternative fuel vehicles, and considering the energy impacts of land use and transportation planning decisions, all contribute to meeting the state law to reduce GHG emissions economy-wide to 1990 levels by 2020 and the long-term goal of reducing GHG emissions to 80 percent below 1990 levels by 2050.

ENERGY EFFICIENCY

**Goal**: Reduce total electricity consumption (GWh) across the region through aggressive but achievable energy efficiency measures.

**Targets**: Targets for reducing total electricity consumption will be established for 2020 and 2030. Based on CCSE’s analysis, they have proposed three possible regional energy efficiency targets for the RES Update. A Base-Level Target, Mid-Level Target, or Full-Level target (depicted above) would require different levels of commitment to achieve. Within these totals, targets are identified for each electricity sector, including new and existing residential, commercial and industrial structures. The Base-Level Target is illustrated in the following table and graph as example.
The energy efficiency targets reflect a projection forward applying existing funding levels from the Public Goods Charge (PGC) program mechanism through San Diego Gas and Electric (SDG&E). Stretch targets for energy efficiency by sector are currently under analysis by the California Center for Sustainable Energy (CCSE). The more aggressive goal would result if the region leverages other policies and programs outside the scope of PGC programs.

Based on analysis to date, the proposed Base-Level Targets will result in a 6.0 percent reduction in total electricity consumption below projected levels in 2020 and a 7.1 percent reduction in 2030. For the RES Update, energy efficiency is broadly defined as using less
energy to accomplish the same level of electrical output as a less efficient energy appliance or application. Energy efficiency can be more precisely defined by the potential for it, by type. For this goal, energy efficiency is defined as the market potential for energy efficiency penetration in each electricity sector.

Policies:

- Leverage federal funding
  - Energy Efficiency and Conservation Block Grants
  - Weatherization programs
  - State Energy Programs
- Support renewable energy/energy efficiency financing options
  - Assembly Bill 811
- Support advanced metering infrastructure
- Support long-term energy efficiency plans
  - CPUC Energy Efficiency Long Term Strategic Plan
    - Focus on energy efficiency market transformation
    - 100 percent of eligible and willing customers will have received all cost effective EE measures by 2020 (CPUC Plan)
- Support California green building initiative directives
  - 20 percent reduction of energy use in state-owned buildings by 2015
  - Recommended private commercial sector goals and compliance with Green Building Action Plan
- Implement legislation that encourages energy efficiency
  - SB 1037 (2005)
  - AB 2021 (2006)
  - AB 32 (2006)
  - AB 1109 (2007)
- Support current legislative cycle energy efficiency bills
- Promote workforce development in the clean energy sector
**REGIONAL PEAK DEMAND**

**Goal:** Reduce per capita electricity peak demand (MW) through targeted energy efficiency and demand response measures, and deployment of smart grid technologies.

**Target:**

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>2000</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Peak Demand</td>
<td>2690 MW</td>
<td>3163 MW</td>
<td>4405 MW</td>
<td>4925 MW</td>
<td>Tbd</td>
</tr>
<tr>
<td>Population</td>
<td>2,498,016</td>
<td>2,813,833</td>
<td>3,245,279</td>
<td>3,635,855</td>
<td>3,984,753</td>
</tr>
<tr>
<td>Per capita peak demand</td>
<td>1.08 kW</td>
<td>1.12 kW</td>
<td>1.36 kW</td>
<td>1.35 kW</td>
<td>Tbd</td>
</tr>
</tbody>
</table>

RES Goal: Tbd  tbd

[Placeholder for graphs showing current San Diego regional peak load demand and desire to flatten load curve and achieve higher capacity factor]

Reducing electric demand through conservation, energy efficiency, and demand response activities are the first actions that should be taken by the region. Such demand-side measures can be considered a most reliable “supply resource” option and have been consistently shown to be the easiest to achieve. Demand reduction delays the need for the construction of new generation and new transmission. Demand reduction reduces the output requirements placed on in-region power plants, thus improving air quality and community health.

Approximately one-third of energy demand in the SDG&E territory is derived from A/C units during peak summer periods. Not only does this affect overall consumption, but high A/C demand during summer peak periods has necessitated the use of less efficient regional peaker plants that have air quality impacts for the region.

In addition to demand-side measures, implementing a smart grid in the San Diego region will provide a reduction in peak demand, improve system availability and provide capacity improvements due to improved power flow. A smart grid is further detailed in the RES goal for the electricity grid. It includes smart devices, two-way communications and advanced control systems. A smart grid can detect and address emerging problems on the transmission and distribution system before they affect service and enable ratepayers that chose to participate to use smart devices that can cycle A/C units, set dryers or other energy intensive equipment to run at off peak hours energy is in greater supply and less costly.

**Policies:**

- Encourage participation in demand response programs
- Support fair and reasonable rate designs and incentives that encourage reductions in peak demand
- Support SDG&E in obtaining resources to implement a smart grid in San Diego region.
• Support and promote Develop aggressive A/C load reduction programs
• Support aggressive energy efficiency programs that prioritize existing building retrofits
• Support development of a regionally consistent and comprehensive energy efficiency building retrofit program

CLEAN DISTRIBUTED GENERATION

Goal: Increase the total amount of distributed generation resources (renewable and non-renewable) in the region to diversify the electricity resource mix and reduce summer peak demand with onsite or near-load resources.

