



**TECHNICAL ADVISORY COMMITTEE TO THE MSRC  
THURSDAY, JANUARY 9, 2020 MEETING MINUTES  
21865 Copley Drive, Diamond Bar, CA 91765 - Room CC8**

**MSRC-TAC MEMBERS PRESENT:**

MSRC-TAC Chair Dan York, Cities of Riverside County  
MSRC-TAC Vice-Chair Anthony (AJ) Marquez, Orange County Board of Supervisors  
Jenny Chan, Riverside County Transportation Commission  
Laura Iannaccone (Alt.), Los Angeles County Board of Supervisors  
Steve Hillman, City of Los Angeles  
Susan Kim (Alt.), Cities of Orange County  
Minh Le, Los Angeles County Board of Supervisors  
Steven Lee, Los Angeles County Metropolitan Transportation Authority  
David Lor (Alt.), Los Angeles County Metropolitan Transportation Authority  
Rongsheng Luo, Southern California Association of Governments  
Nicholas Nairn-Birch, California Air Resources Board  
Sean O'Connor, Cities of San Bernardino County  
Tim Olson, Air Pollution Control Expert (California Energy Commission)  
Andy Silva, San Bernardino County Board of Supervisors  
Cliff Thorne (Alt.), Orange County Transportation Authority  
Vicki White, South Coast Air Quality Management District

**OTHERS PRESENT:**

John Burton, Los Angeles County Public Works  
Ron Matsuoka, Los Angeles County Public Works  
Eva Moun, LA Metro  
James DiFilippo, UCLA  
JR DeShazo, UCLA  
Miguel Ramirez-Congo, City of Eastvale

**SCAQMD STAFF & CONTRACTORS**

Leah Alfaro, Contracts Assistant  
Maria Allen, Secretary  
Penny Shaw Cedillo, MSRC Administrative Liaison  
Ray Gorski, Technical Advisor  
John Kampa, Financial Analyst  
Daphne Hsu, Senior Deputy District Counsel  
Matt MacKenzie, Contracts Assistant  
Cynthia Ravenstein, MSRC Contracts Administrator

CALL TO ORDER

- Call to Order  
MSRC-TAC Chair Dan York called the meeting to order at 1:30 p.m.

**STATUS REPORT**

- Clean Transportation Policy Update

The Clean Transportation Policy Update provides information on key legislative and regulatory initiatives of potential interest to the MSRC. The report can be viewed at [www.cleantransportationfunding.org](http://www.cleantransportationfunding.org).

**CONSENT CALENDAR (Items 1 through 4)**

**Receive and Approve**

**Agenda Item #1 – Minutes for the March 7, May 2, and June 6, 2019 MSRC-TAC Meetings**

The minutes of the March 7 and May 2, 2019 MSRC-TAC meetings were included in the agenda package. The minutes for the June 6, 2019 MSRC-TAC meeting were not available.

ON MOTION BY MSRC-TAC MEMBER STEVEN LEE AND SECONDED BY MSRC-TAC VICE CHAIR AJ MARQUEZ, UNDER APPROVAL OF CONSENT CALENDAR ITEMS #1 – #4, THE MSRC-TAC UNANIMOUSLY RECEIVED AND APPROVED THE MINUTES OF THE MARCH 7 AND MAY 2, 2019 MSRC-TAC MEETINGS.

ACTION: MSRC staff will place the approved meeting minutes on the MSRC’s website.

**Agenda Item #2 – Summary of Final Report by MSRC Contractors**

Three final reports were submitted for MSRC-TAC review and approval during January:

- Rialto Unified School District, Contract #MS14076 (\$225,000– Construct New Public Access CNG Station
- Orange County Transportation Authority, Contract #MS16029 (\$836,413– TCM Partnership Program - OC Bikeways)
- Orange County Transportation Authority, Contract #MS18005 (\$834,222– Clean Fuel Bus Service to OC Fair)

ON MOTION BY MSRC-TAC MEMBER STEVEN LEE AND SECONDED BY MSRC-TAC VICE-CHAIR AJ MARQUEZ, UNDER APPROVAL OF CONSENT CALENDAR ITEMS #1 – #4, THE MSRC-TAC UNANIMOUSLY

VOTED TO RECEIVE AND APPROVE THE FINAL REPORT SUMMARIES LISTED ABOVE.

