MEETING NOTICE AND AGENDA

REGIONAL ENERGY WORKING GROUP
The Regional Energy Working Group may take action on any item appearing on this agenda.

Thursday, November 21, 2013
11:30 a.m. to 1:00 p.m.

SANDAG
Board Room
401 B Street, Suite 800
San Diego, CA 92101-4231

Staff Contact: Allison King Wood
(619) 699-1973
allison.king@sandag.org

AGENDA HIGHLIGHTS

• UPDATE ON SAN DIEGO FORWARD: THE REGIONAL PLAN
• SAN DIEGO FORWARD: THE REGIONAL PLAN: CLIMATE CHANGE MITIGATION AND ADAPTATION WHITE PAPER OUTLINE
• LOCAL GOVERNMENT PARTNERSHIPS AND REGIONAL ENERGY NETWORKS UPDATE

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## REGIONAL ENERGY WORKING GROUP

**Thursday, November 21, 2013**

<table>
<thead>
<tr>
<th>ITEM #</th>
<th>RECOMMENDATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>WELCOME AND INTRODUCTIONS</td>
</tr>
<tr>
<td>2.</td>
<td>APPROVAL OF MEETING SUMMARIES</td>
</tr>
<tr>
<td>2A.</td>
<td>APPROVE</td>
</tr>
<tr>
<td>2B.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>PUBLIC COMMENTS/MEMBER COMMENTS</td>
</tr>
<tr>
<td>4.</td>
<td>REPORTS ON MEETINGS AND EVENTS ATTENDED ON BEHALF OF SANDAG REGIONAL ENERGY WORKING GROUP</td>
</tr>
<tr>
<td>5.</td>
<td>UPDATE ON SAN DIEGO FORWARD: THE REGIONAL PLAN</td>
</tr>
<tr>
<td>6.</td>
<td>SAN DIEGO FORWARD: THE REGIONAL PLAN: CLIMATE CHANGE MITIGATION AND ADAPTATION WHITE PAPER OUTLINE</td>
</tr>
</tbody>
</table>

### APPROVAL OF MEETING SUMMARIES

+2A. September 26, 2013, Meeting Summary
+2B. October 24, 2013, Meeting Summary

### PUBLIC COMMENTS/MEMBER COMMENTS

Members of the public shall have the opportunity to address the Regional Energy Working Group (EWG) on any issue within the jurisdiction of SANDAG that is not on this agenda. Public speakers are limited to three minutes or less per person. EWG members also may provide information and announcements under this agenda item.

### CHAIR’S REPORT

### REPORTS

+5. UPDATE ON SAN DIEGO FORWARD: THE REGIONAL PLAN  

In May, the SANDAG Board of Directors approved the vision and goals for San Diego Forward: The Regional Plan. Since then, the Regional Planning and Transportation Committees have provided input on the policy objectives and development of alternative land use and transportation scenarios. These efforts are described in the attached reports from the Regional Planning Committee and Board of Directors. Staff will update the EWG on the development of the Regional Plan.

+6. SAN DIEGO FORWARD: THE REGIONAL PLAN: CLIMATE CHANGE MITIGATION AND ADAPTATION WHITE PAPER OUTLINE  

As discussed at previous EWG meetings, staff is preparing a white paper on climate change mitigation and adaptation for use in the development of San Diego Forward: The Regional Plan. Based on input from working groups and the public, the draft outline for the white paper is attached for input from EWG members.
7. LOCAL GOVERNMENT PARTNERSHIPS AND REGIONAL ENERGY NETWORKS UPDATE

The California Public Utilities Commission has begun planning for the post-2015 energy efficiency programs. An overview of the two approved funding mechanisms for local government energy efficiency programs was provided at the EWG meeting in May. Staff will provide an update on the funding opportunities.

8. UPCOMING MEETINGS

Please Note: The EWG meeting scheduled for December 19, 2013, has been cancelled. The next EWG meeting is scheduled for Thursday, January 23, 2014, from 11:30 a.m. to 1:00 p.m.

9. ADJOURNMENT

+ next to an agenda item indicates an attachment
SEPTEMBER 26, 2013, MEETING SUMMARY

ITEM #1: WELCOME AND INTRODUCTIONS

Chair Carrie Downey called the meeting to order at 11:36 a.m.

ITEM #2: JUNE 27 AND JULY 25, 2013, MEETING SUMMARIES

Gary Bousquet, San Diego County Water Authority, motioned to approve the meeting summaries from the June 27 and July 25 Regional Energy Working Group (EWG) meetings, and Jennifer Case, San Diego Clean Cities Coalition, seconded the motion. The motion carried without opposition.

ITEM #3: PUBLIC COMMENTS/MEMBER COMMENTS

Randy Walsh, San Diego Energy Desk, announced the Energy Star Portfolio Manager re-launched. He added that in 2012, San Diego improved its standing from 19th to 15th place with 123 buildings. Mr. Walsh announced he will be conducting training for the tool, and he left flyers with interested EWG members.

Don Christiansen, Christiansen Consulting, shared that he attended the San Diego County Board of Supervisors meeting, and reported there was a unanimous vote in favor of proceeding with studying a comprehensive renewable energy plan, which includes studying a community choice aggregation plan.

Sarah Benson, Stay Cool 4 Grandkids, introduced her organization, and explained Stay Cool 4 Grandkids is a non-profit energy membership organization of grandparents specifically united to fight global warming and advance regional and San Diego policies that fight emissions in the region. The organization was formed in early 2013, and Ms. Benson is the first employee and program manager. She highlighted free educational events are provided to members to give them a better understanding of local climate action developments in San Diego. Recently, there was a free presentation on smart transportation from former SANDAG planner Bob Lighter.

John Wotzka, member of the public, discussed energy-related news and provided written comments which are summarized here: General Atomics has proposed a new nuclear reactor design with a new fuel cycle; Southern California Edison will lay off 517 employees; the Sempra Energy quarterly earnings put the company’s earnings in line to meet forecasted year-end projections; South Korea shut down two of its 23 reactors due to fact certificates on plant parts; the Nuclear Regulatory Authority of Japan adopted new safety standards; coastal waters off California are getting more acidic; San Diego Gas & Electric (SDG&E) is proposing a new power plant on Camp Pendleton to...
provide some 1.0- GW of generation just east of the San Onofre Nuclear Generating Station (SONGS); Bill Gates has invested in a large-scale traveling wave reactor by TerraPower; American Electric Power’s Southwestern Electric Power Co. is the first modern plant in the United States to commercialize ultra-super-critical boiler technology; trees and animals are moving to higher elevations as part of climate change.

Tim Hayes, McKinstry, informed that 53 cities in Los Angeles County are receiving training for a technology involving project measurement and verification for a program called EMES, which will roll out this fall. He explained all 53 cities will have one common platform for project evaluation, comparison, and collaboration. He explained the technology takes in all of the utility bill data for city buildings into one electronic feed, allows the buildings to be benchmarked for utility bill and rate plan analysis, and can integrate with Energy Star Portfolio Manager to identify top priority projects.

Don Mosier, City of Del Mar, discussed the decommissioning of SONGS. He shared new information which says that since 1996, SONGS has been using high burn-up uranium fuel rods, which are twice as radioactive as standard fuel rods. He explained the decommissioning process will be twice as long due to the longer radioactive decay period.

ITEM #4: REPORTS ON MEETINGS AND EVENTS ATTENDED ON BEHALF OF SANDAG REGIONAL ENERGY WORKING GROUP

Chair Downey voiced she did not attend any meetings that she needed to brief the committee on.

ITEM #5: REGIONAL ENERGY STRATEGY TECHNICAL UPDATE: DRAFT GOAL REPORTS

Anna Lowe, SANDAG, presented the Regional Energy Strategy (RES) Technical Update: Draft Goal Report. She described the subcommittee meetings took place in August in order to receive input from EWG members on the RES goals and summarized the attendees and key recommendations:

Subcommittee Meeting #1 - August 7, 2013

Attendees: Energy Policy Initiatives Center (EPIC), University of California–San Diego, San Diego Coastal Chamber of Commerce, SDG&E, San Diego Chamber of Commerce, City of Escondido, City of Chula Vista, Airport Authority

RES Goals: Transportation fuels, land use and transportation planning, borders and energy

Recommendations:

- Broaden the scope of transportation fuels from electric vehicles to include alternate fuels; expand the focus to petroleum production and do not isolate it to one source
- Better connect the land use and climate change discussion; include alternate fuels in scenarios when going through the regional planning process
- Broaden to military, tribal, and other inter-jurisdictional borders in the county and region
Subcommittee Meeting #2 - August 14, 2013

Attendees: EPIC, California Center for Sustainable Energy (CCSE), SDG&E, Port of San Diego

RES Goals: Renewable energy, peak demand, smart grid, natural gas power plants

Recommendations:

• Highlight other renewable energy resources; more collaboration
• Broaden the language for all new construction
• Incorporate energy storage and smart technologies
• Include smart-grid demo projects and include micro-grid

Subcommittee Meeting #3 September 4, 2013

Attendees: CCSE, Environmental Health Coalition, SDG&E, City of Chula Vista

RES Goals: Energy efficiency and conservation, distributed generation, energy and water, clean energy economy

Recommendations:

• Add implementation to energy efficiency and conservation
• Include municipal retrofits
• Add municipal/public agencies more than local distributed generation goal/policy
• Help to identify potential applications
• Align other reduction programs
• Encourage a clean energy economy through local industry/technology community

Ms. Lowe added that the subcommittees offered great insight and a broad prospective to the specific goals.

Comments, questions, and discussion from the EWG were as follows:

• Chair Downey voiced when talking about smart technologies and the demo project that the smart-meters are supposed to help people better regulate their energy use at home. She suggested SANDAG staff add a recommendation to the smart-grid goal that includes providing education and information for smart-meter owners from SGD&E, or other sources. This information should include recommendations to smart-meter owners on what steps they can take to reduce their greenhouse gas (GHG) emissions. Chair Downey feels that this component is missing from the update.
• Mike Evans, San Diego Regional Chamber of Commerce, added that the smart-meter information that is going to change consumer habits will come from the Internet. Depending on the rate structure involved, the meters can show the consumers the consequences of using electricity in peak periods versus non-peak periods. That gives the consumers feedback and incentives. He stressed that the actual drivers will come from real-time energy pricing on the Internet. Chair Downey agreed with the statements and emphasized the need for linking the information.

• Chair Downey shared that she believes, especially with the loss of SONGS, that the EWG should talk about using natural gas to provide the needed energy stabilization in the region. She noted that she recognizes the need for a natural gas plant; however, since the plants still produce GHG emissions, they should only be used as necessary to maintain the system.