Targets:

<table>
<thead>
<tr>
<th>DG Technology</th>
<th>2008 (MW) actual</th>
<th>2020 Goal (MW) = 8% of State Goals</th>
<th>2030 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydro (built out)</td>
<td>3.8</td>
<td>3.8</td>
<td>3.8</td>
</tr>
<tr>
<td>Bio</td>
<td>6.4</td>
<td>24</td>
<td>26.55</td>
</tr>
<tr>
<td>Steam (built out)</td>
<td>6.6</td>
<td>6.6</td>
<td>6.6</td>
</tr>
<tr>
<td>PV</td>
<td>49.4</td>
<td>210</td>
<td>249.29</td>
</tr>
<tr>
<td>CHP</td>
<td>341.0</td>
<td>264</td>
<td>397.79</td>
</tr>
<tr>
<td>Total DG</td>
<td>407.2</td>
<td>508.4</td>
<td>684.03</td>
</tr>
<tr>
<td>Net Peak Demand</td>
<td>4568.0</td>
<td>5411</td>
<td>6218</td>
</tr>
<tr>
<td>Penetration of DG</td>
<td>8.9%</td>
<td>9.4%</td>
<td>11.0%</td>
</tr>
</tbody>
</table>


Stacked CEC-Based Market Penetration (in MW by Year) for SDG&E Territory

Source: CCSE, 2009
The draft targets are to exceed 500MW (9 percent of net peak demand) by 2020 and 684 MW (11 percent of net peak demand) by 2030. Targets by technology also have been established.

The overall targets have been revised downward from the 2003 RES after analysis by the California Energy Commission (CEC) and CCSE of the market potential for these technologies shown that the earlier goals were unachievable. For the RES Update, distributed generation is defined as an onsite or near-load electricity generator, under 20 MW, serving either onsite load (or a portion thereof) or the regional utility grid. Technologies and fuels included in the definition of distributed generation are solar, wind, biomass and biogas, fuel cells, clean and efficient combined heat and power (CHP) systems, efficient microturbines, and internal combustion engines (ICEs). Advanced energy storage (AES) is included here as a recently added component of DG applications.

**Policies:**
- Implement legislation that encourages distributed generation technologies and implementation
  - AB 32 (2006)
  - SB 1078 (2002)
  - AB 2466 (2008)
  - AB 1613 (2007)
- Continue incentive programs for distributed generation technologies
  - Self-Generation Incentive Program
  - California Solar Initiative
- Implement financing options that promote distributed generation
  - AB 811
- Support smart grid policy implementation
- Promote workforce development in the clean energy sector

**LARGE-SCALE RENEWABLE ENERGY SUPPLY**

**Goal:** Significantly increase the region’s total electricity supply from renewable energy resources.

**Targets:**

<table>
<thead>
<tr>
<th>Renewable Resources</th>
<th>2008 (actual)</th>
<th>2020</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Included in SDG&amp;E RPS</td>
<td>7%</td>
<td>33%</td>
<td>50%</td>
</tr>
<tr>
<td>Net Peak Demand (MW)</td>
<td>4568.0</td>
<td>5411</td>
<td>6218</td>
</tr>
</tbody>
</table>

Small-scale renewable resources are addressed in the distributed generation goal above. The 2010 and 2020 targets have been revised upward from the 2003 RES to reflect more aggressive state law and policy. The 2030 target from the 2003 RES remains unchanged. The draft targets for the RES Update call for increases in the amount of renewable energy resources to 20 percent by 2010, 33 percent by 2020 and 50 percent by 2030.
Renewable resources include supply that counts toward SDG&E meeting the renewable portfolio standard (RPS). California's RPS program requires electric corporations to increase procurement from eligible renewable energy resources to reach 20 percent by 2010. In November 2008, the governor signed Executive Order S-14-08 directing all state agencies to work toward achieving 33 percent by 2020. The CEC, California Public Utilities Commission (CPUC) and California Air Resources Board (CARB) support the higher RPS goal for 2020, which still must be codified into law through legislation. The large-scale renewable energy goal also will include any renewable resources not counted in the DG goal.

**Policies:**
- In a regionally-consistent manner, assist local governments in the identification and removal of barriers to siting renewable energy installations in San Diego County.
- Assist local governments in identification of potential sites for renewable energy projects that will help the region and SDG&E meet renewable energy targets.
- Promote quality jobs for workers employed in the energy sector through training programs related to local renewable energy industries.
- Support cost-effective transmission access from areas rich in renewable resources to the San Diego region.
- Monitor the Renewable Energy Transmission Initiative (RETI) and consider its recommendations in future regional planning.

**THE ELECTRICITY GRID**

**Goal:** Modernize and expand the transmission and distribution grid to maintain required reliability, provide better access to renewable resources, provide competitively priced electricity, and implement a smart grid in the San Diego region.

The transmission grid provides for a number of functions, including providing access to out of region power, improving fuel diversity (in particular, renewable resources), providing access to broader supplies in the market that help lower and stabilize electric prices, improving system stability and reliability, and creating opportunities for local generation to sell to markets outside San Diego. These benefits need to be balanced with the fact that siting issues for new transmission lines are often contentious and difficult to achieve due to the large number of parties that are affected by such projects (e.g. visual impacts, potential impacts on property values, habitat impacts).