ACTION: The final report summaries will be included on the MSRC's next agenda for final action.

**Information Only – Receive and File**

**Agenda Item #3 – MSRC Contracts Administrator's Report**

The Contracts Administrator's Report for October 31, 2019 through December 26, 2019 was included in the agenda package.

ON MOTION BY MSRC-TAC MEMBER STEVEN LEE AND SECONDED BY MSRC-TAC VICE CHAIR AJ MARQUEZ, UNDER APPROVAL OF CONSENT CALENDAR ITEMS #1 – #4, THE MSRC-TAC UNANIMOUSLY VOTED TO RECEIVE AND FILE THE CONTRACTS ADMINISTRATOR'S REPORT FOR OCTOBER 31, 2019 THROUGH DECEMBER 26, 2019.

ACTION: The Contracts Administrator's Report will be included on the MSRC's next agenda for final action.

**Agenda Item #4 – Financial Report on AB 2766 Discretionary Fund**

The Financial Report on the AB 2766 Discretionary Fund for December 2019 was distributed at the meeting.

ON MOTION BY MSRC-TAC MEMBER STEVEN LEE AND SECONDED BY MSRC-TAC VICE CHAIR AJ MARQUEZ, UNDER APPROVAL OF CONSENT CALENDAR ITEMS #1 – #4, THE MSRC-TAC UNANIMOUSLY VOTED TO RECEIVE AND FILE THE FINANCIAL REPORT FOR THE MONTH OF DECEMBER 2019.

ACTION: No further action is required.

**ACTION CALENDAR (Items 5 through 14)**

**Agenda Item #5 – Consider Two-Month Term Extension for the County of Los Angeles, Contract #ML14030 (\$425,000 – Bicycle Racks, Outreach and Education)**

Cynthia Ravenstein, MSRC Contracts Administrator, reported this request comes from the County of Los Angeles. This is a request for a two-month term extension on a contract under the FYs 2012-14 Local Government Match Program for the installation of bicycle racks, lighting and outreach and education. In August, the County requested for an extension until June 30, 2020, due to the need to pour concrete pads at the beach sites for the bike racks. The cost of this work exceeded the limits what they could do with their in-house staff and they needed to contract it

out. Because the request was received too late to be placed on the September MSRC-TAC and MSRC agendas, and the contract would terminate on October 8, 2019, a three-month term extension was processed administratively in order to allow time for the MSRC to consider the remainder of the request. Due to an oversight, the item was not placed on the October or November MSRC agendas, so an additional three-month term extension was processed administratively to allow time for the MSRC to consider the remainder of the request. In the interim, the County submitted a letter indicating that they need an extension through June 8, 2020 for supplemental lighting at 47 of the bike racks. Given the previous administrative extensions, an additional two-month extension would fulfill the County's request.

ON MOTION BY MSRC-TAC MEMBER STEVEN LEE AND SECONDED BY MSRC-TAC MEMBER VICKI WHITE, THE MSRC-TAC UNANIMOUSLY VOTED TO RECOMMEND TO APPROVE FOR THE COUNTY OF LOS ANGELES, CONTRACT #ML14030, A TWO-MONTH TERM EXTENSION.

**ACTION:** MSRC staff will include this contract modification on the next MSRC agenda for approval.

**Agenda Item #6 – Consider Modified Statement of Work for the City of Bellflower, Contract #ML12091 (\$100,000 – Install EV Charging Infrastructure)**

Cynthia Ravenstein, MSRC Contracts Administrator, reported this request comes from City of Bellflower. The City has gone through a number of changes in their project. This was from the FY 2011-12 Local Government Match Program, which was actually the first in which the MSRC was funding electric vehicles stations since 20 years ago. In the most recent modification of the contract, the City was going to install two Level III charging stations and the City indicated that the power supply at their new parking structure would not accommodate the specified Level III charging stations. The City requested to substitute the installation of five Level II charging stations for the two Level III stations, with no change to the contract value. Two of these stations would be installed at the parking structure, and three would be installed at a separate City parking lot. The City further requested that the contract term be extended to June 30, 2020. The MSRC considered and approved the City's request. The City has now determined that construction costs would be drastically reduced if all charging stations were to be installed at the new parking structure. This would avoid the need to cut into an existing parking lot. They request instead to increase the total number of Level II stations to be installed from five to eleven, with no change to the total project cost or to the MSRC's contribution.

