

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
(415) 749-5000

APPROVED MINUTES

Advisory Council Regular Meeting
9:00 a.m., Wednesday, October 13, 2010

CALL TO ORDER

Opening Comment: Chairperson Bramlett called the meeting to order at 9:08 a.m.

Roll Call: Chairperson Jeffrey Bramlett, M.S., Vice Chairperson Ken Blonski, M.S.; Council Members Jennifer Bard, Benjamin Bolles, Harold Brazil, John Holtzclaw, Ph.D., Kraig Kurucz, M.S., Gary Lucks, JD, CPEA, REA I, Jane Martin, Dr.Ph.D., Debbie Mytels, Kendall Oku, Jonathan Ruel and Dorothy Vura-Weis, M.D., M.P.H.

Absent: Council Members Louise Bedsworth, Ph.D., Robert Bornstein, Ph.D., Alexandra DeSautels, Robert Huang, Ph.D., Stan Hayes, Rosanna Lerma, P.E., and Michael Sandler

Also Present: Board Chairperson Brad Wagenknecht

Public Comment Period: There were no public comments.

Consent Calendar:

1. Approval of Minutes of the September 8, 2010 Advisory Council Meeting

Council Action: Member Blonski made a motion to approve the minutes of September 8, 2010; Member Vura-Weiss seconded the motion; unanimously carried without objection.

PRESENTATION: CALIFORNIA'S 2050 GHG EMISSION REDUCTION TARGET – STRATEGIES AND TECHNOLOGIES FOR THE TRANSPORTATION SECTOR

2. California's 2050 GHG Emission Reduction Target of 80%, Below 1990 Levels – Strategies and Technologies for the Transportation Sector

A. Land Use and Public Transportation

Stuart Cohen
Executive Director
TransForm

Deputy APCO Jean Roggenkamp provided an introduction of Stuart Cohen, Co-Founder and Executive Director of TransForm.

Mr. Cohen introduced TransForm's mission and growth from primarily focusing on county and regional transportation advocacy to working on local programs which engage communities in planning. He gave a PowerPoint presentation and began with a slide of TransForm's look at children as an indicator of

measuring societal issues regarding transportation, climate, and land use. Funding for safe routes to school programs will change the mindset and get kids walking and biking more.

He said the Bay Area has been subsidizing growth with a lot of transportation investment that has focused on moving cars quickly or in moving people quickly on transit and predicting where the growth would be happening. In 2001, with support of the Air District, the Smart Growth strategy was undertaken to reverse the cycle which he believed led to SB 375.

He said TransForm conducted an analysis in a report called *Windfall for All* last year that looked at what people are spending versus what government is spending on transportation. Government spends about 7 times more than what individuals spend, and when looking at solutions, the potential benefit needs to be quantified at the personal level. He said low income families are hit hardest with paying for transportation with 19% being the overall percentage for spending out of earned income. Society has been designed around cars as families are spending so much time driving. The cycle needs to be broken for financial and climate reasons, as well as health and cognitive components.

Mr. Cohen presented very high transportation costs in low-transit areas and their analysis reveals that these same areas have high carbon emissions. He discussed transportation spending and CO2 emissions by transit connectivity which show that places with the highest transportation access spend \$8300 a year and emits 3.5 metric tons of CO2 emissions. Those with the highest transportation access emitted 42% less than the other 80% of the Bay Area combined.

Regarding solutions, he discussed SB 375 which is the major framework where change will occur. SB 375 sets greenhouse gas targets for each of the 18 major metropolitan regions and each region will try to meet targets. It is supposed to integrate transportation, land use and housing planning, as well as investment in the region to better meet targets. The most ambitious scenario MTC ran showed an 18% reduction in GHGs might be able to be achieved from reduced driving, but this figure does not take into account cleaner vehicles and fuels. The more achievable scenario chosen was 15% by 2035, and MTC's modeling shows that it does not matter much where money is being spent, but it is more about land use pricing and Transportation Demand Management (TDM) measures like commuting. He questioned, however, if more could be done with infrastructure in transit expansion.

Mr. Cohen said there are five primary levels; regional scale which must be coordinated with a city scale, and then down to each transit corridor, down to a neighborhood scale and then down to the site scale. Things must be done correctly at each scale if large changes are to be made.

He said at the regional scale, planning will be done for a Sustainable Community Strategy (SCS). Planning for the SCS is underway and there will be four elements; 1) a land use projection which will identify how the Bay Area's transportation and jobs/housing balance will grow; 2) a transportation network plan, which will identify where money will be spent on transportation infrastructure; 3) a TMD plan which will have both policies and investments; and 4) a systems management which looks at things like systems pricing and things that can make traffic move more freely.

The next element of SB 375 is once SCS's are created, those take the land use projection and it becomes the basis for a Regional Housing Needs Allocation (RHNA). Each Bay Area city will get a certain amount of housing projections for an 8 year period and they will need to identify areas within their cities to place housing, which also must have an affordability factor. If done well, it can be a strong affordable housing motivator. Putting the right things along transit lines must also be reviewed, as well as the right mixes for people to get to jobs and housing easily.

The fourth area is the neighborhood scale which is where rezoning must occur. Within 3 years of adopting a housing element, areas must be rezoned to match the housing element. If followed, this will

be one of the strongest components of SB 375 and he believes this is the most important area to get neighborhoods engaged.