California state law requires the utilities to follow a specific “Loading Order” when developing their resource plans. Under this law, utilities should seek new energy resources first from energy efficiency, demand response, renewable energy, and distributed generation before seeking resources from new transmission and fossil-fuel based generation. The state also identifies the lack of transmission access from areas rich in renewable resources to load centers as a major obstacle to meeting the RPS targets.

Transmission is an integral component of a balanced electricity strategy. Additional transmission capacity will enable the San Diego region to gain access to areas rich in
renewable resources, significantly increase electricity supply from renewable energy, and assist the region in meeting its renewable energy target of 33 percent by 2020.

The San Diego Smart Grid Study was released by EPIC in 2006 and included extensive analysis of the technologies, utility and societal costs and benefits, scenarios for implementing a smart grid in the San Diego region.

<table>
<thead>
<tr>
<th>Summary of San Diego Smart Grid Study Cost-Benefit Analysis Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Annual Benefits</strong></td>
</tr>
<tr>
<td><strong>System Benefits (20-years)</strong></td>
</tr>
<tr>
<td><strong>Societal (Consumer-side) Benefits (20-years)</strong></td>
</tr>
<tr>
<td><strong>Total Capital Cost</strong></td>
</tr>
<tr>
<td><strong>Annual O&amp;M Cost</strong></td>
</tr>
</tbody>
</table>

Source: EPIC, 2006

<table>
<thead>
<tr>
<th>Smart Grid Benefits for the San Diego Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefit Type</td>
</tr>
<tr>
<td>Reduction in congestion cost</td>
</tr>
<tr>
<td>Reduced blackout probability</td>
</tr>
<tr>
<td>Reduction in forced outages/ interruptions</td>
</tr>
<tr>
<td>Reduction in restoration time and reduced operations and management due to predictive analytics and self healing attribute of the grid</td>
</tr>
<tr>
<td>Reduction in peak demand</td>
</tr>
<tr>
<td>Other benefits due to self diagnosing and self healing attribute of the grid</td>
</tr>
<tr>
<td>Increased integration of distributed generation resources and higher capacity utilization</td>
</tr>
<tr>
<td>Increased security and tolerance to attacks/ natural disasters</td>
</tr>
<tr>
<td>Power quality, reliability, and system availability and capacity improvement due to improved power flow</td>
</tr>
<tr>
<td>Regional job creation and increased GDP</td>
</tr>
<tr>
<td>Increased capital investment efficiency due to tighter design limits and optimized use of grid assets</td>
</tr>
<tr>
<td>Tax benefits from asset depreciation, tax credits, and other</td>
</tr>
<tr>
<td>Environmental benefits gained by increased asset utilization</td>
</tr>
</tbody>
</table>

Subtotals $69.7M $71.8M

Total $141.5M

Source: EPIC, 2006

**Policies:**
- Secure funding to conduct a feasibility study on the potential for establishing infrastructure corridors that could include pipelines, transmission lines, roadways, and cable.
- Support the adoption and deployment of smart-grid technologies.
- Support regional entities like SDG&E and Energy Policy Initiatives Center at University of San Diego in acquiring state and federal funds to implement smart grid for San Diego.
- Support cost-effective transmission access from areas rich in renewable resources to the San Diego region.
- Monitor the RETI and consider its recommendations in future regional planning.

TRANSPORTATION ENERGY

**Goal:** Reduce petroleum dependence by accelerating the deployment and availability of cost-competitive alternative fuel vehicles in the San Diego region.

Transportation was not addressed in the 2003 RES except to call for further study. Refueling stations and other infrastructure that can accommodate alternative fuel vehicles must be in place to provide members of the public and fleet managers with a level of certainty that they can purchase alternative fuel vehicles without concern over finding a fueling station or maintenance facility. The state has enacted several laws to reduce reliance on petroleum-based transportation fuels. Increasing the use of alternative fuels will help mitigate energy security concerns, provide a buffer from oil price volatility and emit fewer GHG emissions than petroleum-based fuels. Improved vehicle fuel efficiency required by state and federal standards also will help the region address these concerns.

The choice of which alternative fuel will vary based on vehicle class and customer needs. The region will utilize alternative fuels that meet the state’s low carbon fuel standard (LCFS), which is determined by a full fuel cycle analysis (“well to wheels”). Fuels with lower carbon intensities than conventional gasoline and diesel qualify for the LCFS and are eligible for state aid to increase their deployment. Both the state and federal government have significant financial and technical resources available for increasing alternative fuels, vehicles and infrastructure.

**Policies:**
- Identify and secure state and/or federal funding to increase the deployment of alternative fuel vehicles and infrastructure for the region.
- Assist local and regional government fleets to purchase alternative fuel vehicles and use alternative fuels.
- Through public and private partnerships, increase the availability of alternative fuel vehicles and infrastructure in the San Diego region.
- Support local alternative fuel companies that can provide supply to the region.
- In a consistent regional manner, support the Identification and removal of permitting or other barriers to siting refueling/recharging stations and state-approved home refueling options.
- Identify regional transportation investment projects that could be augmented with an alternative transportation component.
• Coordinate with vanpool and carpool programs to replace fleet vehicles with more efficient models.
• Coordinate with regional transit agencies to identify and fund energy reduction technologies for the trolley and light rail.