ON MOTION BY MSRC-TAC MEMBER MINH LE AND SECONDED BY MSRC-TAC MEMBER STEVE HILLMAN, THE MSRC-TAC UNANIMOUSLY VOTED TO RECOMMEND TO APPROVE FOR THE CITY OF BELLFLOWER, CONTRACT #ML12091, A MODIFIED STATEMENT OF WORK.

**ACTION:** MSRC staff will include this contract modification on the next MSRC agenda for approval.

**Agenda Item #7 – Consider Modified Statement of Work and Nine-Month Term Extension for the City of Covina, Contract #ML18156 (\$63,800 – Purchase Four Light-Duty Zero Emission Vehicles and Install EV Charging Infrastructure)**

Cynthia Ravenstein, MSRC Contracts Administrator, reported this request comes from City of Covina. As part of the FYs 2016-18 Local Government Partnership Program, the City was awarded \$63,800 to purchase four light-duty ZEVs and install two publicly accessible Level II charging stations. To date, the City has completed installation of a dual-port charging station and has purchased two of the vehicles. The City requests to substitute the installation of the dual-port station for the installation of two single-port charging stations. The station installed will serve the same number of vehicles. The City also indicates that they encountered unforeseen delays in receiving the first two Nissan Leaf vehicles that they ordered. The City requests a nine-month term extension to allow sufficient time to receive the final two vehicles and to fulfill the three-year operational requirements.

ON MOTION BY MSRC-TAC VICE CHAIR AJ MARQUEZ AND SECONDED BY MSRC-TAC MEMBER STEVEN LEE, THE MSRC-TAC UNANIMOUSLY VOTED TO RECOMMEND TO APPROVE FOR CITY OF COVINA, CONTRACT #ML18156, A MODIFIED WORK STATEMENT AND NINE-MONTH TERM EXTENSION.

**ACTION:** MSRC staff will include this contract modification on the next MSRC agenda for approval.

**Agenda Item #8 – Consider Eighteen-Month Term Extension for the County of Los Angeles, Contract #ML14027 (\$500,000 – Install New CNG Stations in Canyon Country and La Puente)**

Cynthia Ravenstein, MSRC Contracts Administrator, reported this request comes from the County of Los Angeles, Department of Public Works. The County was originally awarded \$500,000 under the MSRC's FYs 2012-14 Local Government Match Program. This contract is to install CNG stations in Canyon Country and La Puente. The County requests an eighteen-month term extension. The original letter submitted is not detailed about the nature of the delays. I was able to find out a little bit more since we went to print. They indicated that their vendor where the equipment is built is in South America, so that is taking a little bit longer than expected. It will actually be completed in March. The County requests an 18-month contract term extension.

ON MOTION BY MSRC-TAC MEMBER SEAN O'CONNOR AND SECONDED BY MSRC-TAC MEMBER STEVE HILLMAN, THE MSRC-TAC UNANIMOUSLY VOTED TO RECOMMEND TO APPROVE FOR THE COUNTY OF LOS ANGELES, CONTRACT #ML14027, AN EIGHTEEN-MONTH TERM EXTENSION.

**ACTION:** MSRC staff will include this contract modification on the next MSRC agenda for approval.

**Agenda Item #9 – Consider Three-Year Term Extension for the Los Angeles County Metropolitan Transportation Authority (Metro), Contract #MS14057 (\$1,250,000 – Implement Various Signal Synchronization Projects)**

Cynthia Ravenstein, MSRC Contracts Administrator, reported this request comes from the Los Angeles County Metropolitan Transportation Authority (Metro), as part of the FYs 2012-14 Signal Synchronization Partnership Program to implement various signal synchronization projects. There are a couple of different things going on. There were some delays associated with contractor issues with the consultant on the San Gabriel Valley Corridor Project. But also for all the projects, originally, a lot of the co-funding was going to be coming from the County. As it turned out, there was not going to be sufficient co-funding to cover all of the need. They were going to have to have the individual Cities also contribute to share the project costs. The Cities are able to do that but that inserted an additional degree of complexity because there have to be additional agreements that have to go forward and coordination. That delays the design process. They actually expect that the design processes could be complete in an additional two years, but then they also need to complete the construction before the MSRC could reimburse them any funds. LA Metro is requesting a three-year term extension for the project.