At the site level, SB 375 brings in the building industry with the thought that if a site is in one of the areas destined for development it can get some amount of streamlining. It can either exempt it from GHG analysis at a regional scale and look at alternative sites that are less dense or in Greenfields or fully exempt it if significant criteria are met.

Mr. Cohen asked if there were clarifying questions of Advisory Council members.

Vice Chair Blonski questioned the case of neighborhoods being comfortable in being what they are and do not want to be rezoned to change its structure. Mr. Cohen said the default is paving over orchards; people need to come to grips with either having less job growth in the Bay Area or providing homes for people that do. He said rezoning is just for housing under SB 375, and he is hoping that a lot of single family home areas are not going to be appropriate places to grow. To the extent growth occurs, there are second dwelling units or other additions, but density will most likely occur along major growth and transit corridors throughout the region. TransForm has found there is a lot of resistance to growth or change of any kind, and this must be about how to provide what amenities people are missing in the community and ensure it is part of the plan. Where this occurs, there is a combination of much less resistance and incredible support for change, and includes growth in densities. He said all future growth can be accommodated in four and five story developments, and it is fully up to cities where growth takes place.

Dr. Holtzclaw stated density is important, as well as destination locations. He questioned how to get cities who are used to certain things to change, whether there will be specific pressure or guidance to allow markets, libraries, and other amenities in residential neighborhoods where they are now excluded by zoning laws, as well as reduced parking requirements. Also, he asked if narrowing sidewalks and streets be a part of those changes. Mr. Cohen said this is where SB 375 is not prescriptive or heavy-handed; it does not talk about parking, sidewalks, and it is essentially the realization of regional planning. It says each region gets to choose the strategies it thinks will be able to meet those targets. But, in all major regions, cities are looking at parking as a major element but the law does not dictate it.

Ms. Mytels referred to slide 14 and confirmed that PDA's are Priority Development Areas, a concept that the Joint Policy Committee put forward as a way to ask cities voluntarily where they would like to concentrate future growth. Most cities have designated at least one PDA, with the goal over time to make sure they are getting resources they need.

Mr. Cohen then discussed challenges on slide 17, stating one of the largest is transit funding and expansion. The region has an extensive transit network and this is why financial savings per person is so much larger than any other region in California at \$5,400 per person, which is \$3800 in the next best region of Los Angeles. There have been severe cuts and shortfalls of \$7 billion to operate the existing system and \$18 billion to maintain it in a state of very good repair. He said there are also unfunded shortfalls of nearly \$10 billion to expand the planned expansions, such as rail, ferry and bus. As they get into the SCS process, they will grapple with how to deal with \$25 billion of maintenance and operation shortfalls and also deal with plans for expansion and reconcile them.

Mr. Cohen presented slide 18, which is the Oakland Airport expansion, and said the price quadrupled, the projected ridership plummeted by over 70%, but it was promised to be built even though there was a faster and more popular alternative proposed. He said a model for doing this is Caltrain who had a 70% increase in ridership and a 40% increase in cost. Over the next two years, MTC is doing a Transit Sustainability Study which he thinks will be one of the key ways to address shortfalls. They found only Caltrain had service and ridership increase more than their costs because they had engineers and planners who said they could have a much more efficient use of tracks and went to a skip, stop and express service.

There is also a proposal of up to 800 miles of High Occupancy Toll (HOT) lanes. Toll lanes would convert existing high HOT lanes and allow solo drivers in for a fee if there was excess space. TransForm would like to see net revenues to go to transit expansion and expanding choices as opposed to helping to fund further out expansions of the highway system. The debate will occur over the next year and MTC hopes to have a plan to bring to the California Transportation Commission by July of 2011.

Mr. Cohen discussed other things they would like to see expanded during the SCS as:

- Bicycle and pedestrian build out
- MTC's new Transportation Climate Initiative
- Safe Routes to Schools
- Regional parking program
- Funding for TOD and affordable housing

He discussed their Great Communities Collaborative which TransForm co-sponsored engaging 25 communities and community planning around transit. He presented an example of downtown San Leandro which was zoned for 500 homes around the transit system. People were not happy with it; they had a community planning process that led to 7 times the density with amenities like child care center, bike lanes, shopping, pedestrian friendly areas, and it led to significant support by the community.

In conclusion, Mr. Cohen said he gave a presentation on SB 375 to the National Governors Association and there are many interested in replicating what California is doing. To him, California has been building in the region for a long time. For each of the scales presented on slide 27, there is no single silver bullet, but people need to continue doing things such as education and engagement, regional vision, bring them down to the local level and make it personal for people. He said TransForm is working on a project due out in a couple of months called, Envision Bay Area, which will allow people to formulate their own visions for the future and see what the outcomes are. In addition, broad support must be given to cities and areas taking new growth. There are a number of ways to do this; prioritizing infrastructure, providing more planning grants, rewarding innovation, bring to scale projects. He noted that Slide 27's last column indicates the regional fit which SB 375 is about and California is far ahead of any state in making that happen. California has a chance to make this a model, achieve targets, save money and lungs, and have more vibrant communities.

Mr. Cohen thanked the Advisory Council for the opportunity to provide his presentation, and noted TransForm's website is www.Transformca.org, which has *Windfall For All* on it as well as a good Fact Sheet on what SB 375 does.

B. Parking Management
Jeffrey Tumlin
Principal
Nelson\Nygaard Consulting Associates, Inc.

Deputy APCO Jean Roggenkamp provided an introduction of Jeffrey Tumlin, Principal with Nelson\Nygaard consulting Associates, Inc.