ENERGY CONSIDERATIONS FOR LAND USE AND TRANSPORTATION PLANNING

Goal: Reduce the energy intensity of the built environment.

This is a new area of focus by the state, although SANDAG’s 1994 energy plan did recognize the need to consider maximizing mobility in community design and building structures with energy efficiency in mind. A proposed target for the RES Update is to increase the number of designated “Potential Smart Growth Areas” (PSGAs) that become part of adopted local plans. Since there are currently 111 PSGAs, attention should begin with areas already served by transit. To achieve this target, methods to address associated energy, water, transportation or other necessary infrastructure improvements must be considered.

Community design is strongly related to energy consumption. The energy intensity of a community is in large part determined by the design and layout of individual buildings and their spatial relation to each other and supporting transportation infrastructure. Local governments influence community design through their land use planning authority and local infrastructure decisions. Local governments provide the blueprint for future land use development and community design in their communities through the General Plan. SANDAG conducts transportation planning for the region and provides land use planning guidance to local governments through the Regional Comprehensive Plan (RCP). In the San Diego region, a major objective of local land use and regional transportation planning is to identify the land and infrastructure needed to accommodate projected population, housing and job growth while maintaining and enhancing quality of life. The San Diego region is forecast to grow by another million residents by 2030, about 30 percent more people than today (2009).

Over the long term, the land use and transportation planning decisions made to accommodate future growth will have a large impact on the spatial distribution of buildings and places and how people travel among them. As a result, energy must be a primary consideration in land use and transportation planning.

Policies:
• Assist local governments in a regionally-consistent manner with incorporating energy-saving measures into general plans and development codes.
• Encourage and help local governments to incorporate Potential Smart Growth Opportunity Areas into their adopted land use plans.
• Support adoption of a resolution calling for zero net energy homes by 2020 and zero net energy commercial buildings by 2030.
• In a regionally consistent manner, promote the integration of efficient energy supply, distribution and use, and petroleum reduction measures into all facets of land-use planning and development.
- Assist local governments with policies, standards, and place-making tools that emphasize pedestrians, bicycles, and public transit.
- Support funding and incentives for transportation demand management (TDM) programs like iCommute, carpools, vanpools and telecommuting.
- Support making walking, bicycling and public transportation safe, practical, and attractive choices for travel.

**NATURAL GAS**

**Goal:** Through energy efficiency measures and fuel diversification, reduce per capita natural gas consumption in the region.

Natural gas is the least polluting fossil fuel and the only fossil fuel that California allows to fuel in-state power plants. It is used for space conditioning and water heating and as a growing transportation fuel for some buses, heavy duty vehicles and passenger vehicles. It is less polluting and more energy efficient than diesel or gasoline.

[Placeholder for energy intensity of various types of natural gas (CNG, LNG, NG) and availability]

Regional natural gas consumption is expected to grow to 590 million therms (MMTh) in 2010, 660 MMTh in 2020 and 730 MMTh in 2030. As demand for natural gas continues to grow in the region, and with the passage of AB 32, priority must be made to utilizing natural gas in the most energy efficient manner and where applicable and cost-effective, replace it with a renewable fuel. Draft targets for the RES Update are to reduce per capita natural gas consumption by 10 percent in 2020 and 15 percent in 2030.

Significant opportunities exist to reduce the use of natural gas in the region, including the dismantling or repowering of aged power plants with more efficient combined cycle gas turbines, expanding the use of solar for hot water and solar pool heating, and reducing demand and peak demand by other energy efficiency measures. The passage of AB 1368 in 2006, placed a GHG emissions standard on power purchases of California utilities that will effectively prevent any high-emission baseload plants from being contracted within the state.

**Policies:**
- Monitor the availability and cost of natural gas supplies in light of increased regulatory and environmental restrictions on fossil fuels.
- Support policies that will provide more stable natural gas prices and reduce consumer exposure to market volatility.
- Increase use of solar water heating in residential, pool and commercial uses to offset natural gas demand.
- Promote the use of high efficiency distributed generation technologies like combined heat and power.
- Promote the weatherization and insulation of un-insulated homes built before the development of building energy codes.
- Increase and promote demand-side energy efficiency programs to reduce residential, commercial and industrial gas usage.
• Encourage the re-powering or replacement of older power plants in the county with high efficiency combined cycle gas turbines or a more efficient technology or fuel.

See Attachment 3 for working drafts of the following new goals.

**Placeholder for WATER - ENERGY CONNECTION GOAL**

**Placeholder for BORDER ENERGY CONSIDERATIONS GOAL**

**Placeholder for GREEN ECONOMIC DEVELOPMENT/ CLEAN ENERGY SECTOR**
Staff Draft – Additional RES Update Goals

THE ENERGY - WATER NEXUS
Moving water supply, water treatment, and customer end uses are extremely energy intensive activities. Water planning at the federal, state and local levels has historically failed to consider the energy implications of water supply, demand and waste. California’s water systems are uniquely energy intensive relative to national averages. We have pumping requirements for major conveyance systems which move water over long distances and thousands of feet in elevation lift. San Diego County is at the most energy intensive end of the State Water Project (SWP) and Colorado River Aqueduct. The future demand for additional sources of water and the limited supply requires us to identify conservation and efficiency options in resource planning, regulation and energy/water sector collaboration. Climate change is expected to lead to greater risk of drought or water shortages in the summer months, and increased runoff and flooding might occur during the winter months.