ON MOTION BY MSRC-TAC ALTERNATE CLIFF THORNE AND  
SECONDED BY MSRC-TAC MEMBER RONGSHENG LUO, THE MSRC-  
TAC UNANIMOUSLY VOTED TO RECOMMEND TO APPROVE FOR THE  
COUNTY OF LOS ANGELES, CONTRACT #MS14057, A THREE-YEAR-  
TERM EXTENSION.

**ACTION:** MSRC staff will include this contract modification on the next MSRC agenda for approval.

**Agenda Item #10 – Consider Modified Statement of Work for the City of Eastvale, Contract #ML16040 (\$110,000 – Install EV Charging Infrastructure)**

Cynthia Ravenstein, MSRC Contracts Administrator, reported this request comes from the City of Eastvale. The City was originally awarded \$110,000 under the FYs 2014-16 Local Government Match Program. Originally, they were going to install six Level II electric vehicle charging stations. Then previously, they saw lower than anticipated costs and some changes in their locations and they requested to increase the number of stations to twenty Level II charging stations that would all be public access. There was a two-year term extension associated with that as well. Subsequent to that, the City has been looking at where there's potential to get charging stations installed soonest, as well as what the demand seems to be from their residents. They are saying that their residents really want to see Level III charging more than Level II. The City is now asking to substitute the installation of 12 Level III charging stations for the 20 Level II charging stations. There is a typographical error in their letter. They give a budget for 12 Level II charging stations, but it is meant to say 12 level III charging stations. I had a lot of discussions with the City before we actually received the request. What they were talking about previously was that they wanted to install the Tesla Supercharger stations. What I understood is that only Teslas can use those stations. Whereas other Level III charging stations, depending on the type of outlet, some kinds of vehicles can use them, and some cannot. Most of the major vendors of Level III stations will offer a multi-standard unit that could offer the ability to charge via either

of the two major standards, the CCS or the CHAdeMO. So there are stations available that would offer these and that Tesla owners can buy an adapter to use. But when I asked yesterday the City was not sure what kind of station they wanted to get. The MSRC solicitations did not specify you have to get any particular type. We have in the contract Level II that have to meet a certain standard. Obviously, there is not a consistent standard for the Level III stations. We had not put those into contracts.

Ray Gorski, MSRC Technical Advisor, commented staff would appreciate before we move this to the MSRC that you vet this issue. Secondly, if there would be a recommendation from the TAC associated with this item, to do one or the other. One is to have a condition that the Level III chargers do in fact support multiple connection types given that there are at least three, most of these DC fast chargers will support two--CCS and CHAdeMO--which Tesla owners again can buy an adapter and utilize those stations. Some of the initial conversations we have had with the City suggested that Tesla was a preferred alternative because it might be a partnership opportunity with Tesla to install the superchargers. And also looking at the mix of vehicles which are currently available that are compatible with Level III charging, I think it's fair to say that Tesla today overwhelms the market. It really comes down whether or not you even want to entertain having the 12 Level III stations substituted for 20 Level II stations, and then if there is going to be a desire to have a condition placed upon that scope change that would require them to have a more universal fast charger system.

MSRC-TAC Member Minh Le commented, perhaps the way the TAC wants to look at that question is to model some ideas from the City of Pasadena, how they approach that. Tesla would install a bunch of charging stations in one the City's parking lots, and Tesla being a proprietary standard, Pasadena also got Tesla to build the infrastructure to enable the more universal CHAdeMO, as well as CCS into that mix. Tesla got something out of it, but also there were funds allocated for the non-proprietary systems. You might want to consider that as a model to encourage some development because the private sector is putting some money into it, but also make sure that the public funds have the widest possible reach.