Mr. Tumlin spoke of his Advisory Council experience 15 years ago representing Stanford University Campus. He said his presentation will focus on why parking is important from an air quality and CO2 perspective as well as other social perspectives. He will discuss some high return municipal parking reforms, how regional agencies can make that happen, benefits, and key recommendations that the Air District can do.

Mr. Tumlin said parking is outrageously expensive and he would argue the most over-regulated commodity in our society even more so than pharmaceuticals. It is the only commodity that governments

require private entities to produce in gross abundance. We would never think of forcing developers to build housing for people or add bedrooms but we think nothing about forcing them to build more parking than the market would ever warrant. Implications of this over regulation are bad. Parking worsens housing affordability for every space that comes with a residential unit. Prices of housing increases by 30% and decreased is the number of units that can be built on a parcel by about 15%-25%.

Working families spend an inordinate amount of income on driving as a result of auto dependency and are forced to live in places where housing is affordable but transportation is not. For every car a household can remove, they can qualify for an additional \$100,000 in mortgage, which is the cost of operating a car over 30 years. Also, a parking space including drive isles takes up about 300 square feet which is about the size of an efficiency studio apartment.

They also know that vehicle ownership is determined in part by income but only to a certain degree. Once they become an even lower middle class, people tend to own the same amount of cars and it varies tremendously by location in places where it is possible to get to school and other places. However, households will own significantly fewer cars and even in suburban locations, significant numbers of households do not own cars at all, such as seniors. There are even young adults that do not want cars even though municipalities are forcing developers to assume all households must have a specific number of cars.

When they array development in a conventional manner where each use is separated from each other along a big arterial and each use has a separate parking requirement, there is more parking area than development area and it results in traffic patterns. He presented trips and parking examples and another example of downtown Mill Valley where there is mixed use with shared parking depending on their demand, which allows them to park once, walking, grocery shopping, and only half of the parking and land area are needed, one-quarter less in arterial trips, one-sixth less in arterial turning movements, and ¼ less vehicle miles traveled simply by arranging land uses and parking in a different manner. Yet, there are still cities that set parking requirements well in excess of demand which results in supply exceeding demand which means the market price of parking is zero, less development capacity, lower land value, higher costs, the assumption of automobile dependency and design, which produces the political need for high minimum parking requirements and auto dependent land forms, to equal air quality impacts and traffic congestion impacts in all counties. He said having parking as the most expensive commodity and free to users is not only economically inefficient, but it creates excess traffic, VMT, and other impacts on society.

From data compiled by Professional Donald Shoup; "Evaluating the Effects of Parking Cash-Out: eight Case Studies," 1997, parking behaves like every other commodity and if you reveal the cost of it, people make different choices regardless of context including in places where there is no transit. He said many communities all over the country have recognized the current approach makes no sense and they have looked at several changes including enforcing California a parking cash-out law that requires employers of 50 or more people who do not own their own parking but lease it separately and provide it free to employees, to offer the cash value of that parking to employees who do not drive, and there is no enforcement. The law states that if an employer gives its parking away free, but this is an enormous transportation subsidy to those who choose to drive. He said there are so few employers who do not control their own parking who are 50 or more and they have not yet found any who follow the law. One idea is to make the law apply to more employers and to provide incentives to make the law work.

The second idea is to charge market rates for parking in high demand areas. This only makes sense from a good business perspective. Cities like Redwood City, San Francisco, and Walnut Creek have realized they make more money off of a successful commercial district than off of their parking meters and the reason they charge for parking is to provide availability for customers, which results in more revenue to them and more business.

Another key reform is to unbundle the cost of parking from the cost of housing and from commercial leases. It does not make sense for either apartment complex or for an employer to offer parking cash-out or to charge for parking if they are forced to take more parking than they actually need. So, parking cash-out and parking pricing works if you can get rid of the parking you do not need. Requiring this in the course of development is an exceedingly important reform.

Another key reform is eliminating key requirements for parking and instead, substituting parking maximums, which even small cities like San Mateo has done. San Mateo has recognized in its rail corridor area that if they wanted to require developers to get a 30% reduction in trips, they cannot allow developers to have any more parking spaces than the trip cap. Otherwise, employers have no incentive for following the trip reduction requirement. Therefore, San Mateo and San Francisco have low parking maximums.

Finally, to create value out of under-utilized parking lots, you need to increase the allowable Floor Area Ratio (FAR) for businesses and property owners that reduce their parking demand. What is needed is to allow property owners to capture the value of their reduced parking, take the money and use it for community improvements or to fund their parking cash out program, similar to what Genentech does. He said Genentech in South San Francisco is far from any public transportation. They were growing and could not buy out their neighbors rapidly enough and they were stuck with needing to build more lab space on their existing surface parking lots. In order to do so, they needed to fund very expensive parking structures. What they realized is that it was cheaper for them to pay their employees not to drive than it was to build new parking structures for them. Genentech now pays employees \$4 per day who do not drive, which has offered a remarkable marketing plan. The program only made sense for Genentech because the City of South San Francisco was a partner. They reduced the minimum parking requirement so they could free up surface spaces, they increased the allowable FAR recognizing that density restrictions are a proxy for traffic restrictions. By Genentech agreeing to reduce vehicle trips, the City did not care what the allowable density was provided the height of the buildings matched the scale of the community. So, the City reduced minimum parking requirements, allowed more development, and Genentech captured the value on making employees happy rather than building very expensive parking structures. The result has been that over a period of three years commute-related GHG reduction by 8.6% which has improved over a year. They have examples of other employers who cut GHG's by over 20% in better locations.