• Crystal Crawford, Ygrene Energy, commented that it seems that the natural gas topic would be a good opportunity to link energy efficiency and peaker plants. She added that with SONGS offline, there is an opportunity to use efficiency measures to reduce the region’s load and perhaps avoid the need to invest in additional plants. It is important to show the policymakers the connection between efficiency, load, and the need for investment in the overall system. Chair Downey agreed and suggested that there be two points under the natural gas component. One point would be the reliability of natural gas and how it is used, and the other would be how to deal with the peaker plant situation.

• Charlie Buck, CCSE, voiced that the retirement of SONGS and once-through cooling plants sets up the context, or at least sets up the framework, for the next plan.

• Mr. Wotzka suggested that there be a strategic plan for the placement of new natural gas plants since most pipelines are outdated, and it will take at least five years to put in new natural gas lines. Chair Downey thought that was a good idea and agreed that pipeline safety should be addressed somewhere.

• Jennifer Case, San Diego Regional Clean Cities Coalition, informed the EWG that many wastewater treatment plants around the county are beginning to take in fats, oils, and greases to add into their anaerobic digesters to produce more methane. She asked if that is something that San Diego has talked about moving towards. Chair Downey replied that she envisioned this as an option, in addition to wind and solar, when options were highlighted, but it was never called out. Ms. Case added that other cities have their methane byproduct going directly into vehicles or back into the pipeline.

• Mr. Evans commented that demand response is part of the energy efficiency reducing the load that Ms. Crawford was talking about. As people think about natural gas power plants, in the context of renewables, the Working Group may want to take into context pump storage. It also may want to think about whether SANDAG should support the Lake Elsinore Advanced Pumped System as opposed to peaker plants, which burn natural gas; both provide a similar function. The region’s resource mix should be considered if the region wants to move towards sustainability. Chair Downey added that in terms of system reliability, maybe the RES should address having more storage in the region. Mr. Evans
suggested SANDAG staff consider the decision issued by the California Public Utilities Commission on energy storage.

- Mr. Bousquet announced that next month the Water Authority will be awarding a contract to study a 500-MW pump storage project. His understanding is that the California Independent System Operator (Cal ISO) will be accepting applications for projects like the Water Authority's in spring. Chair Downey commented that the project seems like it would be an asset to the RES, and asked if there was any assistance that SANDAG could provide to help the project get traction. Mr. Bousquet answered that any support they could get for the project, instead of support for a new gas pump, would be helpful. He emphasized that pump storage is good because it can be turned on. Chair Downey added that all of those comments help to keep options open for local alternatives.

- Chair Downey asked if there was any discussion on Property Assessed Clean Energy (PACE) funding to help the built environment's energy efficiency. There have been a number of discussions on PACE, recognizing that there still are barriers. Continuing to support those types of activities and helping to be a conduit for information is still on the list of needs.

Ms. Lowe went over the draft goals on page 22 of the agenda. SANDAG staff is encouraging comments on those 11 goals to help modify and change them. She explained the layout of each draft goal, including an overview, progress since the RES adoption, planning needs going forward, monitoring, resources, and recommendations.

Ms. Lowe shared RES goals such as energy efficiency and conservation, renewable energy, and water and energy. Working Group members had comments and questions regarding these goals:

- Jason Anderson, CleanTECH, asked for clarification on the difference between local governments and municipalities. Ms. Lowe answered the local governments included public agencies and, therefore, is a broader category than municipalities. Mr. Anderson added Proposition 39 funds are available and are a huge opportunity for energy efficiency at the K-12 school level. Addressing that could be impactful to the region.

- Scott Gallic, RECON, informed SDG&E has been collecting data on energy efficiency programs, and recommended that the EWG look at the progress since the RES adoption. Highlighting only Energy Upgrade California is misleading since it is only one program and the program is still new, with some difficulties. The broad energy reductions are much bigger than that. SANDAG staff could highlight, using SDG&E’s total program portfolio, data and how energy has been reduced in that time period. The goal should include all energy efficiency programs in the region.

- Chair Downey commented the average person would not understand the numbers that are currently in the RES. She added that they need to include understandable numbers and calculations in the RES so that the average person can comprehend.

- Julie Yunker, SDG&E, agreed all energy efficiency efforts need to be included, especially with the partnerships. Those partnerships include the municipal retrofits as well as the commercial and residential and small business and green business programs.
Mr. Anderson commented only residential and commercial energy use was addressed in the energy efficiency and conservation goal, but he thinks public (airport, navy, etc.) should also be included. Ms. Lowe commented they recognized that but don’t have access to data to include those energy sources. Mr. Gallic added that typically, commercial means non-industrial and non-residential.

Mr. Anderson voiced that in our region, where there is so much activity at the local government level, from the city and port perspective, it seems like energy efficiency should be addressed separately. Mr. Gallic explained you could highlight energy efficiency at the local government level, but then there is no measurement of that energy efficiency.

Mr. Buck shared he was in Los Angeles at the Long-Term Energy Strategic Plan Update for the Local Government Chapter. At that meeting it was brought up that, technically, government is leading by example with its buildings and municipal operations in the commercial sector. However, the Public Utilities Commission (PUC) thinks the government’s role and their buildings in management and monitoring need to be addressed.

Chair Downey emphasized there needs to be a total number for San Diego, and the GHG emissions should be based on everyone. There should be a starting GHG emissions number for the region, a current number, and a target number for the region. Then, to help with plans and future actions, the region can be evaluated on those categories and numbers.

Ms. Crawford commented one of the recommendations at the bottom of the goals is to evaluate the effectiveness of programs. On the financing box it references PACE financing is available. She was interested in what staff wanted to report there since there has not been any construction financed by PACE money in the county at all. She is worried the message gives the impression PACE is an effective tool or there has been some kind of progress, when there has not. Mr. Anderson shared he thought there were some projects financed in Chula Vista. Ms. Crawford replied those projects were in the process, but the program will not launch until 2014.

Ms. Lowe explained it is important to recognize these types of opportunities are available. There are very specific loan programs available they should probably highlight as well. She is confident that the idea was not to quantify the effectiveness of programs but to acknowledge the availability. Benchmarking the availability of programs gives the opportunity to have something to look at on a later date and assess the effectiveness.

Mr. Walsh asked if the 20 percent reduction was based on a projection of electricity consumption or if it was to hold consumption where it is.

Scott Anders, EPIC, replied that the idea was to hold consumption constant from 2009 levels. It is difficult since people can be successful in energy efficiency, but overall consumption could still go up slightly. What people don’t see on the chart is all of the stuff they did, because it was reduced. There are projected consumption and target consumption numbers for the region, and the chart for the energy efficiency goal shows various wedges for ways the region can get from the projected to the orange flat line. The target is to maintain flat total electric consumption.
Mr. Walsh commented that energy efficiency and conservation are two different things. He asked if the electricity consumption was grid-use electricity or renewable electricity. Chair Downey answered that they had not yet defined electricity consumption, but it really was meant to be total consumption, which includes both grid and renewable. That is how the per capita measure came about since they were trying to get everyone to use less electricity.

- Ms. Yunker informed that the data Josh Brock is acquiring from the SDG&E programs will not include consumption. It will only have kilowatt hours saved by different energy efficiency measures (retrofits, changing out the lights, etc.). In some of the retrofit programs electricity consumption was tracked. They found out with the retrofits energy consumption has still gone up since plug load has gone up.

- Mr. Anders added that if the region had 100 percent renewable, then it wouldn't matter how much was consumed. However, that is not the case, so it is still important to reduce consumption since it is expensive to supply 100 percent renewables.

- Mr. Evans inquired what the EWG really can influence and do. He emphasized that the first thing the EWG has the ability to do is to put structural changes in place to encourage conservation and renewable energy use at local governments. Mr. Walsh asked what Mr. Evans meant by structures. Mr. Evans explained that he meant codes, having houses prewired for solar photovoltaics, etc. The second thing SANDAG could do is monitoring and reporting, and the third thing is making recommendations for utilities and possibly legislators. He also mentioned that he was concerned with the goal of flat consumption and thinks that it is more monitoring.

- Mr. Anders voiced that what Mr. Evans was getting at is that a plan is being set up with targets for things that the EWG and SANDAG have little authority over.

- Dr. Mosier commented that Del Mar recently held a home energy workshop that CCSE presented at. One of his frustrations was that there can be talk about energy policy at the council level, but homeowners are not going to make the necessary changes unless they see the energy they are going to save. When people started hearing, due to various factors, they would save about 8 percent to 10 percent, they lost interest. Policy changes are not going to have a big impact if you can't directly communicate the importance.

- Chair Downey emphasized that there is a need for discussions like the earlier one about including a link in the plan for smart meters. Every effort to make a difference comes back to consumer behavior. An education component to convince the average citizen needs to be included in each goal. That is something that SANDAG and the EWG can influence.

- Chair Downey added that one goal of this plan is to provide useful numbers and add some bite to the plan.

- Mr. Evans asked what is SANDAG’s expectation for publishing the RES. Ms. Lowe replied that the idea is to bring the draft RES update back to the EWG next month and take it to the Regional Planning Committee in November. Since the RES update will be folded into the San Diego Forward: The Regional Plan, the update will be brought to the SANDAG Board of Directors meeting in conjunction with the San Diego Forward: The Regional Plan.
Chair Downey commented the goal is 45 percent renewable energy by 2030. She asked the EWG if they should stick to what the legislators want or say to increase renewables. She asked for EWG members’ thoughts on that goal.

Mr. Evans commented he was concerned with that number. If the goal reads “to meet or exceed” a certain percentage, then it gives sufficient opportunity to expand without putting out an expectation that isn’t realistic or is too costly for the region.

Pamela Bensoussan, City of Chula Vista, asked if the number could be presented more as a goal.

Chair Downey informed if SDG&E wanted to increase renewables right now there are things it can’t get due to certain PUC and ISO rules right now. She suggested that the 45 percent figure be removed and language added that states SANDAG would be very supportive of raising that number given that all issues have been addressed.

Mr. Evans added another thing that would help to exceed the 33 percent renewables by 2020 would be to include the amount of photovoltaic generation that is included in net energy metering (NEM) and not included in the current energy portfolio.

Michelle White, Unified Port District of San Diego, inquired if ways to reduce or eliminate barriers could be included knowing the many constraints and operational issues that exist. It is more than just a number and there are things that can be done that may help to facilitate renewable energy in the region. It may be related more to implementation than the number.

Ms. Yunker added it is important to get people excited. Getting those projects permitted through the County is a barrier.

Chair Downey voiced this might be a place to support the project to do water pumping and other projects that would help to integrate more renewables in the region.

Mr. Anderson suggested the EWG monitor the County of San Diego’s Renewable Energy Plan, which will make or break it from the utility scale in East County. It will be important to keep an eye on the contents of that document, especially as it relates to utilities.