Ms. Ravenstein commented, I did ask the question if there was a possibility of putting in a mix and the initial response that I got was no, that they had to be all the same type.

MSRC-TAC Chair Dan York commented, they must have a pulse on what their community needs. If their Council's ready to execute an agreement, I think we need to be sensitive to that. Eastvale has its own unique needs. This is \$110,000, and it sounds like what they are going to be investing in installing is much greater than \$110,000. So, at the end of the day, if we have installed more infrastructure and it's being utilized, then we've met our goal, that's another aspect to at least consider. I am torn on this because being a city guy, I understand that a city must know what their community needs. But on the other hand, these are regional dollars. Part of the discussion first for us to decide is on the use of MSRC dollars, should they be for stations which are all encompassing and open and available? Or if we are okay with the fact that they are meeting the intent of simply expanding EV stations.

MSRC-TAC Alternate Cliff Thorne commented, on the first part, I kind of feel that it should be open and more universal. I think that it's not just about meeting the residents' desires, but we are also encouraging people to buy electric cars. So, if you are just going with Tesla stations, you are going to encourage people to buy Teslas. If you are more widespread, you are encouraging

people to buy any one of the many manufacturers that are available. I tend to go with something like what you proposed, as long as part of it is universal so that others could use it.

Mr. Le commented my understanding of the arrangement that was made in Pasadena was that Tesla would fund the infrastructure upgrade, as well as their proprietary stations and that Pasadena was going to pay for the universal charging station. Building the transformer, applying the public funds to the transformer, for example, or the hardware, the non-station part of the installation might be a good compromise.

PUBLIC COMMENT: Miguel Ramirez, City of Eastvale commented, right now we are working with the developer. The reason for the change from 20 to 12 stations is because right now we only have two sites that are ready to have stations installed. We are working with the developer to get them installed as soon as possible because of our residents' concerns. There is no agreement with Tesla, and nothing in writing that Tesla is the only option for this. The reason why we're looking into Level III is because the location where they're going to be installed is in a food court kind of area and there is a lot of in and out type of traffic. It is not at a long-term parking space. So, you could charge your car in 20 minutes with a Level III, as opposed to a Level II. The developer is developing another site, which is about one year away from completion, and they have agreed to install Level II charging stations there. There will be a hotel at that location and a fine dining option there.

Mr. York commented, the issue here really seems to be some concern about proprietary. What you would need to understand is that if you were going to enter into a proprietary deal you're going to have to be crafty as to what these expenditures are that serve a greater general public benefit, meaning that you can demonstrate that what you are installing has the opportunity to provide something else good for the public.

MSRC-TAC Member Tim Olson questioned, are the residents Tesla owners?

PUBLIC COMMENT: Miguel Ramirez, City of Eastvale commented, we do not have the exact numbers of how many Tesla owners we have but a majority that are asking for the stations are Tesla owners. The closest Tesla charging stations available now are in Rancho Cucamonga, over towards the Victoria Gardens area. Tesla does have the non-Tesla proprietary stations on their maps for anyone to use.

Mr. Le commented, part of the issue is that you might be able to get some additional funding from Tesla. Tesla might actually spend money to build it and you want to try to capture that as much as possible to make it more cost-effective. But from a public standpoint, many of us would want to see a more publicly adopted universal standard. So, the question is how do you balance the benefit that you might be able to capture if you want proprietary versus the public good benefit of having universal stations.

PUBLIC COMMENT: Miguel Ramirez, City of Eastvale commented, it is leveraging dollars to make sure that you get the public good, whether that it is to install additional infrastructure or infrastructure that everyone can use. That is the part we will have to discuss when we choose who the company is going to be, whether it is Tesla or a different Level III charging station.

Mr. York commented, what we should do as a group is, we should make a two-part recommendation that we can send up to the MSRC that would give guidance also to Eastvale. Part 1 would say we're in support of installing Level III and the reduction in number of stations. And then Part 2 would be a condition or contingency upon these charging stations being available to the general public and whether they are proprietary or not. The motion would include those two elements and I'm entertaining one from somebody.

MSRC-TAC Member Vicki White questioned, when do you think the City will have this decision made as to which provider they are going to go with?