Therefore, in identifying what can the region do in making sense out of parking as a means for improving air quality, reducing congestion and CO2 emissions, barriers need to be recognized. Key among the barriers is that people do not fully understand parking. There is a lack of coordination among different government entities between the public and private sectors. There is perception of problems by the retail community for fear we will overprice parking and therefore drive customers away the myth of which needs to be dispelled. There is significant neighborhood concern about spill over parking which is a significant problem that needs to be eliminated. And, there is an absence of a constituency about reform, and no one is demanding taking away parking subsidies.

Some strategies they helped develop for MTC which were presented to the Joint Policy Committee is:

- 1) For each of the regional agencies to lead by example by revealing the true cost of providing parking to their own employees and visitors;
- 2) To incorporate parking reform policies into all grant programs. When offering money to municipalities or to employers to run shuttle programs and other good things, those will be awarded more points if they make sense from their parking requirements and parking management principles;
- 3) Reforming the Congestion Management Agencies (CMAs) which is critical the District needs to be aware of. Currently, CMA's are responsible for most transportation funding allocation

and determining which projects get funded and which do not. Their job is to reduce congestion by accommodating more cars. The formulas by which the CMAs reward themselves say more driving is better and we need to facilitate more driving by widening roads and by throwing money at capital projects. CMAs need to be given the responsibility for reducing congestion, not by accommodating it, but by actually reducing per capita vehicle miles traveled. If this one thing is changed, all transportation funding priorities in the region would suddenly change dramatically;

- 4) Extending regulations to parking, which is where the Air District comes into play with thoughts of implementing indirect source regulation. It is hard to determine what is the property role of government in solving a problem that government over-regulation has created;
- 5) Conditioning discretionary transportation funding on parking reform, which is more an MTC issue but it can also be that for all the money that the Air District awards;
- 6) It could require that the entity has implemented a full array of parking reform measures including the gas tax or extension of the GHG cost recovery fee; and
- 7) Advocating elimination of the federal tax subsidy for employee parking. Currently, parking can be paid on a pre-tax amount. If the federal tax subsidy was eliminated for parking and driving, it generates \$52 billion a year nationwide and helps to make the economy more efficient at the same time.

There is interest in parking reform because it has an extraordinarily high impact not only in terms of reducing CO2 emissions but reducing vehicle miles traveled, congestion and a host of other things. By implementing the array of items in new development, vehicle miles traveled can be cut by up to 50%, and by in existing development, by 22% to 30%. While land use is the big solution for air quality, it has a tremendous amount of inertia. If there is any hope of meeting targets by 2015 or 2035, existing development has to be affected, and there is no better way of doing this than parking. Parking reforms earn about \$2000 per ton of CO2 removed. In their examinations of CO2 cost curves, parking reform comes out on top both in terms of the total tonnage removed, as well as the cost for earnings per ton removed. It is also socially equitable.

He noted that almost 38% of CO2 emissions come from the transport sector and of that and 72% is personal driving, which means if roadway pricing is not done, politically, there is greater political tolerance for pricing the trip end than there is for the trip itself. In fact, it is also a lot easier to do and just as effective.

Mr. Tumlin presented Slide 20; the McKinsey cost curves, *Pathways to a Low Carbon Economy, 2009* and said the items on the left side of the chart are programs that earn money per ton of CO2 removed. They are mostly things that make more efficient use of what exists. In looking at more detail at local and regional cost curves, i.e. BART, any of BART's capital projects such as rail expansions and adding parking to existing stations is good for CO2 but very expensive. The very bottom of the chart shows things that BART can do to reduce CO2 emissions and the one very effective is charging the right price for parking at its stations.

In conclusion, regarding questions of what the Air District can do, he recommends six things:

1. Start focusing on removing the barriers; reasons why parking is over-regulated. One is to address fear of parking spillover head on by using grant programs to help municipalities to do good parking planning including the usual things like residential parking permit districts, parking benefit districts, community education. This can be done in partnership with MTC which is already creating a grant program.
2. In partnership with MTC, invest in good parking technology. Parking meters that only access quarters should be made illegal, and the transactional cost of parking needs to be eliminated.

There are arrays of technology which can get out into the market in order to eliminate the transactional cost of charging for parking which is so much greater than the actual cost.

3. Use regulatory authority to start requiring the unbundling of the cost of parking from the cost of housing and from the cost of commercial leases. This allows the existing state parking cash out law to begin for commercial properties, and it allows residents with several cars to choose more parking and residents with fewer cars to choose less parking, and residents with fewer cars can afford to buy more housing. Unbundling is already occurring in urban areas of the region. Incentives are needed to get developers to do it elsewhere and to force municipalities to allow it, as it is currently illegal in most jurisdictions.
4. Start taking on the problem of excessive minimum parking requirements at municipalities. This can begin through incentives, by conditioning grant programs on having municipalities get smart on their minimum parking requirements, or direct regulation. In the United Kingdom, minimum parking requirements are illegal as a matter of national law because they are recognized to be serving only social and economic ills.
5. Start thinking about a regional parking fee. He said Vancouver had a short lived regional parking fee that charged a per parking space fee on the property tax bills of all property owners in the region, which was undone in part because of how poorly it was implemented and the fact that high parking space owning suburban places had no way of getting rid of parking. There was no incentive program built into it. Were we to propose a parking fee in this region, he suggested it be a use fee rather than a property tax, so the fee be charged to whoever was operating the parking, and more importantly, that the fee be graduated to encourage the kind of behavior we want to see. If the parking operator was charging market rate for parking on an hourly basis or offering parking cash out, the fee should drop to zero and that the impact use fee only be charged on those operators that are giving their parking away for free that are subsidizing parking and encouraging excessive vehicle miles traveled. He also suggested that net revenues generated by the fee go back to the municipality where they were generated in the form of grant programs to help deal with other ways of reducing VMT can address social equity problems of any fee implemented.