Chair Downey added it will be interesting to see, but the RES should trump the County’s Renewable Energy Plan since it includes everyone and not just County lands. It will be interesting to see how the County’s plan fits into the RES if it suggests higher numbers for renewables.

Mr. Anderson explained the County’s plan isn’t based on numbers; it is more the ability and the capacity to do things. It is from a planning perspective more than a projected growth level and focuses on siting issues. The streamline permitting process will be at the County level and not at any city jurisdiction.

Ms. Lowe shared the other RES goals such as natural gas power plants, transportation fuels, land use and transportation planning, distributed generation, and clean energy economy. For time-sake, those goals were briefly listed and no dialogue followed. Ms. Lowe informed that borders also
includes tribal (Workshop), military (Military Working Group), counties, and inter-jurisdictional borders. For the energy and water goal she explained that the region could look at simplifying the permitting processes for grey water and evaluate the energy-water nexus.

Comments were received on the peak demand goal and the smart-grid goal. Those comments were as follows:

- Chair Downey added staff may want to include and incorporate the earlier discussion into the peak-demand goal. They should look at gas and evaluate loading order for addressing peak demand.

- Mr. Anderson commented that to him, the smart-grid and the micro-grid aren’t the same thing. However, in the RES, the goal is for smart-grid, but there are micro-grid recommendations. He is not sure where micro-grid fits, but he doesn’t think it is in the smart-grid category.

- Mr. Gallic added he thinks having a network of micro-grids connected to a smart-grid could work since a micro-grid is, in effect, a smart-grid.

- Mr. Buck added the EWG may want to decide what to say about micro-grids. Chair Downey agreed and suggested a decision be made as to whether micro-grid development should be encouraged in the RES.

- Mr. Anderson shared he believes there is something to quantify with already-installed micro-grids.

- Chair Downey questioned if it was possible at this late date to take micro-grids out and place it in a separate section. She explained micro-grids are still fairly new and the impacts are unknown. The recommendations would be to follow micro-grids and see what the impacts are, whether good or bad.

- Mr. Anders commented micro-grids seem too small to be pulled out and placed in a separate category. He thought a solution would be to expand the category and call it smart energy. Then you can add all systems, vehicle to grid charging, and other things to that category. It may be vague, but it is a good umbrella to encompass.

- Mr. Evans voiced a smart-grid is defined differently by everyone. A discussion in the EWG of what a smart-grid is versus a micro-grid would be appreciated.

- Ms. Crawford commented that for many of the categories she finds herself wondering how things are defined. Ms. Lowe informed that an appendix could be developed to address all of those definitions.

- Chair Downey added they want to be able to use smart-grid to decrease energy use in the region.

- Ms. Lowe informed changing smart-grid to smart energy makes it clearer and staff will make those changes in a revised draft.
• Chair Downey suggested the EWG start thinking what the components are of the smart-grids and what they can do. Smart-grids alone do not reduce energy use but some components of them do, and some components allow consumers more reliability. Linking which component does what could be helpful.

• Mr. Anderson informed that the updates to the San Diego Economic Impact Studies (by sector) look like they will occur at the end of the year.

• Chair Downey announced the remaining agenda items will move to the next meeting. Mr. Anders suggested sending his presentation out ahead of the meeting next month.

ITEM #6: CALIFORNIA ENERGY COMMISSION GRANT OPPORTUNITY: ALTERNATE FUEL READINESS PLANS

Due to a lack of time, this item was not discussed.

ITEM #7: UPDATE ON 2013 ENERGY LEGISLATION

Due to a lack of time, this item was not discussed.

ITEM #8: DRAFT SAN DIEGO REGIONAL PLUG-IN ELECTRIC VEHICLE READINESS PLAN

Due to a lack of time, this item was not discussed.

ITEM #9: UPCOMING MEETINGS

The next meeting of the EWG is scheduled from 11:30 a.m. to 1:00 p.m. on Thursday, October 24, 2013.

Chair Downey adjourned the meeting at 1:02 p.m.
<table>
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<tr>
<th>REPRESENTATION</th>
<th>JURISDICTION / ORGANIZATION</th>
<th>NAME</th>
<th>MEMBER / ALTERNATE</th>
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<tr>
<td>Energy Working Group Chair</td>
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<td>Carrie Downey</td>
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<tr>
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OTHER ATTENDEES:

Sarah Benson, Stay Cool 4 Grandkids
Don Christiansen, Christiansen Consulting
Crystal Crawford, Ygrene Energy Fund
Jennifer Domeier, County of San Diego
Scott Gallic, RECON
Tim Hayes, McKinstry
Mike Iammarino, SDG&E
Jim McCollum, Solar Turbines
Ken Parks, SDG&E
Randy S. Walsh, San Diego Energy Desk
John Wotzka, member of the public
Jeff Wyner, City of Escondido
Anna Lowe, SANDAG
Sarah McCutcheon, SANDAG
ITEM #1: WELCOME AND INTRODUCTIONS

Chair Carrie Downey called the meeting to order at 11:38 a.m.

ITEM #2: SEPTEMBER 26, 2013, MEETING SUMMARY

Quorum was not met for this meeting. Voting to approve the September 26, 2013, meeting summary was deferred to the November 21, 2013, meeting.

ITEM #3: PUBLIC COMMENTS/MEMBER COMMENTS

John Wotzka, member of the public, discussed energy-related news and provided written comments that are summarized here: California's solution for insuring power supplies to San Diego and the Los Angeles Basin were reviewed in Sacramento, California, on September 9, 2013; the Humboldt Bay Nuclear Power Plant was closed in 1983, decommissioning began in 2010, and the project was completed ten years after closure in April 2013; the Japanese government will spend $470 million on a subterranean ice wall to stop the leaks of radioactive water from the crippled plants after repeated failure by Tokyo Electric Power Company (TEPCO) to contain the water; Thor Energy of Norway is testing using thorium fuel in nuclear power plants; China's 13.86-gigawatt (GW) Xiluodu hydroelectric project will have parts coming on-line in the upcoming months; a blackout in Venezuela knocked out 70 percent of the country's power on September 3, 2013; President Obama's speech on June 25, 2013, at Georgetown University indicated that the U.S. Government will end all new funding for coal power plants overseas; Florida Power and Light is modernizing its power plant capacity with a new 1.2-GW Cape Canaveral next generation Clean Energy Center near the Kennedy Space Center; there are concerns over the pipeline capacity to meet loads for peaker plants; a low pressure along the west coast and high pressure east of San Diego is responsible for the lower than normal temperatures for 43 of 91 days from June through August.

Don Mosier, City of Del Mar, informed that he went to a Nuclear Regulatory Commission (NRC) meeting in Carlsbad, California, on the decommissioning of nuclear plants with emphasis on the San Onofre Nuclear Generating Station (SONGS). SONGS has 60 years to decommission. SONGS has been using high-burnup fuels since 1996, so the amount of radioactivity in the spent-fuel rods is roughly twice what was originally planned for. The storage canisters have a 20-year half-life, but fuel rods have a 30-year half-life. It is estimated that the decommissioning will take 60 years since funds can be collected from the decommissioning trust fund every year.
Scott Anders, University of San Diego Energy Policy Initiatives Center (EPIC), invited the Energy Working Group (EWG) to the Climate and Energy Law Symposium on Friday, November 8, 2013. He shared that there would be a great line-up of speakers and attendees. Virgil Welch, special council to Mary Nichols, Chair of the Air Resources Board, was the morning keynote, and Representative Scott Peters was the afternoon keynote.

Mo Lahsaie, City of Oceanside, commented that Governor Brown, and seven other states, are working to meet the goal of 3 million zero-emission cars on the road in the next 12 years.

ITEM #4: REPORTS ON MEETINGS AND EVENTS ATTENDED ON BEHALF OF SANDAG REGIONAL ENERGY WORKING GROUP

Chair Downey shared that the State of California began a study on the impacts and recognition of net energy metering (NEM) rates. Chair Downey did not attend any meetings or events that she needed to brief the committee on.

ITEM #5: REGIONAL ENERGY STRATEGY TECHNICAL UPDATE

Allison King Wood, SANDAG, presented the Regional Energy Strategy’s (RES) technical update and highlighted the key changes that were made based on the comments received. She provided the EWG with an RES technical update recap that included the goal summary reports, the updates to the RES document, and existing conditions and future projections.

Ms. Wood shared the next steps for the technical update. The update will be presented to the Regional Planning Committee on November 1, 2013. Then, greenhouse gas (GHG) inventory data will be incorporated into the RES in early 2014, and the RES update will return to the EWG in early 2014. The updated RES will be used to inform the energy components in San Diego Forward: The Regional Plan.

Chair Downey turned it over to the EWG for questions or comments:

Crystal Crawford, Ygrene Energy, and Kayla Race, Environmental Health Coalition, were not present at the meeting but had emailed SANDAG staff their comments on the update. Chair Downey read the comments to the EWG.

Ms. Crawford suggested that the energy efficiency section discuss the evolution of property-assessed clean energy (PACE) financing over the last several years. She also suggested that the RES include Senate Bill 555 (Hancock, 2011) as an example of the legislature’s continued efforts to make energy efficiency, water conservation, and renewable energy financing available to property owners.

Ms. Race commented that the region did not need additional power plants. Chair Downey felt that Ms. Race’s comments reflected a concern that the RES technical update was implying a switch to complete natural gas. Chair Downey explained that something has to replace the coal and nuclear resources, and the RES should include a list of all of the options, not just natural gas.
Ms. Race’s comments also suggested that the RES reflect that SDG&E is not meeting its retrofit goals for the San Diego region as the SDG&E program only met about 10 percent of its set goals. Chair Downey commented that she will research that so that it can be accurately reflected in the RES and directed SANDAG staff to work with SDG&E to include that information in the RES.

Ms. Race also suggested that energy disclosure requirements inform both building owners and tenants when applicable. Chair Downey agreed with the suggestion. Ms. Race’s comments included a suggestion to add a requirement for pre-plumbing and pre-wiring for solar water heating and solar photovoltaics for possible phase-in requirements for buildings. Brendan Reed, City of Chula Vista, suggested that staff look at the new Title 24 of the California Code of Regulations as those requirements will be mandatory.

Mike Nagy, San Diego Regional Chamber of Commerce, suggested the RES include a short background on what has happened over the last couple years with Title 24.

Ms. Race also commented that the distributed generation/utilities scale renewable energy sections should discuss the local governments evaluating the feasibility and options for community choice aggregation (CCA) as a mechanism to increase local renewable energy production. Chair Downey explained that it does not make sense to suggest that each jurisdiction look into it, but staff could monitor the County of San Diego’s evaluation of CCA or other efforts in the region.

Ms. Race added that the RES should include the energy storage targets recently approved by the California Public Utilities Commission (CPUC). Chair Downey agreed that that could be included.