PUBLIC COMMENT: Miguel Ramirez, City of Eastvale commented, as far as I know, they are trying to get it as soon as possible. It is just kind of ironing out the details because we are also working with the developer of the site. That adds another element to this.

Ms. White commented, is there any harm to delaying this item by a month? Mr. York commented, at the end of the day, we need to be able to make a recommendation to the MSRC as to how we are going to deal with this. We will see more opportunities for emission reductions if the need is for Level III, and there is going to be a call for what type of unit is a Level III and so we probably have to make some recommendation.

Mr. Thorne commented I am supportive of non-proprietary because it is still available to Tesla owners. But if you go the other way, it is there is no adapter to go to a Tesla charger.

PUBLIC COMMENT: Miguel Ramirez, City of Eastvale commented, from my understanding, the Nissan Leaf can charge with Tesla and that is in the City's fleet, also with an adapter. It is not completely shut off from everyone else. You would have to have a Tesla adapter towards your car and there are a couple more automakers that will allow for that. It is actually down to the battery not necessarily the car. It is whether the battery supports fast charging.

MSRC-TAC Member Steven Lee commented, to summarize what you are trying to say, it is not a really long-term parking lot area, at the most 30 minutes to an hour for people who go to the food court. You want to do the quick Level III Tesla charging to charge for about 15-20 minutes to get a full charge. You are looking towards the future. There are Level II stations that take a little bit longer to charge and it might take up parking spaces. Is that your concern too?

PUBLIC COMMENT: Miguel Ramirez, City of Eastvale commented, not just parking spaces but availability for more cars to charge.

Mr. Lee commented, the City is shrinking from 20 to 12, that is an ample amount of space.

PUBLIC COMMENT: Miguel Ramirez, City of Eastvale commented, the shopping center where it is going has lots of parking available.

MSRC-TAC Member Rongsheng Luo commented, if you choose Tesla technology, then you could also provide adapters for non-Tesla users too. Mr. Gorski replied, that would be difficult, that is something that you take with you.

Mr. Le commented, if you install a Tesla Supercharger, you cannot plug a Nissan Leaf into that Supercharger. There are some third-party hacks, but that is not a way that is available. If you have a CHAdeMO or CCS Level III charging station, you can plug a Tesla into it, but it does not work the other way around.

Mr. Lee commented, is there a way put a couple of Level IIs in that area and then the rest Level IIIs?

Mr. York commented that a motion could be, we recommend to the MSRC to allow a reduction of the number of Level IIs for Level IIIs and there is a contingency on this that the Level III cannot be proprietary, that it's open to all.

Mr. Le commented, I oppose the second part. I would adjust the language in the second part to capture potentially some benefit that allows for a non-proprietary Level III, but there's a potential for significant private sector investment at that site that the City may want to avail themselves of. Therefore, the public funds could be helping that investment along. But as long as you capture some non-proprietary elements as part of the site, you can get a win-win.

Mr. York commented, maybe the third part is that staff to prepare a recommended standard to suggest to the MSRC as part of this motion.

ON MOTION BY MSRC-TAC CHAIR DAN YORK AND SECONDED BY MSRC-TAC ALTERNATE CLIFF THORNE, THE MSRC-TAC UNANIMOUSLY VOTED TO RECOMMEND TO APPROVE FOR THE CITY OF EASTVALE, CONTRACT #ML16040, A MODIFIED STATEMENT OF WORK, 1) APPROVAL OF THE SUBSTITUTION OF 12 LEVEL III CHARGERS FOR 20 LEVEL II CHARGERS AND; 2) THAT MSRC FUNDS ONLY BE USED FOR NONPROPRIETARY EVSE PROJECT COMPONENTS AND 3) STAFF PREPARE A RECOMMENDED STANDARD.