C. Plug-in Hybrid Electric Vehicles
Simon Mui, Ph.D.
Scientist, Clean Vehicles and Fuels
National Resources Defense Council

Deputy APCO Jean Roggenkamp provided an introduction of Dr. Simon Mui, Scientist with National Resources Defense Council's Air and Energy Program.

Dr. Mui said NRDC's position has been the best solution is to design and avoid the need to drive by providing mobility choices. The second best solution is to make remaining driving that is needed as efficient as possible. The third best solution is to make the fuel that is burned as clean as possible.

Regarding Plug-in Electric Vehicle (PEV) technologies, he presented the various types of PEV's being launched, how many are coming to California, and said the question is what is being done to help reduce emissions over time. He presented a graph of where California would be if there were policies on the books in California implemented successfully; a business as usual case with fixed efficiency of vehicle technologies and population growth projections; with Pavley 1 together with the Low Carbon Fuel Standard (LCFS), SB375, and California is on a progressive course. Over time, much more is needed in VMT growth in order to meet 80% reduction targets below 1990. Luckily, California has been leading the nation in terms of reduction targets as well as what it will accomplish if programs are adopted successfully.

Dr. Mui discussed how PEV's fit in. One area of attention is the automotive launches of battery electric vehicles, capital expenditures, and product plans coming out. He stated Baum and Associates reviewed vehicle plans of automakers over the next five years and they looked at the product plans, investments by auto makers and develop a forecast for parts suppliers, the list of which is growing.

He reviewed the various PEVs being launched for the U.S. market and presented cumulative sales over time. It is expected that over one million vehicles will be on the road by 2015 with consumer incentives, financing mechanisms, hybrid performance and cost improvements in batteries.

He said key drivers include:

State and federal environmental regulations and policy:

- Next round of National GHG emission standards and California Standards;
- Low Carbon Fuel Standard (LCFS);
- ZEV Program;
- CPUC PEV proceeding;
- Economy-wide Clean Energy and Climate Bill;
- State PEV Collaborative

Infrastructure:

- Roadmap and coordination
- AB118
- Clean Fuels Outlet
- LCFS credit incentives
- Other federal/state investment or incentives

Dr. Mui reviewed GHG emission reductions from PEV deployment and said significant GHG reductions can be achieved from PEVs, significant reductions in oil consumption, and a cleaner electricity sector. He presented an aggressive electric vehicle technology scenario getting about 55 mpg, and there is still some improvement for a battery electric vehicle versus today's conventional baseline vehicle. Over time, if a utility cap can be developed or a product placement, higher emission reductions can be achieved. And, if taking into account a utility cap over time together with the initial placements being on the coastal states, and consider the lifetime of the vehicle as a whole, you get to an extremely low vehicle emission. And PEV's will need to be deployed in a commercial scale in order to meet future standards. Dr. Mui then provided various analyses of targets, aggressive cases, fuel volumes needed, and future projects to reach goals.

The amount of electrified miles in the light duty sector that they see as necessary is between 50% to 70% of all miles moving forward by 2050. It means an aggressive ramp-up in terms of vehicles deploying over the next 10 years, focusing on a successful launch of plug-in vehicles to drive down the cost of energy storage, bring economies of scale, determine ways to finance upfront costs and bring back savings to customers.

In summary, Dr. Mui said needed are continued standards pushing both vehicles, VMT reduction and low carbon fuels continuously, such as future Pavley, future national program for fuel economy and vehicle tailpipe standards for heavy duty trucks nationally. A lot of market success will determine how fast and far California can push. And with pushing, they should be able to achieve 60% below 1990 levels for on-road vehicles. Many consumer advocate groups have a campaign of 60 mpg's by 2025 and information can be found on www.go60mpg.org. They are looking at achieving 3 million barrels per day reduction in oil consumption, over 500 million metric ton reductions by 2025, and a 35% reduction in fuel consumption from long haul, tractors and trailers, which will go a long ways in addressing the heavy duty sector in terms of fuel efficiency and GHG emissions.

In terms of questions presented regarding measures the District can focus on, there has been a lot of work in leading a regional effort, and the Air District has and should continue to support Electric Vehicle Charging Service Equipment (EVSE) deployment. While this proposal was not funded, the action plan was to take existing charging structures and upgrade them, determine where to locate public charging, ensure residential charging which will accomplish 90% of charging needs goes forward smoothly, streamline customer experiences, identify environmental and social benefits to get cities engaged, highlight strong local government roles to stimulate the market; support projects that provide public with high exposure to PEV's, support partnerships with companies, work with stakeholders to ensure all new residential and commercial buildings are PEV ready with necessary wiring and panels, and develop and support innovative financing mechanisms to help buy down the upfront costs of PEVS or charging infrastructure.