Mr. Nagy asked when the absolute deadline for comments was. Ms. Wood answered that the RES technical update would be presented to the Regional Planning Committee as information on November 1, 2013. Comments should be received by Monday, November 18, 2013.

**ITEM #6: SUMMARY OF ASSEMBLY BILL 327**

Mr. Anders presented a summary on Assembly Bill 327 (Perea, 2013), which is now law. He first presented the EWG with basic information on the legislation. He explained that AB 327 began as a rate-change bill, and was sponsored by assembly member Perea and signed into law by Governor Brown. The bill’s provisions can be grouped into three categories: rates, distributed energy, and renewable portfolio standard.

**Rates**

Mr. Anders described the four provisions related to rates: residential electric rate structure, residential electric fix charge, CARE (California Affordable Rates for Energy; a low-income energy rate scheme), and time-variant pricing.

**Residential Electric Rate Structure:** After the energy crisis, Assembly Bill 1x (AB 1x) was passed in 2001. AB 1x had provisions to create a tiered rate-structure that capped the first two tiers. In the intervening time, Senate Bill 695 (Kehoe 2009) was passed that allowed for the gradual increase in energy rates for the first two tiers. Mr. Anders explained that AB 327 repeals the language related to AB 1x and SB 695. He commented that there is ongoing rule-making at the CPUC to evaluate residential rate structure, and there is supposed to be a proposed decision this month.
Ian Stewart, SDG&E, added that the CPUC is bringing all of the parties together to try and figure out a better rate structure. He explained that AB 327 does not offer solutions, but puts the burden on the CPUC to fix it.

**Fixed Charge:** Mr. Anders explained that under AB 327, the CPUC is now authorized to approve new fixed charges or expand existing charges starting January 1, 2015. A fixed charge would help utilities recover part of the fixed costs that are lost to net-energy metering (NEM) customers. An example of that cost is the cost of the infrastructure that solar customers use but don’t pay for. There is a cap of $10 for non-CARE and a cap of $5 for CARE. The CPUC is not required but authorized to apply a fixed charge. The CPUC can consider minimum bills in lieu.

**Time-Variant Pricing:** The existing law prohibits the CPUC from requiring or permitting mandatory or default time-variant prices with or without bill protection prior to January 1, 2013. AB 327 effectively deletes the restrictions on time-variant pricing. After January 1, 2018, the CPUC is allowed to require or authorize default time-of-use pricing for residential customers. Mr. Anders added that the utilities need to offer one year of bill protection and the right to opt out with no additional charges. The utilities also need to offer customers an annual summary of other rate options, including the bill impacts of each.

Susan Freed, County of San Diego, asked if time-variant pricing is not mandatory, does that mean that the customer can choose time-of-use rates. Mr. Anders answered that if the utility offers it, then there may be optional time-of-use rates.

Chair Downey added that there are time-of-use rates that the utilities offer for electric vehicle owners. Those can be expanded at the option of the customer if they choose to participate.

**Distributed Energy**

Mr. Anders then presented on the two distributed energy provisions of AB 327: net energy metering (NEM) and the distributed energy plan.

**Net Energy Metering:** Mr. Anders described the CPUC decision made in 2012 that redefined aggregate peak demand for the purposes of calculating the NEM cap. It was determined that aggregate peak demand be equal to the sum of non-coincident peak demand. Peak demand under this definition is about twice as large as the previously defined aggregate peak demand, which allows for a much larger NEM cap. AB 327 codifies the language that the CPUC approved in its decision and states that NEM is to continue through July 1, 2017, a two-year time extension from the previous date, or until the cap is met. In San Diego the cap is 607 megawatts (MW) and current NEM use is at 200 MW. Mr. Anders commented that unless net-metered solar capacity triples in the next couple years, it is more likely that San Diego will hit the deadline before the cap. In the meantime, the CPUC needs to develop a standard contract or tariff by December 31, 2015, for use after July 1, 2017. The CPUC will determine the length of the transition period for the new contract or tariff to take effect. Current NEM customers can stay on contract, and after a period of time they will transition to a new undefined standard contract scheme. Mr. Anders explained that right now, energy offsets from a tier four consumer earns a retail credit of 37 cents per kilowatt-hour, which is not sustainable.
Charlie Buck, CCSE, commented that the NEM credit was not sustainable under the tier structure that we had. Mr. Anders explained that the current average weighted rate is based on the tiers and any future compensation structure will be substantially less than the current average rate. If you take the tiers and even them out to some level, that is unsustainable. It will be something less than that. Feed in tariffs around the state are in the 12-14 cents range, which is less than half the credit currently received by tier three and four customers. Providing average rate compensation is not sustainable in the long-run. It will be something much less.

Jeff Wyner, City of Escondido, asked if compensation referred to times when customers produce more energy than they use. Mr. Anders answered that he is referring to energy production up to 100 percent of energy use. After 100 percent the consumer/producer gets the short-run avoided costs, which is about three cents. Effectively, NEM is a monthly true-up statement.

Mr. Buck also shared that there is grandfathering language for existing NEM customers in Governor Brown’s signing statement with clear language that he is expecting to see existing NEM customers treated fairly.

Mr. Anders commented that he did not see any of that blanket grandfathering clause in the law, but it is very open ended and the length of the transition period depends on many things.

**Distributed Energy Plan:** Mr. Anders shared that there is a provision in the law that requires the IOUs to provide a Distribution Resources Plan proposal. The plan would:

- Identify the optimum locations for the deployment of distribution resources
- Provide a cost/benefit analysis of distributed resources on distribution system
- Propose and identify standard tariffs or contracts
- Propose methods to coordinate existing programs, incentives, and tariffs to maximize location benefit
- Identify barriers

Funds for the distribution infrastructure are necessary for the plan to be included in the next general rate case. The CPUC is to adopt criteria, benchmarks, and accountability mechanisms to evaluate the success of any investment authorized for a Distribution Resources Plan.

**Renewable Portfolio Standard**

Mr. Anders described another provision of AB 327 that permits the CPUC to require IOUs to procure levels of eligible renewable energy resources in excess of adopted targets.

**ITEM #7: CLIMATE CHANGE SCOPING PLAN FIRST UPDATE DRAFT**

Anna Lowe, SANDAG, presented the EWG with background on the draft for the first update of the California Air Resources Board (CARB) Climate Change Scoping Plan. Assembly Bill 32 (Nunez and Pavley, 2006), the Global Warming Solution’s Act of 2006, set the 2020 statewide GHG emissions reduction goal. AB 32 also directed CARB to develop early actions to reduce GHGs and to prepare a scoping plan to identify how to reach the goal. CARB was then directed to adopt reduction measures by 2011 and update the scoping plan every five years to accommodate for changes.
Ms. Lowe explained that the updated plan will highlight the successes to date, changes in policy and technology, and areas for improvement. She added that the update will lay the foundation for a framework for continued emissions reductions beyond 2020. Ms. Lowe presented the EWG with a timeline for the draft update and the next steps. The final plan will be considered by CARB in spring 2014.

Mike Nagy, San Diego Regional Chamber of Commerce, shared that the City of San Diego (City) is moving forward with its Climate Action Plan. That plan has an aggressive goal of 49 percent renewables by 2030. The City also will have to provide an environmental document, which could take years. Mr. Nagy expressed the concern that many cities are moving forward and going at it on their own without a regional standard. In some cases, the cities are trying to exceed the goals set by the state and federal government. He hopes that there can be recommendations against one city doing one thing and one city doing another thing. That inconsistency is very confusing for companies and residents, and may lead to businesses moving from one city to another.

Mr. Wotzka added that the Intergovernmental Panel on Climate Change (IPCC) is releasing its climate assessment this month.

Mr. Nagy shared that the Californians for Affordable and Reliable Energy is a group that is advocating for an assessment that would evaluate how efficiently elements of the Scoping Plan are being implemented. He expressed concern that the State may not know if a goal has been reached or not, yet continue to move forward with policies, regulations, and mandates.

Chair Downey added that the economic downturn needs to be addressed as well so that it can be determined if it was really their programs that reduced emissions, or if it was a result of the economic downslide.

Cody Hooven, Unified Port of San Diego, inquired why CARB is using 2030 as the emissions target date instead of 2035, which is the halfway point between 2020 and 2050.

Chair Downey shared that the target for 2030 is consistent with the level of reduction needed to stabilize warming at 2 degrees Celsius. That is the target that the European Union and other countries have adopted, even though the U.S. has not. It would keep the U.S. in line so that, globally, gases could be kept at the right level. Chair Downey suggested that in addition to the 2030 emissions target year, CARB could also use 2035 since many people are working on plans for 2035.

Mr. Anders shared that from his experience in analyzing GHG emissions for the City of San Diego, existing policies such as increased fuel economy and the renewable portfolio standard, when looked at over time, do not reduce emissions enough to meet the long-term reduction goals. He explained that these efforts would need to be ramped up to much higher levels that currently planned.

Dr. Mosier suggested that the State look at what other countries have done. Germany currently has 50 percent renewables. He commented that the shift to renewables is a behavioral change issue and all behavior change is difficult, but the more that it is delayed, the more difficult it will be. He thinks that California should look at models that have worked and evaluate how they got traction for adopting.
Mr. Anders cautioned pointing at Germany since they are having issues with their renewable energy program. Their rates have increased substantially, and they are evaluating whether or not their program is sustainable. Germany is ahead of the U.S., but they are also showing growing pains with the new technologies.

**ITEM #8: DRAFT PLUG-IN ELECTRIC VEHICLE READINESS PLAN**

Ms. Lowe announced that the San Diego Regional Electric Vehicle Infrastructure (REVI) Working Group has prepared a draft San Diego Regional Plug-in Electric Vehicle Readiness Plan. At the November 14, 2013, REVI meeting the draft will be finalized. SANDAG staff plans to present the plan for acceptance to the SANDAG Board of Directors in January 2014.

**ITEM #9: UPCOMING MEETINGS**

The next meeting of the EWG is scheduled from 11:30 a.m. to 1:00 p.m. on Thursday, November 21, 2013. Please note that this is one week early due to the Thanksgiving holiday.

Chair Downey adjourned the meeting at 1:00 p.m.
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OTHER ATTENDEES:
Mike Grim, City of Carlsbad
Tim Hayes, McKinstry
Mo Lahsaie, City of Oceanside
Brendan Reed, City of Chula Vista
Mark Roll, AECOM
Kim Sheredy, San Diego County Regional Airport Authority
Joseph Smith, City of Del Mar
Ian Stewart, SDG&E
Lindsey Taggert, CCSE
John Wotzka, member of public
Jeff Wyner, City of Escondido
Anna Lowe, SANDAG
Sarah McCutcheon, SANDAG
Rob Rundle, SANDAG
Allison King Wood, SANDAG
UPDATE ON SAN DIEGO FORWARD: THE REGIONAL PLAN

Introduction

At the May Energy Working Group (EWG) meeting, staff presented the adopted vision and goals for San Diego Forward: The Regional Plan (Regional Plan). Since then, the policy objectives have been developed to support these goals. In addition, SANDAG has worked to explore alternative land use and transportation scenarios to inform the Regional Plan. This report includes an update on these efforts related to the development of the Regional Plan.