Key Energy-Water Findings for California (CEC):
- Electricity for water uses costs Californians at least $2 billion per year, and this electricity use and dollar figure are expected to grow.
- Urban water and wastewater facilities draw about 3,000 MW of power at peak use, with about 1,800 MW of that occurring in Southern California.
- Many of the peak demands for water and the energy required to treat and transport that water coincide with the peak seasonal energy demands experienced by the electrical utilities, particularly in Southern California.
- Water conservation is the most efficient strategy in addressing the need for additional water sources and achieving energy savings.
- Investment in conservation may forestall or avoid larger public investments for drinking water, clean water infrastructure, or power generation facilities, and it will help stretch available public water funds.
- Water recycling is a highly energy efficient water source with considerable potential.
- There is essentially zero potential for securing significant new freshwater sources in the state.
- Desalinated brackish water and seawater can relieve drought conditions, replace and restore groundwater, and provide a source of water for river and stream ecosystem restoration.
- Solutions to California’s water management issues are best planned and carried out on a regional basis.

San Diego Regional Water -Energy Findings
- End use energy dominates San Diego County’s water-use cycle (57% of total energy use or 3900 kWh/acre-foot of 6900 kWh/acre feet total)
- San Diego County Water Authority (SDCWA) estimates that at least an additional 100,000 acre-feet/year will be needed in 2020 (SDCWA supplies about 600,000 af/year currently).
- The Energy Commission identifies water conservation as the far superior water “source” from an energy perspective.
- The amount of energy used to deliver water from the State Water Project to residential customers in Southern California is almost 1/3 the total average household electric use in the region. (The SWP burns energy by pumping water 2,000 feet over the Tehachapi Mountains -- the highest lift of any water system in the world.)
San Diego Water Reclamation Progress

The San Diego region has already made substantial investment in water reclamation. The City of San Diego has constructed two reclamation facilities – North City Water Reclamation Plant (NCWRP) and South Bay Water Reclamation Plant (SBWRP). NCWRP has capacity to produce up to 24 million gallons per day (MGD) of recycled water, but existing beneficial reuse, consisting mostly of irrigation and some industrial purposes, total only about 6 MGD (City of San Diego, Water Reuse Study [2006]). The SBWRP produces from five to six MGD of recycled water that is then disposed through the ocean outfall, without application for domestic or industrial reuse. Thus, although the region has substantial capacity to produce recycled water with adequate quality, actual demand for recycled water has not matched that capacity. None of the recycled water is currently used as potable water, due to lack of public acceptance.

Currently, a substantial portion of the reclaimed water processed by the MWD is never utilized. Instead, it is pumped back into the general wastewater lines where it is run through treatment processes again at the Point Loma water treatment facility, and disposed of in the Pacific Ocean. This represents a waste of water and the energy used to process and pump it.

Water and Power Plant Findings

- The Energy Commission will no longer approve the use of fresh water to provide makeup for conventional power plant cooling systems (i.e., favoring instead use of degraded or

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**TABLE 7**

*Estimated Energy Use Integral to Water End Use In San Diego County*

<table>
<thead>
<tr>
<th>Water Use Category</th>
<th>Estimated Percent of Total Use in 2010 (8)</th>
<th>Estimated Energy Intensity (kWh/af) (8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>58%</td>
<td>0</td>
</tr>
<tr>
<td>Toilets and leaks</td>
<td>14%</td>
<td>27,200</td>
</tr>
<tr>
<td>Dishwashers</td>
<td>1%</td>
<td>11,650</td>
</tr>
<tr>
<td>Clothes washers</td>
<td>8%</td>
<td>6,700</td>
</tr>
<tr>
<td>Showers, faucets, and bathtubs (1)</td>
<td>12%</td>
<td>6,700</td>
</tr>
<tr>
<td>Landscape irrigation</td>
<td>23%</td>
<td>0</td>
</tr>
<tr>
<td>Commercial, Industrial, and Institutional</td>
<td>32%</td>
<td>27,200</td>
</tr>
<tr>
<td>Kitchen dishwashers</td>
<td>0.5%</td>
<td>6,700</td>
</tr>
<tr>
<td>Prerinse nozzles</td>
<td>0.2%</td>
<td>Not Estimated</td>
</tr>
<tr>
<td>Other kitchen use</td>
<td>1.2%</td>
<td>11,650</td>
</tr>
<tr>
<td>Laundries</td>
<td>0.6%</td>
<td>800</td>
</tr>
<tr>
<td>On-site wastewater treatment (2)</td>
<td>5.8%</td>
<td>67,700</td>
</tr>
<tr>
<td>Water-cooled chillers (3)</td>
<td>2.4%</td>
<td>0</td>
</tr>
<tr>
<td>Single pass cooling (3)</td>
<td>2.4%</td>
<td>0</td>
</tr>
<tr>
<td>Landscape irrigation</td>
<td>12.1%</td>
<td>0</td>
</tr>
<tr>
<td>Other heated water (4)</td>
<td>0.3%</td>
<td>6,700</td>
</tr>
<tr>
<td>Other unheated water (5)</td>
<td>6.5%</td>
<td>Not Estimated</td>
</tr>
<tr>
<td>Agricultural (6)</td>
<td>10%</td>
<td>3,900</td>
</tr>
<tr>
<td>Totals and weighted average (7)</td>
<td>100%</td>
<td>Not Estimated</td>
</tr>
</tbody>
</table>

Source: California Energy Commission
recycled water, or air-cooled systems), nor anything but use of zero-liquid discharge (ZLD) systems to handle any wastewater, unless such use is “environmentally undesirable or economically unsound”.