The Advisory Council and staff thanked the speakers for their presentations.

BREAK

Chairperson Bramlett called for a break at 10:56 a.m., and thereafter, the Advisory Council reconvened the regular meeting at 11:01 a.m.

PANEL DISCUSSION

3. Transportation Sector Strategies and Technologies for California and the Bay Area

Chairperson Bramlett called for questions of Advisory Council Members.

Ms. Bard said one year ago, we had a panel discussion on transportation sector where some items were touched upon. She said Mr. Tumlin had mentioned one of the most important things that could be done is to change what Congestion Management Agencies (CMA's) are doing in terms of parking requirements. Other recommendations could come forward with how the District could work with CMA's. She asked what topic recommendations Mr. Tumlin could see for the transportation sector in terms of strengthening key areas of what is currently being contemplated with CMA's to ensure reductions are made.

Mr. Tumlin said there is a fundamental problem with CMA's and also with the way most municipalities model and estimate traffic impacts and making decisions about mitigating them. This is also embedded in CEQA in the way it treats transportation analysis. It is complicated and rooted in a focus on intersection Level of Service (LOS) as the primary criterion by which transportation investments are judged. He said intersection LOS measures the seconds of delay that motor vehicles experience at intersections. When a CMA or municipal conducts a traffic impact, it is judged on an A to F letter scale. Many people confuse the A through F system with report cards and assume F is the worst and A is the best. However, from an economists' perspective, LOS F means the roadway investment is fully utilized. From a retailer's perspective, LOS E is much better than LOS A because many cars are traveling relatively slowly and they see inside stores.

The worst part of the problem is the tools by which we are allowed to mitigate a poor LOS score. If by CEQA or CMA analysis, roadway segments are LOS F, there are a couple of options to solve the problem; 1) widen the roadway, 2) reduce the density of development, and 3) to move development to a more isolated/rural location where there is currently not traffic congestion so the new development will not trip the LOS from E to F.

The unintended consequence of each action is for traffic congestion to be a self-fulfilling prophecy. If the roads are widened, it is easier to drive and induced demand is unleashed. Also, a wider road makes it more difficult to walk, bike or take transit. The second solution of reducing density simply

increases the vehicle trip generation rate. The third situation is worst of all--By moving development out, it ensures all trips are by cars, and they will be long car trips.

He said the solutions CMA's currently employ to reduce localized traffic congestion greatly exacerbate regional traffic congestion and increases emissions. Therefore, the CMA's and municipalities need to get smarter at measuring the role of the transportation system in achieving larger goals.

MTC has moved in this direction of looking at economy, equity and ecology, but the CMA's have not. There is a role for the District to play in concert with other agencies in helping to reform the charters of the CMA's that have to be approved by MTC and to change the rules of the game. If you tell CMA's that their job is to reduce congestion by reducing vehicle trip generation rate rather than accommodating it, this would completely change how their projects are evaluated and their priorities would be reversed.

The second problem with CMAs is that once a project is adopted into their plan, it becomes a legacy and it can no longer be evaluated based on new criteria. The other thing necessary is for regional agencies to require that the CMAs continue to update their funding priorities based upon the new evaluation criteria. So, just because something has been on the books does not mean it is a good idea.

Mr. Cohen added that MTC is trying to figure out how to take the SB 375 target and push it down to the CMA level. There is no mandate in SB375 that CMAs adopt this goal, but most counties go through a mini, regional transportation plan and most will do updates over the next one to two years. TransForm feels strongly they should adopt the 50% GHG reduction target and try to realign their planning around it and affordability clearly needs to be one.

Finally, Mr. Cohen said the 25-year regional transportation plan is supposed to look at available revenues and determine what projects can be funded. He said the process is loose, and the \$25 billion shortfall in federal funding for transit was allowed to exist, and this allows expansions to sit on the books. So getting at that fiscal constraint at the local level is important.

Mr. Lucks thanked speakers, and asked for clarification about the parking cash out subsidy and not having much enforcement. His understanding is that the law changed last year to provide increased authority for air districts. Also, regarding the comment about the myth of paid parking hurts retail he said about one year ago, Oakland increased the time with which one had to pay for parking later in the evening, which brought forth a big backlash. Mr. Tumlin said there is new authority to enforce the parking cash out subsidy but no one has acted on that authority. It is difficult to get information about what are employers who are covered by the law are doing. He noted it is a very small number of employers that may cash out parking, but they estimate that the current state law covers less than 1% of California employers. Therefore, working to expand that coverage in such a way that it makes economic sense for employers to implement is most important.

Regarding parking, Mr. Tumlin said Oakland is the perfect case study of how not to do parking, and he discussed a story about the Grand Lake Theater owner increasing the price of parking and extending the hours of enforcement, while having all meters still take quarters and have a two hour time limit. The City should recognize it is important to make the neighborhood more successful for its customers. Setting a price too low does not work for business. Setting it too high does not work because of empty spaces, but setting it just right is both good for business and maximizes revenue for the City.

Ms. Roggenkamp requested Mr. Tumlin expand on Redwood City or another example in the region that has taken parking head on from a City finance perspective and has worked well, and Mr. Tumlin discussed the downtown Redwood City case study, free City parking and non-availability of parking.