Updated Policy Objectives

The policy objectives for the Regional Plan reflect the input received from SANDAG Board of Directors, Regional Planning and Transportation Committees, community-based organizations, and the public comments. The adopted vision and goals for the Regional Plan, and the updated policy objectives, are included in the attached Regional Planning Committee report from October 4, 2013 (Attachment 1).

Alternative Land Use and Transportation Scenarios

As part of the 2050 Regional Transportation Plan and its Sustainable Communities Strategy (2050 RTP/SCS) adopted in 2011, the Board of Directors committed to preparing alternative land use and transportation scenarios to explore what it would take to further reduce greenhouse gas (GHG) emissions beyond those projected in the Plan. The attached Board of Directors report from September 13, 2013 (Attachment 2), summarizes the efforts underway to develop the alternative land use scenarios. At the December 6, 2013, Board of Directors meeting, staff will be presenting initial sketch-level performance results of the alternative land use scenarios.


Key Staff Contact: Phil Trom, (619) 699-7330, philip.trom@sandag.org
SAN DIEGO FORWARD: THE REGIONAL PLAN:
UPDATED POLICY OBJECTIVES

File Number 3102000

Introduction

In May, the Board of Directors approved the vision and goals for San Diego Forward: The Regional Plan. In June, the Regional Planning and Transportation Committees provided input on topic areas to inform the development of policy objectives to support the vision and goals. Based on the Committees’ discussion and on direction provided by the Board at its July meeting and at its September meeting based on public comments relating to social equity made by various community based organizations, the policy objectives have been updated as shown in Attachment 1.

Discussion

The adopted vision and goals for San Diego Forward: The Regional Plan are shown below:

Vision: To provide innovative mobility choices and planning to support a sustainable and healthy region, a vibrant economy, and an outstanding quality of life for all.

Goals:
Updated Policy Objectives

Based upon Board discussion in July and public comments made at the September Board meeting by various community based organizations that are participating in the development of the plan, the Board provided direction to update the policy objectives and present them to the Regional Planning Committee at its October 4, 2013, meeting. Attachment 1 shows the updated Policy Objectives for San Diego Forward: The Regional Plan.

CHARLES “MUGGS” STOLL
Land Use and Transportation Planning

Attachment: 1. San Diego Forward: The Regional Plan Updated Policy Objectives

Key Staff Contact: Phil Trom, (619) 699-7330, philip.trom@sandag.org
<table>
<thead>
<tr>
<th>Topic Area</th>
<th>Policy Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobility Choices</strong></td>
<td>Provide safe, healthy, <strong>affordable</strong> and convenient travel options with access to jobs, goods, services, <strong>health care, food, education, and recreation and housing;</strong> maximize the use of the system; reduce travel time and cost while increasing reliability; provide transportation solutions that <strong>maximize public health benefits, foster social interaction and community cohesion, promote economic prosperity and social equity</strong> and reduce GHG emissions. Explore and invest in existing and emerging technologies to increase mobility and <strong>improve</strong> traveler experience.</td>
</tr>
<tr>
<td><strong>Regional Economic Prosperity</strong></td>
<td>Promote transportation investments that support and provide <strong>equitable access</strong> to a variety of jobs <strong>for all communities</strong> with competitive wages to facilitate a rising standard of living and facilitate sustainable freight and goods movement opportunities to promote regional economic prosperity.</td>
</tr>
<tr>
<td><strong>Complete Communities</strong></td>
<td>Collaborate with others to create great places for all to live, work and play near existing and planned infrastructure investments. Support <strong>healthy, active, and walkable and bikeable</strong> communities with <strong>safe and equitable access</strong> to jobs, <strong>goods, services, health care, food, education, housing, shopping services, and recreation.</strong></td>
</tr>
<tr>
<td><strong>Habitat and Open Space Preservation</strong></td>
<td>Focus growth in urbanized areas to facilitate preservation, management, and restoration of open space, natural topography, and urban canyons; provide access and connections through these resources where feasible; promote clean water and resources for coastlines and healthy beaches; and encourage urban forestry and tree planting in the urbanized areas.</td>
</tr>
<tr>
<td><strong>Partnerships and Collaboration</strong></td>
<td>Collaborate with <strong>Native American tribal nations, governments, Mexico, military communities, and our neighboring counties and local communities in an inclusive planning process</strong> to ensure our regional transportation system connects to the megaregion and national network; and collaborate with other regional infrastructure providers and the private sector to ensure our infrastructure investments meet regional needs for a healthy environment, a diverse economy and recognize the importance of equity, and high quality of life for all.</td>
</tr>
<tr>
<td><strong>Binational Collaboration with Baja California</strong></td>
<td>Recognize the vital economic, environmental, cultural and community linkages between the San Diego region and Baja California. Support relationships with partner agencies and organizations, coordinate shared infrastructure, <strong>promote equity and invest in transportation that connects the binational region while maximizing the unique opportunities available to the growing megaregion.</strong></td>
</tr>
<tr>
<td><strong>Preservation and Safety of the Transportation System</strong></td>
<td>Maintain the transportation system to maximize travel benefits, protect the public’s investment, and enhance public safety while maintaining security.</td>
</tr>
<tr>
<td><strong>Environmental Stewardship</strong></td>
<td>In the coordination of transportation and infrastructure planning, work to meet or exceed standards for clean air, respect the environment, emphasize conservation and efficiency and live more sustainably.</td>
</tr>
<tr>
<td><strong>Energy and Climate Change Mitigation and Adaptation</strong></td>
<td>Prepare for local climate change impacts; reduce GHG emissions through energy efficiency and cleaner energy and transportation investments; Support existing energy programs that promote a vibrant economy and healthy environment; and encourage infrastructure investments that take advantage of emerging technologies.</td>
</tr>
</tbody>
</table>
SAN DIEGO FORWARD: THE REGIONAL PLAN: ALTERNATIVE LAND USE AND TRANSPORTATION SCENARIOS

Introduction

As part of the 2050 Regional Transportation Plan and its Sustainable Communities Strategy (2050 RTP/SCS) adopted in 2011, the Board of Directors committed to preparing alternative land use and transportation scenarios to explore what it would take to further reduce greenhouse gas (GHG) emissions beyond those projected in the Plan. The first phase of the project is focused on exploring potential land use alternatives; the second phase will focus on the transportation component. The results will help inform the SCS and transportation network to be included in San Diego Forward: The Regional Plan.

At a joint meeting in July, the Regional Planning and Transportation Committees provided input on potential land use alternatives that could be tested in a sketch model (summarized below). The Regional Planning and Transportation Committees also directed staff to evaluate the role of emerging technologies in reducing GHG emissions. Additional work is underway on emerging technologies and will be presented to the Board this winter.

Setting the Stage

The region’s vision of its future has been evolving for decades. This change is illustrated in the figures below, which show the planned housing and employment growth between 1995 and 2020 compared to the planned housing and employment growth between 2008 and 2050. During the past decade, many jurisdictions have updated their local land use plans and zoning ordinances, collectively moving the region’s planned growth toward more compact development near public transit, and toward greater habitat and open space preservation.
**Proposed Land Use Scenarios**

The evaluation of alternative scenarios will provide information that could help further refine the region’s vision over time. The first phase of this effort is to develop alternative land use concepts that could accommodate the region’s projected job and housing growth, and test those alternatives with the 2050 RTP/SCS transportation network, keeping the transportation network constant. The next phase would focus on exploring transportation alternatives that could be paired with the land use scenarios for a more comprehensive analysis of both land use and transportation collectively, including effects on GHG emissions.

Based upon input received from the Regional Planning and Transportation Committees, the Regional Planning Technical Working Group, the Cities/County Transportation Advisory Committee, and the public, staff has developed three potential land use concepts that illustrate different ways of distributing future growth in the region (shown below).

**Proposed 2050 Land Use Scenario Concepts**

- **Scenario A: Second Units and Infill/Redevelopment in Urban and Suburban Areas**

  Scenario A would spread future growth most equally among the incorporated jurisdictions, testing the effects of second units and infill development in our urban and suburban areas. New jobs would be distributed fairly evenly, with the highest employment intensities in existing job centers.

- **Scenario B: Transit Oriented Development**

  Scenario B would concentrate new housing and jobs within a mile or so, of existing and future transit stations included in the 2050 RTP/SCS, with the highest intensities closest to the transit station areas. New development would consist primarily of mid-rise, mixed-use buildings.

- **Scenario C: Multiple Dense Cores**

  Scenario C takes a different approach and would focus future growth into four dense cores. In this scenario, new housing and jobs would consist of mid- and high-rise, mixed-use buildings.
concentrated along the State Route 78 (SR 78)/SPRINTER/Palomar Airport Road corridor in North County; the Golden Triangle/Sorrento Valley/Mira Mesa area in Mid-County; the Downtown/Kearny Mesa/La Mesa/National City area; and the Chula Vista/International Border area in South County.

The conceptual images contain gradation variations, with the lightest brown in Scenario A, representing the lowest intensities in a larger land area, and the darkest brown in Scenario C, representing the highest intensities in a smaller land area. Each land use concept responds to demographic trends, including the aging of the population and the increasing interest of Generation Y millennials to live in more urban environments.

Regional Planning and Transportation Committee Comments

At their joint meeting in July, the Regional Planning and Transportation Committees suggested that staff incorporate the western portion of the SR 78 corridor (in addition to the Palomar Airport Road corridor) into Scenario C to take advantage of the economic opportunities in this area. This change has been reflected in Scenario C, illustrated above. In addition, staff has made minor changes to Scenario A to reflect more accurately the incorporated area boundaries.

At the joint meeting, various committee members expressed preference for some scenarios over others, but there was general recognition that it would be useful to test all three concepts so that the results from this analysis could potentially help inform future updates of local general plans and the Regional Growth Forecast. There also was a desire to recognize local jurisdictions’ adoption of general plan updates during the past decade, which have resulted in the planned land use changes between the Series 9 and Series 12 forecasts (shown above). On a separate note, Attachment 1 summarizes feedback on initial land use scenarios discussed at the Regional Plan workshop held on June 21, 2013.

Economic Perspective

The Regional Planning and Transportation Committees, the Regional Planning Technical Working Group, and workshop participants also felt that it may be useful to view the land use scenarios through an economic development lens to better address “jobs-housing fit,” or the relationship between wages and housing costs. In other words, a more coordinated spatial matching of jobs and housing could reduce vehicle miles traveled, which could potentially reduce GHG emissions.