- Wind power and solar photovoltaic systems use no water during operations
- Distributed energy systems essentially are air-cooled machines, needing little to no water for power operations.

**Recommended Water – Energy Actions for San Diego Region:**

- Regional and local governments should collaborate with CWA, local water districts and SDG&E to undertake cooperative programs to increase water conservation and acceptance of reclaimed water for domestic use to help the region meet its goals of water source diversification
- The San Diego region needs to take whatever measures necessary to ensure that 100 percent of the reclaimed water that is processed is utilized in an effective manner – it’s too expensive to reclaim it and then dispose of it into the Pacific Ocean.
  - The San Diego region has recycled water resources available that could be utilized for power or other uses. The Palomar power plant in Escondido uses reclaimed water for cooling.
- Promote end use water conservation as an optimal means to reduce future water resource needs and energy intensive processes.
- Promote increased coordination on energy and water conservation measures among water agencies, local governments and SDG&E
- Promote energy efficiency, demand response and self generation efforts at water pumping stations and treatment facilities
- Develop and promote innovative, regionally consistent water conservation programs to assist residential and commercial water customers
- Identify financing mechanisms that end users can utilize to reduce water usage such as those available for energy measures (i.e., on-bill financing (property tax or utility) and low interest loans).
- End use efficiency education programs that raise awareness and encourage conservation habits among residential and commercial customers.
- Incentives for reduction of lawn size & use of native arid plants that would reduce residential irrigation.
- Provide sprinkler recommendations- limited days, or watering in the mornings and afternoons to avoid excessive evaporation.
Developing/Expanding a Clean Energy Economic Cluster

Significant federal and state investment will be injected into the Clean Energy Sector:

- The American Recovery and Reinvestment Act (ARRA) provides $787 billion over the next ten years, with most of the spending occurring over the next two years.
- The act includes $48 billion in investments in job training and education, nearly $100 billion in funding for transportation and infrastructure, $20 billion in tax incentives for renewable energy, and more than $41 billion for energy-related programs.
- A substantial portion of these funds can be used to green our economy and communities while creating quality employment and training opportunities that provide pathways out of poverty.

Definitions of Green Economy- Clean Energy Economy

The US Conference of Mayors defines the ‘Green Economy’ as that part of economic activity which is devoted to the reduction of fossil fuels, the increase of energy efficiency, and the curtailment of greenhouse gas emissions. The economic advantages of the Green Economy include the macroeconomic benefits of investment in new technologies, greater productivity, improvements in the US balance of trade, and increased real disposable income across the nation. They also include the microeconomic benefits of lower costs of doing business and reduced household energy expenditures. These advantages are manifested in job growth, income growth, and of course, a cleaner environment. They listed the San Diego region as one of the top ten metropolitan areas for green jobs.

Another description of green jobs

Green jobs typically deal with reducing pollution or conserving resources. They are sometimes broken into two parts: engineers and scientists who create new technologies, and technicians who put new methods or products into use. The sectors include renewable energy, low-impact construction, biofuels, “clean transportation,” environmental compliance and conservation-minded water and waste management. In many cases, people have been doing green work for years without getting the label.

Green-Collar Jobs are:

- Jobs that preserve, restore, or improve the environment.
- Jobs that help save energy, advance new energy efficient technologies, and foster a more sustainable regional and national energy system.
- Either blue or white collar positions, updated to adopt sustainability as a core segment of the individuals’ job description.
- Career opportunity capable of supporting a family's income, with the potential for advancement.

Green-Collar Jobs provide opportunities and advantages, such as:

- Creating new jobs or retraining the unemployed in a time of economic downturn.
- Providing opportunities for career advancement in the sustainability fields.
- Reducing our dependence on foreign oil, and strengthening national security.
- Promoting the use of domestic renewable energy resources.
- Reducing the tax burdens of inefficient public buildings and public housing.
- Mitigating climate change by cutting greenhouse gas emissions.

Some jobs will be created directly by the American Recovery and Reinvestment Plan, while others will grow out of normal economic growth created by businesses supporting infrastructure projects and support for the needs of the workers. Jobs in construction and manufacturing are projected to have the largest growth. These jobs will generally offer higher than average wages and include a significant percentage of union jobs, as well as jobs for women and minorities. Below is a sample of the jobs projected to be created from the federal recovery plan.

<table>
<thead>
<tr>
<th>GREEN INVESTMENTS AND JOBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGIES FOR GREEN ECONOMIC INVESTMENT</td>
</tr>
<tr>
<td>Building Retrofitting</td>
</tr>
<tr>
<td>Mass Transit/Freight Rail</td>
</tr>
<tr>
<td>Smart Grid</td>
</tr>
<tr>
<td>Wind Power</td>
</tr>
<tr>
<td>Advanced Biofuels</td>
</tr>
</tbody>
</table>

This is a unique time for this development with significant ARRA-based federal and state funding for this area, in particular with infrastructure investment and workforce development. Regional and local governments should identify and provide public policy support in order to foster the region’s Clean Energy Sector. We should strengthen our existing industries, our emerging growth companies, and our universities and research and development institutions that create new enterprises. These actions represent important opportunities for the region; they are part of the foundation on which our future economic prosperity depends.