They developed an ordinance which said there shall be about 15% of parking available on every block in every lot at all times of day throughout the City and staff is delegated authority within certain constraints of determining what the right price is in order to achieve a parking availability target. The City implemented new technology for meters, reduced the cost of parking in garages, ended time limits and set a right price, all employees went to garages or free parking three blocks away that was not utilized. They took 100% of the net revenue and reinvested it in the downtown, and sales tax revenue increased which went to the General Fund.

Mr. Tumlin then provided another example in San Francisco, which uses parking as a congestion management tool. Data sensors sit under parking spaces in pilot areas that wirelessly network with each other. They let the City and others know where empty parking is and keep close track of utilization patterns. This allows the City to adjust the price of parking by time of day to ensure there are always spaces available, to eliminate driving around and to be able to adjust parking rates to achieve vehicle trip reduction goals.

In response to Mr. Brazil, Dr. Mui described Pavley I and II technologies and their differences. Mr. Brazil questioned costs for residential charging stations. Dr. Mui said options are to plug into a normal 120 outlet, but most customers will want to charge at a higher voltage to charge up faster. Level II charging is developing with service providers providing charging equipment at a cost of about \$2,000. Key is making sure infrastructure have load management functions so customers can utilize electricity for the least amount of cost, minimize impacts to the grid, and avoid peak charging.

Dr. Bedsworth said if parking starts to unbundle, she questioned the case of someone not wanting to buy parking with their home. Mr. Tumlin said for a single family home, in terms of government regulation, it does not make sense to force unbundling of parking, but in a neighborhood like Grand Lake in Oakland, where neighbors are living in multi-family housing with no parking, the market price is high. Having the municipality to allow homeowners legally to sell parking to neighbors is appropriate, as well as selling parking on, for example, Craig's List.

Dr. Bedsworth asked to integrate electric home charging and the move to sharing community cars, which seems they must occur in a similar timeframe. Dr. Mui said to the extent there is a wider adoption of technology; people will need a place to park and charge the vehicle, which does not necessarily conflict with reducing parking in public spaces. Where it gets more challenging is in multi-dwelling units where owners do not have garages, which is a larger question. Some companies are working with landlords to have a spot available for the community to charge their vehicle not associated with one particular resident. Mr. Tumlin also noted that once the actual costs of driving are shown, cost effective ways of driving while improving mobility include City Car Share and Zip cars work well and reduce VMT's and emissions. He said for every car share, between 7 and 25 private vehicles are eliminated and VMT reduced significantly, even for people who did not previously own a car because fixed costs are turned into variable costs.

Dr. Holtzclaw thanked presenters, and said San Francisco has incentives for new developments to include a certain number of Car Share or Zip car locations, and most developers realize they can decrease the amount of parking and provide incentives, and neighbors want this or sometimes demand it. He referred to Slide 14 on PHEV Fleet Penetration and total electrical consumption, and asked to include the total U.S. emission of CO2 so as to compare the percentage of improvement.

Dr. Mui said in this scenario is an additional 7% of electricity. The EV's are 3 to 4 times more efficient than a gasoline engine. Overall, because of the increase in efficiency, transportation energy demand is dramatically reduced if an entire fleet is converted, and he doubts it would be over 10% over total additional load. However, he agreed to provide the actual figures to Dr. Holtzclaw.

Dr. Holtzclaw referred to the example of San Francisco's parking and asked if it was done on a day-to-day basis or an hourly basis and questioned how rates are raised. Mr. Tumlin said making the market work requires getting adequate information to the consumer to make a reasonable choice. By the time the consumer has made the decision to drive, it is too late. Therefore, there is limited effectiveness of dramatically increasing or decreasing the price of parking on an hourly basis, but better is relying on analysis of past behavior to make adjustments over time and holding them steady. Another role regional agencies can help with is to make this technology that already exists both out there by releasing transit information it collects.

Dr. Holtzclaw referred to Mr. Tumlin's presentation on page 20 and 21, and regarding changes to reduce carbon emissions and costs per ton of profits or costs. He said he could not find changes in parking and Mr. Tumlin said this is because the transportation sector has been ignored by big studies that have looked at the entire economy and things to reduce CO2 emissions. In particular, the demand side of the equation is continually undervalued.

Vice Chair Blonski thanked speakers, and said the analogy of children is indicated in TransForm's presentation which is important which also brings in considerations of public safety. He referred to slide 27, under the column "reward Innovation/consistency" and questioned CEQA's streamlining and questioned remedies. Mr. Cohen said SB 375 is the first major attempt to overcome some of them.

Vice Chair Blonski referred to the 80% reduction scenarios for light duty vehicles and asked how to deal with population projects. Dr. Mui said population projections are based on the state's Department of Finance forecasts. He said California is at 38 million and is expected to grow to 60 million by 2050. The actual modeling is what ARB uses for vehicle stock turnover and growth. If the growth rate is lowered, it would be tremendous, but also needed is reduction in vehicle ownership and providing more mobility options other than driving.

Mr. Tumlin said in his practice, CEQA is the greatest promoter of sprawl and the biggest obstacle to infill development in California. It occurs in Appendix G of the guidelines which were recently reformed. He said TransForm lost in that reform effort and reform was made worse by the League of California Cities and the California Home Builders. The necessary reform is to drop the LOS and substitute per capita VMT as the significance criterion for transportation and to not allow communities to mitigate their traffic impacts by expanding roadways. This eliminates all obstacles of doing infill development and makes it more difficult to develop sprawl. He said the League of California Cities uses the current guidelines as an exaction tool because cities do not have transportation impact fees. In order to eliminate the League's objection, we need to help all cities impose transportation impact fees and a grant program from the District of about \$50,000 that will let cities charge all development for their transportation impacts, and not just those projects that trip an intersection from LOS E to LOS F.