To gain additional insights, a workshop was held in August with economic development stakeholders from throughout the region. The stakeholders discussed the importance of recognizing the unique opportunities that the binational region provides in terms of creating job growth and international trade on both sides of the border; adding to our region’s group of globally-successful companies; providing more educational and training opportunities for the jobs that we are encouraging; supporting tools and incentives to build more affordable housing, particularly around transit, as one of the main drivers of economic growth; addressing parking at the regional level; providing solutions for the “last mile” issue; recognizing the needs and desires of the millennials for more housing diversity, more walkable and bikeable neighborhoods, and better Wi-Fi connectivity in local neighborhoods and on public transit; and supporting more compact development patterns such as those in Scenarios B and C.
Concurrent with the scenario effort, SANDAG is developing the Series 13 Regional Growth Forecast through 2050 (see Agenda Item No. 2). The forecast, which will provide a foundation for the Regional Plan, currently projects nearly one million new people, nearly 500,000 new jobs, and more than 330,000 new homes. The forecast is a separate and independent effort from the scenarios. Depending upon the scenario outcomes and subsequent policy discussions by the Board and Policy Advisory Committees, the scenarios could potentially influence the SCS, the final forecast, and/or policies in the Regional Plan.

SANDAG also is developing new modeling and visioning tools. The new modeling tools include the transportation-related Activity-Based Model (ABM) and the land use-related Production, Exchange, Consumption, and Allocation System (PECAS), which will offer several enhancements by introducing economic conditions and return on investment calculations into the projections of development, redevelopment, and infill. The new visioning tools include a sketch model called “UrbanFootprint” that is being used in California by other metropolitan planning organizations on similar scenario planning efforts. The sketch model will provide visual representations of each land use scenario and initial “easy-to-understand” indicators related to scenario performance. Additional metrics could be considered during the second phase of the project through the use of PECAS and ABM. A demonstration of UrbanFootprint will be scheduled this fall.

**Emerging Technologies and Parking Strategies**

In response to direction by the Regional Planning and Transportation Committees to integrate emerging technologies into the scenario planning effort, staff has been working on a menu of existing and emerging transportation technologies in the categories of personal technology, vehicle technology, and infrastructure technology that could be integrated into the Regional Plan’s preferred transportation network (Attachments 2 and 3). Many of the concepts included in the menu are derived from the SANDAG Intelligent Transportation System Strategic Plan, and were presented at the July 19 joint meeting of the Regional Planning and Transportation Committees.

Regional Planning and Transportation Committee members generally were supportive of the inclusion of emerging technologies in the Regional Plan. In particular, there was interest in providing people with greater mobility choices and greater roadway capacity through technologies that are already available or becoming available in the very near future (e.g., connected vehicles, driverless cars, real-time traveler information via personal devices, and other applications).

Additional work is underway on emerging technologies. Staff is reaching out to individuals and organizations working in transportation technology fields to engage them in a dialogue regarding technologies that have the highest potential to impact the region’s travel patterns and urban form. An important component will be to develop an understanding of which existing, emerging, and advanced technologies could be included in the Regional Plan and to what degree they could be applied, modeled, and used in the next round of Senate Bill 375 (Steinberg, 2008) target-setting.

Staff also is responding to Board direction to analyze parking management strategies in conjunction with the scenario planning efforts, and to prepare a parking toolbox. Parking management strategies such as shared parking, parking maximums, remote parking, unbundled parking, demand-based parking, and other strategies, including pricing strategies, could be considered.
White papers on emerging technologies and parking strategies will be brought to the Board and Policy Advisory Committees this fall and winter.

**Discussion and Next Steps**

Staff is seeking input from the Board on the land use scenario concepts to be tested in the UrbanFootprint sketch model.

During October, SANDAG will hold two public workshops to review the sketch-level performance results of the alternative land use scenarios, and to seek input on alternative transportation ideas that could be tailored to the land use scenarios. The results, as well as feedback from the workshops, will then be presented to the Board and Policy Advisory Committees in November.

Further development and analysis of transportation, emerging technology, and parking strategies will occur over the next several months, and results will be brought to the Policy Advisory Committees and Board as they become available early next year. The final phase of this effort will focus on policy discussions related to the scenario outcomes for potential consideration in the Regional Plan.

GARY L. GALLEGOS  
Executive Director

Attachments:  
1. Workshop Summary: Focus on Land Use and Transportation, June 21, 2013  
2. Emerging Technologies Illustration Sheet  
3. Existing, Emerging, and Advanced Transportation Technologies

Key Staff Contact: Carolina Gregor (619) 699-1989; carolina.gregor@sandag.org
WORKSHOP SUMMARY: FOCUS ON LAND USE AND TRANSPORTATION -
JUNE 21, 2013

More than 125 participants took part in the June 21st workshop on San Diego Forward: The Regional Plan. Below is a summary of input provided by stakeholders on the six topics addressed at the workshop. More information and more detailed notes are available at: www.sandag.org/sandiegoforward.

Land Use Scenarios

- Give more priority to protecting our urban open space, recreation, and habitat areas.
- Expand the higher density core to include Chula Vista and the border area.
- Include the area south of the border for affordable housing opportunities.
- Explore the impacts of each scenario on the economy, health, environment, and quality of life.
- Explore smart growth scenarios that help with transportation choices, transportation costs, and health benefits.
- Consider second units close to the transit oriented development (TOD) areas.
- Look at the redevelopment of the region’s commercial areas and development of shopping malls near transit hubs.
- Address jobs/housing fit and try to do a better job of matching income levels with housing choices to address the range of income levels in a job place (i.e., high-paying jobs versus service workers working in high-tech buildings). The SANDAG modeling process should look at the implications of jobs/housing fit.
- Modify scenarios to acknowledge and better integrate the major employment clusters.
- Conduct a market feasibility analysis on all of the scenarios.
- Map topographic land constraints; many slopes are uninhabitable for human development. River valleys and steep slopes are not suitable for human development.
- Create a scenario with urban growth boundaries.
- Address sea level rise in the scenarios.
- Consider placing just as much emphasis on creating more walkable and bikeable communities than is placed on transit oriented communities so we do not have to invest in so much public transit.
• The TOD scenario is more reflective of where job centers are throughout the region.

• Consider housing costs and affordability in scenarios.

• Consider quality of life issues and transit access to parks, healthcare, education, family resource centers, clinics, childcare, and other community resources/social service facilities.

• Adapt to current trends such as telecommuting, co-work spaces, etc. which are becoming more popular and more sustainable.

**Emerging Technologies**

• The ability to track the bus is important when people are going somewhere.

• Self-driving vehicles can help reduce accidents.

• When considering emerging technologies, include sustainability, mobility/accessibility, and safety.

• The idea of crowd sourcing would be easy to focus on and easy to do. Provide the cloud to interested individuals and go beyond what is traditionally done.

• Expand Car2Go system geographically so that there is coverage across the whole county.

• Expand the availability of plug-in charging.

• Use technology for information such as real-time traffic information. This would help people decide what mode of transit to take and what route.

• Provide a greenhouse gas calculator application to help change people’s behavior

• Apply emerging technology to infrastructure improvements that reduce reliance on vehicles.

• Consider security and loss of privacy.

• Keep up with technology – signal detection, loops, etc.

• Technology can help with lowering costs.

• Autonomous vehicles are an easy solution to reckless drivers; they would allow more cars on the road without building more lanes, and the idea holds promise.

• The shared economy (Car2Go, etc.) is growing. Consider this in the planning process.

• Provide better traveler information.

• Consider equity as an issue since there are barriers to entry for technology, and not everyone can afford a smart phone, car, or Google glasses.
Parking and Pricing

- Integrate parking with purposeful economic returns.
- Balance demand management strategies (congestion pricing) with alternative transportation modes (public transit, active transportation, etc.).
- Make car-sharing a more attractive option for transit users.
- Develop park-once strategies where people are encouraged to ‘park once’ during a day/trip.
- Use metered parking in a manner that creates turnover of spaces in high demand (for shopping or dining purposes, for example) and allows longer term metered parking (for work/employment) further away.
- Use emerging technologies to connect the public with available parking (available parking spots/vacant lots, variably priced metered parking, etc.).
- Survey communities to better understand their specific needs, in order to create more tailored solutions rather than a one-size-fits-all.
- Consider shared parking strategies that balance the peak AM/PM use and off-peak uses.
- Allocate the parking revenues to contribute to not only to the enhancement of the transit experience, but the walkability of the street.
- On the private side, we need to give carpools priority parking. Cities should require it.
- Companies should be incentivized to reduce employee parking and to subsidize transit passes.

Active Transportation

- Focus on Safe Routes to Transit as a key goal.
- SANDAG is doing an admirable job at trying to connect with communities but needs to do a better job in reaching out.
- SANDAG efforts to reach out and invite participation from groups that traditionally are not engaged in the process are appreciated and beneficial.
- Broaden the active transportation goal to include skateboarding, scooters, etc.
- Implement separated bicycle infrastructure facilities on major corridors.
- Plan according to younger generations that want to live in communities where they can walk and bike.
- Improve systems for carrying bicycles on transit vehicles.
- Engage schools as a method of encouraging kids to walk and bike to school.
• Consider expanding way finding signage to direct users to transit stops which would encourage people to bike.

• Develop infrastructure such as bike stations to encourage more people to bike to transit.

• Separation between bicyclists and vehicles is critical since a fear of safety is a barrier.

• Incorporate the complete streets concept into SANDAG planning efforts.

• Offer incentives to encourage more biking; encourage employers to provide more shower and locker room facilities to employees.

• Encourage bicycle education.

• Emphasize utilitarian trips and not just commuter trips.

• Having an Active Transportation discussion puts health first and foremost including individual and environmental health.

**Mobility**

• Focus on intra-regional mobility which can bring money to outlying areas which can foster regional economic vitality.

• Consider a child bike-share program with helmets as a part of a larger bike-share program.

• Create reliability for developers to invest around transit stations.

• Consider moving air freight travel out of Lindbergh, separating passenger from freight and moving freight to Carlsbad or Brown Field.

• Any type of bike-share program needs to include infrastructure to support safer routes to ride.

• Expand traveler information to ease of use of the systems (e.g., “Next Bus” signs)

• Develop a “transit ambassador” program for seniors.

• Make transit competitive with driving in terms of travel time.

• Apply a complete streets model for main boulevards accommodating multiple modes of travel.

• Provide transit service that reaches hard-to-access job centers (e.g., North County).

• Design transit so that it accounts for different areas (e.g., higher density areas merit light rail projects).

• Improve walk/bike/other connections between bus and rail and to/from destinations.

• Direct growth through transportation investments.

• Encourage growth along Smart Growth transportation corridors.
• Consider public health in decision-making.