**ACTION:** MSRC staff will include this contract modification on the next MSRC agenda for approval.

**Agenda Item #11 – Consider Decreased Scope of Work and Value for the County of Los Angeles, Contract #ML14096 (\$150,000 – San Gabriel Bike Trail Underpass Improvements**

Cynthia Ravenstein, MSRC Contracts Administrator, reported this request comes from the County of Los Angeles as part of the 2012-14 Local Government Match Program. The County was awarded funding to make improvements to the portion of the San Gabriel River Bike Trail where it passes under the Interstate 10 freeway. In November 2019, the County indicated that pavement reconstruction and drainage work was expected to be complete at the end of the month. However, the County had by this time determined that the tunnel lighting component of the project would require them to secure an Army Corps of Engineers permit for the installation of the solar panel poles on top of the San Gabriel River Levee. Due to the time necessary to obtain such a permit, and other alternatives investigated taking just as long or longer, the County requested to remove the tunnel lighting from the project. They further requested a three-month term extension to complete their final report and billing. Because the December MSRC-TAC and

MSRC meetings were cancelled, the three-month extension was processed administratively in order to allow time for the MSRC to consider the remainder of the request. Additionally, MSRC staff informed the County that it would not be possible to remove the task without a corresponding reduction in contract value. The County requests to eliminate the installation of lighting and to reduce the contract value by \$75,814.

ON MOTION BY MSRC-TAC VICE CHAIR AJ MARQUEZ AND  
SECONDED BY MSRC-TAC MEMBER STEVEN LEE, THE MSRC-TAC  
UNANIMOUSLY VOTED TO RECOMMEND TO APPROVE FOR THE  
COUNTY OF LOS ANGELES, CONTRACT #ML14096, A DECREASED  
SCOPE OF WORK AND VALUE.

**ACTION:** MSRC staff will include this contract modification on the next MSRC agenda for approval.

**Agenda Item #12 – Consider \$15,079 Contract Value Increase for the Better World Group Advisors (BWG), Contract #MS21002 (\$250,000 – Programmatic Outreach Services to the MSRC)**

Cynthia Ravenstein, MSRC Contracts Administrator, reported that back in June, the MSRC approved a proposal from the Better World Group to do some additional outreach and support of the development of the Regional Goods Movement Program for the 2018-2021 Work Program. The MSRC authorized work at a cost not to exceed \$25,165. To achieve that they will be using a fair amount of funding that was in their existing contract. There was also an allocation of an additional \$15,000. Given staff direction and the potential project partners' schedules, the work has not proceeded as rapidly as originally anticipated. Contract #MS16030 expired on December 31, 2019. They were selected to continue as the MSRC's outreach coordinator. They have a new contract and have requested that the balance of the money that was authorized for that task be carried over and put into the new contract. The amount will be \$15,079.

MSRC-TAC Dan York commented, you recall when we first brought this amendment back to the group, we were talking about developing this bigger program that there needs to be some flexibility. What they are doing contractually is truing up with the vision that staff presented to us.

ON MOTION BY MSRC-TAC VICE CHAIR AJ MARQUEZ AND  
SECONDED BY MSRC-TAC MEMBER STEVEN HILLMAN, THE MSRC-  
TAC UNANIMOUSLY VOTED TO RECOMMEND TO APPROVE FOR THE  
BETTER WORLD GROUP ADVISORS, CONTRACT # MS21002, A  
CONTRACT VALUE INCREASE OF \$15,079.

**ACTION:** MSRC staff will include this contract modification on the next MSRC agenda for approval.

**FYs 2018-21 WORK PROGRAM**

**Agenda Item #13 – Update on Development of UCLA Luskin Center for Innovation (Luskin Center) Report on Planning for Electric Vehicle Charging Infrastructure Investments**

JR DeShazo, Director of the UCLA Luskin Center for Innovation, and James DiFillippo, Researcher, reported that the motivation for this is that within the South Coast territory we have a lot of workplaces and a lot of multi-unit dwellings--condos and multifamily apartments--and we wanted to have better information on how to target charging infrastructure resources and outreach for cities, councils of governments (COGs), utilities and counties that were interested. The motivation is to try and provide a planning tool and information that would help direct investment and outreach resources to specific parcels within specific localities and communities to enhance the effectiveness of our existing programs with respect to workplace charging and multi-unit dwellings (MUDs). Planners at all levels currently have no guidance if they are going to be proactive about who to approach. The fundamental motivation for this tool is to help identify who to approach. Our scope of study includes the South Coast Air Quality Management District, but we are also including Ventura County and Imperial County in the workplace analysis. This analysis and guidance are based on contemporary socio-demographic residential patterns in terms of where workplaces are and where multifamily units are and the incomes of those residents. This is a planning tool that would need to be updated probably every five years. Our analysis period is 2020 to 2025. Because people move around and neighborhood demographics change, this could need to be refreshed at some point.