Mr. Cohen added that if one is in a Priority Development Area (PDA) and there is a pre-set traffic mitigation plan for that area, you can only be charged a proportional share of the traffic mitigation fee for that development. Builders support this because they are okay with fees but not okay with the total uncertainty that comes with CEQA. If these can get set up, there is no chance for CEQA exemptions until 2013 when the SCS is adopted, and it is a perfect time for people to develop and implement mitigation plans within PDA's.

Ms. Bard referred to HOT lanes and net revenues going to the current transportation system rather than supporting sprawled development. She said this recommendation was given a year ago, which she read into the record, and she asked if Mr. Cohen had anything to add to this. Mr. Cohen said MTC had hoped to get legislation that would allow the 800 mile network which failed. They just awarded a contract to develop a network of at least 400 miles. They have decided that because they had too much public involvement, they are going in the opposite direction and want to said the council heard that parking

pricing, re-examination of current investments, fiscal constraints, freeing up projects sitting on the books that are not reach goals, and the District is in a perfect place to impose criteria for analysis, and TransForm is trying to convince them to make it more of an open process. He urged the recommendation because there is a separate public/private partnership law where it is MTC and Caltrans as partners and they believe they could do it under existing law and require less participation. Mr. Tumlin added that MTC is modeling for the HOT project including the portions of the program that add highway lanes. Their modeling did not include peak demand nor did it include any increase in housing at the suburban fringe that might result in highway expansion. Their argument was that it is an imprecise science and cannot predict the demand inducement, nor the degree the real estate market will respond with increased under-dependent housing at the suburban fringe. The answer is coming up with a range of estimates. Therefore, the District could push MTC to study what the secondary impacts of what highway expansion might be. He said they also find that there are significant air quality CO2 benefits from tolling existing lanes, which has produced a dramatic shift in travel behavior at a small price differential.

Mr. Brazil questioned speakers' thoughts on current transit funding and suggestions on further shifting funding. Mr. Cohen said they are involved in a few efforts to increase it. From the State level, one would be to index or increase the State gas tax and at the same time, change Article 19 which has strict requirements for transit operations. Second would be to allow regions the authority to raise fees, assuming Proposition 26 does not pass, on fuels and vehicles. Finally, he thinks innovation is needed. The transit sustainability project MTC is doing is looking into the range of mechanisms. He has suggested things like massive expansion of the Eco-Pass Program where both businesses and residents could give out passes bought at great discount because they are at bulk.

Mr. Tumlin added that changing all funding formulas to reward what we are trying to achieve. Currently, funding formulas tend to emphasize transit capital expansion at the edge, which tends to be inefficient projects which are bad for the economy and equity, and to devalue improvements to the core system. He would argue that capital money should be focused overwhelmingly on the thousands of smaller projects that improve existing service and reliability. It should focus on high frequency lines throughout the region. Important to understand is that transit delay is a significant problem for all operators. If they can reduce transit delay by 20%, not only can buses be turned around more quickly and increase capacity by 20%, transit is also then made significantly more attractive to those who have a choice of both.

Mr. Kurucz said when they do the sprawl and develop further out as a solution, looking over 25 years it seems that the I-580 and I-680 corridors were developed out to address whatever congestion problems were at the time, and now, you are trying to figure out how to solve the congestion problem in the new area. Mr. Tumlin said in CEQA, they are required to analyze cumulative demands and they are supposed to look at the larger impacts of what they do. The end result is that not only do we focus on the adjacent intersections, but solutions to solving traffic congestion problems exacerbate. This expands the extent of the problem multiplicatively.

Mr. Kurucz referred to parking and said he used to live in the Grand Lake in Oakland; they have now introduced validated parking where it is seen more in downtown San Francisco. He wondered how this fits into the strategy because it means the business is getting the benefit of the trip is helping pay for it. Mr. Tumlin said validated parking is the opposite of parking cash out—you are subsidizing customers who drive and not providing the same subsidies for customers who do not drive. It is not very efficient from a systems perspective, but he would argue that those are individual businesses making their own decision as to whether this makes sense rather than government providing validated parking for everyone. By getting government out of the business if merchants were made to make the decision, they will recognize that for their target market, it is worth it for them. He thinks that valet programs provide a higher level of customer service for those customers who want it and are willing to pay for it.

Council Members thanked all presenters.

OTHER BUSINESS

4. Council Member Comments/Other Business

Chairperson Bramlett gave the following report:

- Advisory Council Member Michael Sandler will be giving a presentation to the Board of Directors at their November 3, 2010 Board Meeting;
- Advisory Council Member Form 700 Statement of Economic Interests are due November 2, 2010;
- Advisory Council Member recruitment is underway, as there are expiring terms of Advisory Council Members

5. Time and Place of Next Meeting - 9:00 a.m. – 12:00 p.m., Wednesday, November 10, 2010, 939 Ellis Street, San Francisco, CA 94109.

6. Adjournment: The meeting adjourned at 12:14 p.m.

/s/ Lisa Harper

Lisa Harper
Clerk of the Boards