• Consider including punitive measures to effect change, rather than just incentivizing change; the 18 cities and Port District should be required to follow the Regional Plan goals and principles.

• Include transportation options for all demographics (e.g., youth without licenses trying to get to beach as well as aging population of baby boomers).

• Promote telecommuting and encourage businesses to offer telecommuting to their employees 1-2 days per week.

• Consider sidewalk access and improvements.

• Look at impacts of freight movement versus other modes – do the needs of trucks conflict with the needs of bikes, for example.

• Make transit convenient, cost-effective, and reliable so that transit is competitive with driving.

**Transportation Project Evaluation**

• Consider sustainability and return on investment. Can you sustain what you are building?

• Incorporate public health into the evaluation criteria and prioritization of transportation projects.

• Balance return on investment and use of transportation facilities.

• Provide a complete analysis of the costs and benefits of the projects, on other forms of transportation, and compare between all modes of transportation.

• Encourage smart growth, neighborhood shuttles.

• Add reduced greenhouse gas emissions to the criteria.

• Place greater value on community involvement and input in the evaluation of these projects. Make sure the community’s voice is heard.

• Focus priority on moving the most people at the least cost and increasing transit frequency.

• Consider density as a factor in determining transit project priorities.

• Think about health costs, too.

• Keep equity in mind … neighborhoods that don’t have many transportation options should be focused on first.

• Think about students, where they need to get to, and how they get to school, and how they make their connections.
Introduction

Technology has shaped our lives allowing us to be more connected, more productive, and with the potential to change the way we live, work, and play. We will look at three aspects of emerging technology and compare today with what might be in the future.

Personal Technology

Today
• Cell Phones
• Smart Phones
• Tablets

Application: Mobile 511, Traveler Information, Way Finding, Parking Guidance

Tomorrow
• Wearable Computers
• Google Glass
• Augmented or Enhanced Reality

Application: Enhanced 511, Reduction in Travel Demand – Virtual Shopping, Medical Care

Vehicle Technology

Today
• GPS, Way Finding, Routing
• Driver Assist Technology – Lane Keeping, Forward Collision Warning, Self-Parking

Tomorrow
• Autonomous Vehicle, Automated Vehicle, Connected Vehicle
• Co-operative Adaptive Cruise Control – Self Platooning of Vehicles

Application: Improved Safety, Mobility, Throughput, Reduction of Greenhouse Gases

Infrastructure Technology

Today
• Link Transportation Networks (Freeway, Transit, Arterials, Pedestrian, Bicycle, etc.) to work together
• Real Time and Pro-Active Transportation Management and Operations

Tomorrow
• Smart Roads Communicating with Connected Vehicles

Application: Safety, Mobility, Reduction of Greenhouse Gases
EMERGING TECHNOLOGIES

Personal Technology

Google Glass

Vehicle Technology

Self-Driving Vehicle

Connected Vehicles

Infrastructure Technology

Smart Intersections
## Existing, Emerging, and Advanced Transportation Technologies

Research for Possible Inclusion & Application to Regional Plan

### A. Roadway Capacity Strategies

<table>
<thead>
<tr>
<th>Transportation Technology</th>
<th>Application to GHG Reduction</th>
<th>When?</th>
<th>Model Application (Y/N)</th>
<th>Primary Responsible Party</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Vehicle Automation/ Semi-Automation</strong></td>
<td>Less Stop-N-Go/Reduced Idling</td>
<td>Near*, Mid, and Long-Term</td>
<td>Y</td>
<td>Public/Private</td>
<td>Vehicles are partially or fully automated or able to navigate without human input improving roadway performance and safety</td>
</tr>
<tr>
<td>2. <strong>Real-Time Traveler Information Via Personal Devices</strong></td>
<td>Fewer SOV Trips More Bike/Walk Trips More Transit/Carpool/ Vanpool</td>
<td>Near-Term*</td>
<td>Y</td>
<td>Public/Private</td>
<td>Provides real-time traveler and parking information, available on-the-fly, to influence mode choice, route choice and time of travel</td>
</tr>
<tr>
<td>3. <strong>Arterial, Freeway, and Transit Management System</strong></td>
<td>Fewer SOV Trips Less Stop-N-Go/Reduced Idling More Transit/Carpool/Vanpool</td>
<td>Near-Term*</td>
<td>Y</td>
<td>Public</td>
<td>Extension of the Integrated Corridor Management concept for real time and multi-agency congestion management to proactively improve mobility and corridor travel efficiency</td>
</tr>
<tr>
<td>4. <strong>Green GPS Fleet Tracking Systems</strong></td>
<td>Fewer SOV Trips Less Stop-N-Go/Reduced Idling</td>
<td>Near-Term</td>
<td>N</td>
<td>Public</td>
<td>Reduces GHG emissions and operating costs by using real-time tracking to monitor fuel consumption, route efficiency, etc.</td>
</tr>
<tr>
<td>5. <strong>Corridor Level Signal Timing</strong></td>
<td>Less Stop-N-Go/Reduced Idling</td>
<td>Near-Term*</td>
<td>Y</td>
<td>Public</td>
<td>Improvements to real-time data collection and arterial management, operations, and coordination.</td>
</tr>
<tr>
<td>6. <strong>Dynamic Lanes on Arterials to Support HOV Access</strong></td>
<td>Fewer SOV Trips Less Stop-N-Go/Reduced Idling More Bike/Walk Trips More Transit/Carpool/Vanpool</td>
<td>Near-Term*</td>
<td>Y</td>
<td>Public</td>
<td>Infrastructure and lane control that enables arterial lanes to be switched on-the-fly from general purpose, to HOV use, for certain time periods or based on demand</td>
</tr>
<tr>
<td>7. <strong>Smart Intersections</strong></td>
<td>Less Stop-N-Go/Reduced Idling More Bike/Walk Trips</td>
<td>Near-Term*</td>
<td>N</td>
<td>Public</td>
<td>Improvements to intersection infrastructure to allow real-time and pro-active signal timing operations and support Multi-Agency Arterial Management. Improved mobility and efficiency</td>
</tr>
</tbody>
</table>
# B. Vehicle and Personal Strategies

<table>
<thead>
<tr>
<th>Transportation Technology</th>
<th>Application to GHG Reduction</th>
<th>When</th>
<th>Model Application (Y/N)</th>
<th>Primary Responsible Party</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Car Sharing</td>
<td>Fewer SOV Trips, More Bike/Walk Trips, More Transit/Carpool/Vanpool, Increased Fuel Efficiency</td>
<td>Near-Term</td>
<td>Y</td>
<td>Public/Private</td>
<td>Transportation service that provides communities with a neighborhood based fleet of shared vehicles available to members for a fee.</td>
</tr>
<tr>
<td>2. Variable Speed Limits on Freeway Network</td>
<td>Less Stop-N-Go/Reduced Idling</td>
<td>Near-Term*</td>
<td>Y</td>
<td>Public</td>
<td>Speed limits vary in real-time to respond to congestion levels and roadway conditions to maintain smooth and consistent traffic flow.</td>
</tr>
<tr>
<td>3. Personal Technology</td>
<td>Fewer SOV Trips, More Bike/Walk Trips, More Transit/Carpool/Vanpool</td>
<td>Mid, Long-Term</td>
<td>Y</td>
<td>Public/Private</td>
<td>Transit ticketing via personal devices; trip-tracking and reward reclamation via personal devices.</td>
</tr>
<tr>
<td>4. Universal Transportation Account (UTA)</td>
<td>Fewer SOV Trips, More Bike/Walk Trips, More Transit/Carpool/Vanpool</td>
<td>Near-Term*</td>
<td>Y</td>
<td>Public</td>
<td>Fully integrated account for accessing all transportation services (transit, bikeshare, carshare, bikelockers, FasTrak, vanpool etc).</td>
</tr>
<tr>
<td>5. On-the-Fly Trip Planning and Ride Matching</td>
<td>Fewer SOV Trips, More Bike/Walk Trips, More Transit/Carpool/Vanpool</td>
<td>Near-Term</td>
<td>N</td>
<td>Public/Private</td>
<td>Multi-modal trip planning and ridematching in real-time via personal devices enabling travelers to find a ride, where and when they need it, using the mode and time that fits best.</td>
</tr>
</tbody>
</table>
## C. Infrastructure Strategies

<table>
<thead>
<tr>
<th>Transportation Technology</th>
<th>Application to GHG Reduction</th>
<th>When?</th>
<th>Model Application (Y/N)</th>
<th>Primary Responsible Party</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Automated Truck Corridors</td>
<td>Less Stop-N-Go/Reduced Idling</td>
<td>Near-Term</td>
<td>N</td>
<td>Private</td>
<td>Hybrid, fuel-cell, battery, corridor-level, etc. for energy efficiency</td>
</tr>
<tr>
<td>2. Alternative Fueling Stations</td>
<td>Increased Fuel Efficiency</td>
<td>Near-Term</td>
<td>N</td>
<td>Private</td>
<td>Fuels under CA’s Low Carbon Fuel Standard</td>
</tr>
<tr>
<td>3. Solar Highways &amp; Parking Lots</td>
<td>Increased Fuel Efficiency</td>
<td>Long-Term</td>
<td>N</td>
<td>Public</td>
<td>Road surfaces and parking lots that generate electricity by solar power</td>
</tr>
<tr>
<td>4. Eco-Driving</td>
<td>Less Stop-N-Go/Reduced Idling</td>
<td>Mid-Term</td>
<td>N</td>
<td>Public/Private</td>
<td>Technologies that control and maintain vehicle speed for optimal fuel efficiency and reduced carbon emission</td>
</tr>
<tr>
<td>5. Mobility Hub – Shared Vehicles</td>
<td>Fewer SOV Trips More Bike/Walk Trips More Transit/Carpool/Vanpool</td>
<td>Mid-Term</td>
<td>N</td>
<td>Public/Private</td>
<td>Interconnected “mobility hubs,” integrate regional transit services with communities. Mobility hubs provide a source of shared vehicles and services including cars, neighborhood electric vehicles, personal electric vehicles, and bicycles, along with supporting amenities and technologies.</td>
</tr>
<tr>
<td>6. Electric Vehicle En-Route Charging</td>
<td>Increased Fuel Efficiency</td>
<td>Near-Term</td>
<td>N</td>
<td>Public/Private</td>
<td>Transition to fully electric bus/vehicle fleets</td>
</tr>
<tr>
<td>7. Electric Vehicle Charging Stations</td>
<td>Increased Fuel Efficiency</td>
<td>Near-Term</td>
<td>N</td>
<td>Public/Private</td>
<td>Expansion of efficient vehicle charging stations to support an increase in electric cars and light duty trucks</td>
</tr>
<tr>
<td>8. Rail Technologies</td>
<td>Less Stop-N-Go/Reduced Idling</td>
<td>Near-Term</td>
<td>N</td>
<td>Public/Private</td>
<td>Electric catenary rail systems, dual-mode locomotives, etc.</td>
</tr>
<tr>
<td>9. Bike Sharing or Other Shared Services</td>
<td>Fewer SOV Trips More Bike/Walk Trips More Transit/Carpool/Vanpool</td>
<td>Near-Term</td>
<td>N</td>
<td>Public/Private</td>
<td>Expand shared transportation services such public bike and car sharing and peer-to-peer carsharing.</td>
</tr>
</tbody>
</table>

"**" Included in the Intelligent Transportation System for the San Diego Region (SANDAG)
Near-Term = 2013-2020; Mid-Term = 2020-2030; Long-Term = 2030-2050
SAN DIEGO FORWARD: THE REGIONAL PLAN:
CLIMATE CHANGE MITIGATION AND ADAPTATION WHITE PAPER OUTLINE

Introduction

At previous Energy Working Group (EWG) meetings, staff has presented on local and regional climate change planning efforts, and received input from EWG members on addressing climate change in San Diego Forward: The Regional Plan. Based on this input from the EWG, other SANDAG working groups, and feedback from the Regional Plan public workshops, a draft outline for the climate change mitigation and adaptation white paper (Attachment 1) has been prepared. EWG members are asked to provide feedback on the draft outline for the white paper.