In the most advanced economies worldwide, one or more industry clusters serve as the driving force of the regional economy. At the core of the cluster are geographic concentrations of interdependent, internationally competitive firms in related industries. Clusters include large companies and small companies, and both domestic and foreign firms. In addition to selling their products and services locally, cluster firms sell globally and bring outside dollars into our region.

Clean energy is being identified as one of the most promising new ventures for American manufacturing. The domestic market for solar panels, wind turbines, fuel cells, combined heat and power (CHP) systems, and biomass engines is projected to reach $226 billion annually by 2016. Demand for solar and wind power will continue to expand over the next 20 years, and between 70 and 80 percent of the new jobs created in those industries will be in the manufacturing sector.
Job Creation by Clean Energy Sector

Studies and the influx of federal stimulus funding create the potential for significant growth in Clean Energy Sector. Several studies identify various levels of job creation.

- According to research by Roger Bezdek for the American Solar Energy Society (ASES), the renewable energy and energy efficiency industries created a total of 8.5 million jobs (direct and indirect) in 2006; 450,000 jobs in renewable energy and 8 million jobs in energy efficiency throughout the United States. As many as 1 out of 4 workers in the United States will be working in these industries by 2030. The 40 million jobs are not just engineering-related, but also include millions of new jobs in manufacturing, construction, accounting, and management.
- A report from the US Council of Mayors projects that 4.2 million new green jobs can be added to the US economy by 2038.
- According to the Center for Energy, Resources and Economic Sustainability at the University of California, Berkeley, California’s energy efficiency policies created nearly 1.5 million jobs from 1977 to 2007, while eliminating fewer than 25,000.
- The EPA reports that investment in energy efficiency programs results in direct, indirect and induced employment increases in energy efficiency and related fields during the program life and thereafter. Examples of direct jobs include program staff and contractors required for measure installation. Indirect jobs include manufacturing and service positions that supply technologies rebated and installed by programs, and induced jobs result when the utility bill savings that accrue to participants are either saved or spent.

Manufacturing

Investing in renewable energy and energy efficiency manufacturing creates and retains permanent good jobs on the factory floor. The American Council for an Energy Efficient Economy conservatively estimates that every $1 million of investment in renewable energy systems creates approximately five full-time component manufacturing jobs. Every $1 million invested in energy efficiency programs creates three to four building-material manufacturing jobs and five energy efficient appliance manufacturing jobs. Investing in manufacturing also drives regional economic development: every dollar invested in manufacturing generates more associated (or induced) jobs—in other words, has a higher “multiplier effect” — than each dollar invested in other sectors of the economy, such as services. The Economic Policy Institute estimates that every direct manufacturing job supports an additional 2.9 indirect jobs in finance, transportation, supply chains, installers, and other related businesses.

Green Construction

Research has shown that both green and conventional construction projects are being bid and worked on by similar contractors, implying that green construction work does not require specialized workers. Instead, one of the key differences between green and conventional renovations is generally the materials used in the process. One problem that currently exists in the industry, however, is a knowledge gap across many contracting firms. Some firms are not fully aware of some green construction techniques or the wide variety of modern materials that can be used in a given renovation project. This makes them unable to effectively educate customers about the energy efficient building options that are available.

As green building technology becomes increasingly popular—due to advocacy programs like Energy Star® — traditional contractors will develop their skill sets and expand their knowledge bases in
ways that will allow them to transform large numbers of ordinary buildings into some of the most energy efficient in the world. The existing stock of energy inefficient buildings offers an opportunity to reduce total electricity demand and create jobs for these workers.

Building Retrofit Workers
A 2008 study on green economy job opportunities by the Political Economy Research Institute (PERI) identifies a specialty trade contractor component of the construction sector will benefit the most from new clean energy employment opportunities. Many of the workers required to complete the renovation work and installations of efficiency upgrades fall under the classifications of the traditional construction trades that comprise this category. Ultimately, increasing demand for green building work can be expected to generate new employment opportunities for electricians, HVAC technicians, carpenters, plumbers, roofers, laborers, and insulation workers, among others.

Increased demand for green retrofitting work will simultaneously stimulate demand for green building materials, providing additional sources of job gains in associated manufacturing industries.

San Diego Region's Labor force through 2030:
The San Diego region will experience major changes and shifts in its population over the next 30 years, which in turn will affect its labor force. We are growing and are expected to add nearly one million people; we are becoming more ethnically diverse – the Hispanic and Asian populations will nearly double, and the non-Hispanic White population will shrink by more than one percent; our median age is increasing and we are living longer – the number of seniors will double, and the number of octogenarians will nearly triple; and an increasing number of us are using temporary employment agencies to find jobs throughout our careers.