Discussion

The climate change mitigation and adaptation white paper will include an overview of regional greenhouse gas (GHG) emissions, strategies to both reduce GHG emissions (mitigation) and address impacts of climate change (adaptation), and describe existing climate change planning efforts in the region. The paper will conclude with a discussion of key policy questions for consideration in the Regional Plan.

Comments from Stakeholders and the General Public

Staff has solicited input on addressing climate change in the Regional Plan from the Regional Planning Committee, SANDAG working groups, and the general public. Comments received include:

Areas for regional consistency and collaboration to support local climate change planning efforts:

- Data collection and methodology for GHG emissions calculations
- Climate Action Plan development, implementation, and monitoring
- Facilitation of a coordinated approach for GHG thresholds for CEQA analysis
- Funding to support climate change planning
- Climate adaptation planning, particularly preparing for sea level rise
- Education to encourage behavioral changes
Climate change mitigation and adaptation strategies and links to other policy areas:

- Prepare for impacts of climate change including sea level rise, wildfires, heat waves, drought, and extreme weather, particularly on vulnerable communities and water resources
- Develop infrastructure for electric and alternative fuel vehicles
- Reduce emissions from transportation by increasing investment in infrastructure to support transit, biking, and walking
- Support energy efficient buildings and development of renewable energy sources
- Use innovative solutions and new technologies
- Increase climate change awareness and relevance for the public and customize solutions for different communities
- Expand urban forestry efforts
- Include economic measures and highlight cost savings
- Highlight connections between land use and climate change: promote smart growth, infill development, density, transit-oriented development
- Consider vulnerabilities to climate change in land use and transportation planning

Next Steps

Staff continues to solicit input on the white paper from stakeholders and working groups. Efforts are also currently underway to update the San Diego regional GHG emissions inventory, which will be included in the white paper. The draft climate change mitigation and adaptation white paper outline will be presented for discussion by the Regional Planning Committee on December 6, 2013, and the Transportation Committee on December 13, 2013. The draft white paper is scheduled for completion in early 2014, and will be used to inform the climate change components of San Diego Forward: The Regional Plan.

Attachment: 1. Draft Climate Change Mitigation and Adaptation White Paper Outline

Key Staff Contact: Allison King Wood, (619) 699-1973, allison.king@sandag.org
A. Introduction

This section will describe the sources of greenhouse gas (GHG) emissions and impacts of climate change in the San Diego region. It will also provide an overview of the contents of the white paper.

- **GHG Emissions Inventory:** Presentation of the 2012 San Diego regional emissions inventory by source (transportation, electricity, natural gas, water, and waste), comparison of 2012 emissions to past emissions levels, and forecasted emissions out to the year 2050.

- **Climate Change Impacts:** Discussion of the effects of climate change in the San Diego region (e.g., sea level rise, wildfires, drought, storm surges, and extreme weather) and impacts to coastal resources, water management, public health, agriculture, and biodiversity/habitat.

B. Strategies to Address Climate Change

This section will describe the mitigation strategies, ways to reduce emissions, and adaptation strategies, ways to prepare communities for a changing climate, identified by state and local climate plans to reduce GHG emissions and prepare for the impacts of climate change.

- **Mitigation - Reducing GHG Emissions:** Strategies to reduce emissions include alternative transportation, low carbon fuels, efficient vehicles, smart growth, complete streets, transit-oriented development, energy efficient buildings, renewable energy sources, landfill diversion, water conservation/reuse, urban green infrastructure, etc.

- **Adaptation - Preparing for Climate Change Impacts:** Strategies to prepare for the impacts of climate change include assessing vulnerabilities (sea level rise, wildfires, heat, drought, extreme weather, etc.), identifying a response to the vulnerabilities (design criteria for infrastructure, habitat planning, floodplain management, public health protection, etc.), and coordinating a regional approach and consistency for preparedness and resiliency for all communities.

C. Existing Energy/Climate Change Planning in the San Diego Region

This section will highlight ways SANDAG and local governments are addressing climate change in the San Diego region, both individually and collaboratively, and the nexus between climate change and other regional and local planning activities.

- **SANDAG Planning:** 2050 Regional Transportation Plan and its Sustainable Communities Strategy, Regional Energy Strategy, Climate Action Strategy, Energy Roadmap Program, Green Operations Manual, plug-in electric vehicle planning, habitat conservation planning, shoreline protection, public health planning, cross-border coordination, and addressing climate change in capital projects.

- **Local Government Planning:** Actions taken by local jurisdictions to address climate change through GHG emissions inventories, climate action plans, Energy Roadmaps, and other planning efforts as well as steps taken to implement these plans.
• **Collaborative Regional Efforts:** San Diego Regional Climate Collaborative, San Diego Regional Energy Partnership, San Diego Gas & Electric programs, San Diego Bay Sea Level Rise Adaptation Strategy, and Climate Understanding and Resilience in the River Valley – Tijuana River National Estuarine Research Reserve.

D. **Key Policy Questions for Discussion**

• **What are the gaps in current efforts?**
  o Access to data for climate planning
  o Regional targets/thresholds for CEQA analysis
  o Consistency in climate planning across the region
  o Collaborative approaches to implementation

• **What role should SANDAG play in climate change planning?**
  o Provide regional framework for climate change planning
  o Facilitate collaboration among local governments, state and federal entities, and other stakeholders
  o Provide tools/resources to support local government efforts
  o Provide vehicle miles travelled data for transportation-related GHG analysis

APPENDICES

A. **Key Federal and State Policies/Guidance**
  a. Presidential Climate Action Plan
  b. Executive Order S-03-05 – GHG Reduction Targets
  c. Assembly Bill 32 – Global Warming Solutions Act
    i. 2008 Scoping Plan
    ii. 2013 Scoping Plan Update
    iii. Cap and Trade
  d. Senate Bill 375 – Sustainable Communities and Climate Protection Act
  e. Senate Bill 97 – CEQA Amendments for GHG Analysis
  f. Executive Order B-16-12 – Zero Emission Vehicles (ZEV)
    i. ZEV Community Readiness Guidebook
  g. Assembly Bill 758 – Comprehensive Energy Efficiency Program for Existing Buildings
  h. California Long Term Energy Efficiency Strategic Plan
  i. Executive Order S-13-08 – Climate Adaptation Strategy
    i. California Climate Adaptation Strategy (2009, 2013)
    ii. California Adaptation Planning Guide
  j. Governor’s Office of Planning and Research Environmental Goals and Planning Report: “California’s Climate Future”

B. **GHG Emissions Inventory Detail**
LOCAL GOVERNMENT PARTNERSHIPS AND REGIONAL ENERGY NETWORKS UPDATE

File Number 3200700

Introduction

In May, SANDAG staff provided an overview of the two California Public Utilities Commission (CPUC)-approved funding mechanisms for local government and public agency energy efficiency programs: Local Government Partnerships (LGPs) and Regional Energy Networks (RENs). Since that time, the CPUC released a draft Order Instituting Ruling (OIR), which opens a new proceeding to determine the next round of energy efficiency programs. The draft OIR is available online at: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K612/81612676.PDF

Staff will provide the Regional Energy Working Group (EWG) with an update on the potential funding opportunities in order to inform discussions about possible energy program options for local governments and the region for the next program cycle.

Background

LGPs are energy efficiency programs that local governments apply to their investor-owned utility (IOU) to undertake. San Diego Gas & Electric (SDG&E) is the IOU for San Diego County and currently has LGPs with the cities of Chula Vista and San Diego, Port of San Diego, SANDAG, and the County. These are part of the utilities energy efficiency program portfolio, which are approved by the CPUC.

The 2013-2014 program cycle included a new funding option, the CPUC authorized local governments to apply directly for funding of energy efficiency activities that employ a regional approach to program and project management. Two RENs were approved as pilot programs in the Bay Area (Bay REN) and Southern California (SoCal REN). RENs are meant to complement LGPs and comprise multiple governments and public agencies within a region. They are managed by local governments rather than the local utility, and the CPUC may offer this in the next program cycle.

Discussion

Local Government Partnerships

SDG&E, along with the other IOUs in California, have included LGPs as part of their energy efficiency portfolios since 2006. The IOUs have formed LGPs with local governments, regional governments, and public agencies. They also offer institutional partnerships to colleges, universities, and other institutions. The LGP proposals are submitted by SDG&E to the CPUC as part of its overall portfolio of energy efficiency programs.
**Regional Energy Networks**

RENs submit their program proposals directly to the CPUC, rather than through the local utility. The direct submittal process is intended to provide local governments more control over the development and implementation of energy efficiency programs that were central to meeting their Climate Action Plan (CAP) and sustainability goals. RENs were also established as a means to create an instrument for continuing and expanding those local government energy programs that were funded through federal stimulus grants stemming from the American Recovery and Reinvestment Act (ARRA).

**Going Forward**

The start and length of energy efficiency program cycles are determined by the CPUC. The current program cycle is scheduled to end on December 31, 2014, with the draft OIR describing a possible bridge cycle for 2015, which would essentially extend successful programs another year with the intention to have new programs begin on January 1, 2016.

**Possible Timeline**

2013  November 14, 2013: CPUC to open proceeding and provide schedule for development and submittal of energy efficiency programs by IOUs, RENs, and Community Choice Aggregators.

2014  Locally hold meetings and discussions about regional program opportunities through LGPs and RENs.

2015  Energy efficiency program portfolios (including LGP programs) and RENs due to CPUC.

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