Workforce Training and Education for Clean Energy Sector
- Provide training and education to existing construction workers and firms on clean energy materials and business practices.
- Local governments should enlist existing organizations like San Diego Workforce Partnership to explore new approaches to providing education and training opportunities to workers employed by temporary staffing agencies. The San Diego region has a large number residents employed in the temporary field.
- Utilize community colleges and university extension programs to provide programs to prepare older workers for the opportunity to remain actively employed and transition to Clean Energy fields.
- Local governments can partner with regional schools and Workforce Investment Boards (WIBs) to bring funding to the San Diego region to spur green economy knowledge and skills.
- Integrate green jobs initiatives into existing workforce systems
- Leverage resources at universities, community and technical colleges, WIBs, community-based organizations, and economic development agencies
  - Universities offer four year Degree Programs and Graduate Degrees in Business, Engineering, and the Sciences.
  - Community Colleges offer both two year Business and Technical Degree Programs and Certification Programs.
  - Tech High Schools offer Trade preparation with hands-on technical laboratories, apprenticeship programs and some certification programs.
  - Dept of Labor, partnering with Community Colleges, Tech High Schools, Unions and Business offer Job Skills Training programs and Apprenticeships.
Placeholders: Growth of Industry - Clean Energy Products more Mainstream
[Placeholder for Table 9: Energy Star Program Key Indicators, 2000 and 2006 ]
[Placeholder for online longer RES chapter, include table of variations in Economic studies on Job Creation from Clean Energy Sector]
EXTRA MATERIALS FOR EWG AGENDA ITEM 8

Border Energy Issues

Note: Tribal and county to county border energy issues to be added.

California-Baja California Border Region
The California-Baja California border region is experiencing increased levels of growth-induced energy demand. The growing energy demand in this border region adds to air quality problems caused by inefficient power plants and boilers, highly polluting industrial facilities, traffic congestion, and agricultural burning practices. Continued coordination between California-Baja California can help identify common issues, interdependencies and policies and actions to address energy planning and infrastructure on both sides of the border.

OVERVIEW

- California and Baja California share a 150 mile border, with a combined population of five million people. The regional population is expected to grow to eight million by 2025.
- For the years 2004-2009, the CEC and SDG&E forecast a 2.1 and 2.0 percent annual growth in electricity demand, respectively, for the San Diego/Imperial County region. The CFE’s 2003-2014 forecast expects a 7 percent annual increase in electricity demand for Baja California.
- Natural gas demand within the SDG&E region is forecast to grow between 1.2 and 1.6 percent annually. Natural gas demand in Baja California is expected to grow by as much as 7 percent annually, importing all its gas from the U.S. through two 30-inch pipelines connected to the SDG&E system.
- The San Diego–Tijuana border area has a combined population of nearly 4 million people, with approximately 2.8 million in the San Diego region and 1.2 million in Tijuana.

Cross Border Electricity Exchange
- The Cerro Prieto Geothermal Plant in northern Baja California is connected to the U.S. grid at the Imperial Valley Substation by two 12-kv lines.
- SDG&E is connected to Tijuana and Tecate by two 12-kV lines.
- In mid-2003, Sempra and Baja California Power began transmitting electricity generated from newly constructed natural gas-fired plants near Mexicali, Mexico, to California over two 230-kV lines terminating at the Imperial Valley Substation.
- Three 34.5-kV lines connect Calexico to Baja California.

Opportunities for Enhanced Energy Efficiency Programs in Baja
The Western Governors’ Association report estimates a market potential for cost-effective energy efficiency projects with annual energy savings of approximately:
- 434,600 megawatt hours (MWh) and cost savings of about $22.8 million in the industrial (manufacturing) sector;
- 101,200 MWh and cost savings of $5.4 million in the commercial (hospitality) sector;
- 283,000 MWh and cost savings of about $15.4 million in the institutional (healthcare/hospitals, government, and education) sector.

Energy Efficiency Implementation Challenges
- Lack of program funding for implementation agencies
Lack of financing options for interested customers
Lack of awareness and technical knowledge
Insufficient technical assistance for project identification and evaluation
An underdeveloped energy services industry
Insufficient market data to target services to appropriate sectors
A regulatory environment that hampers private energy projects

Baja California is not currently connected to Mexico’s pipeline system. Not having any local sources of natural gas, it imports all its gas from the U.S. through two 30-inch pipelines connected to the SDG&E system at Otay Mesa, California, and to the El Paso Gas Company pipeline at Blythe/Ehrenberg.

Natural gas demand in Baja California is expected to grow by as much as 7 percent annually, primarily for electricity generation and industrial heat.

The development of one or more proposed liquefied natural gas (LNG) gasification and storage facilities diversified natural gas supply sources for the area and convert Baja California into a net exporter of gas to the U.S.

Two high capacity natural gas pipelines run east of Tijuana and cross Baja California to feed the gas-fired plants near Tijuana and Mexicali.

Energy Saving Opportunities related to Transportation and Goods Movement
- Port of Entry (POE) truck stop electrification feasibility study
- Heavy duty truck retrofits for high-traffic regional trucking companies
- Electric recharging infrastructure and other alternative fueling infrastructure in the vicinity of the POEs

Recommended Actions/Policies
- EWG and SANDAG COBRO and Borders Committee should coordinate on energy and climate related issues
- Participate in activities like the Border Energy Forum to promote successful efficiency programs for Border region
- Support funding opportunities for binational energy efficiency programs
- Coordinate the development of renewable energy, combined heat and power, and industrial efficiency programs to relieve stress on the regional system and achieve air quality improvements.
- Engage Mexican energy agencies in a coordinated decision making process to create mutually beneficial results.

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