Everyone knows that MUD residents are underrepresented among plug-in vehicle (PEV) drivers. Charging, and selling infrastructure within MUDs has really become the holy grail of EV planning. It is the hardest thing to do, so much so that we began looking at DC fast charging options as another model, rather than having residential charging. But we all recognize that residential charging, however it can be provided, is going to be the most cost-effective solution. This is true both for the drivers--the residents--as well as for the EVSEs long-term. Because DC fast charging, when it is priced to reflect its actual cost, is going to be more expensive than it currently is. There are many communities that are majority MUDs and there are quite a few that have substantial minorities of multi-unit dwellings within their communities. Especially if you are interested in disadvantaged communities and reaching them, trying to crack the MUD nut and provide support is going to be critical.

We now have 10 years of data on who purchases PEVs and we can look at who purchases them when they have access to on-site residential charging and who purchases them when they do not. Essentially we took that information and we developed a model that predicted within the MUD residential space, who is most likely to purchase a PEV. If we're going to be spending public resources, we want them to be utilized when they are expended. And so, we want to meet demand where it's greatest currently. We might have some other goals, at a minimum, we might want to know where the demand for PEVs is among the MUD residents. And so, we developed this propensity to purchase score which we go through. Historically we have compared this to actual purchase decisions and tried to validate it as carefully as we can. We norm each of these propensity scores for each county. Some counties are richer than others. We have basically already done the analysis that we proposed for all the counties. We are still in the process of producing some of the maps and the databases. Each score is going to be county-specific. We are

providing you with the propensity to purchase for every parcel in all the counties, but highlighting really the top 10% of structures. I can even restrict it to the top 5%. When we did a similar project for Santa Monica we did the top 5% because they said their EV planner was only going to be able to knock on so many doors a year. We are planning right now to give you the top 10% but you could tell us we would like to do it for 3%, 10% or 15%, however you want the information is going to be there for each parcel.

What stakeholders should be the target of the outreach efforts? This information could be useful for property owners of MUDs, for residents of MUDs, and for future developers of MUDs that are trying to think about what kinds of PEV charging services to provide on-site. There are really three different sort of customer segments for this information, in addition to the planners that might be targeting these recipients.

MSRC-TAC Member Steven Lee questioned, do any of the approaches incorporate equity? A lot of the target people we want to provide charging for are in MUDs, but you mentioned condos and places that have homeowners associations. Mr. DeShazo commented, we do an overlay, and you could sort by residents in disadvantaged communities and look at their propensity to purchase within the disadvantaged community using this tool. One of the realities of the new car buyer market tends to be that income and housing values are the best predictors of who is going to purchase a vehicle. That is changing as the secondary market becomes more developed. We are actually on the cusp of that with the Bolt and Teslas now moving into the secondary market, C-Max is another thing. That secondary market is becoming more important especially for disadvantaged communities. That is something that we need to do more work on in terms of who is buying these used cars. The models are really good at predicting the new car buyers. Mostly because the data is only now developing, the models are not as good at predicting the purchase of used cars. The primary benefit in terms of life cycle cost of owning a PEV is fuel savings, that is what makes it work out.

MSRC-TAC Member Tim Olson commented, a couple of dimensions we thought had an impact and one was stationary charging versus portability. Another dimension is really parking space analysis, I do not know if that is in your model, but I would recommend it. Mr. DeShazo commented, the CEC funded a lot of work that we have done for different COGs within the region that have actually taken each MUD structure and looked at the parking systems that were available. We have broken them down into 16 different types of parking systems associated with MUDs in the South Bay COG. Turns out some of them are really amenable to Level I charging. If you are in a garage space that is sectionalized and has a door, chances are almost a 100% you have a 110 outlet in there. Whether that's common property power or your power is another question that has to be resolved but we are a big proponent of digging into the MUD space and not treating all of them alike. Some of the coastal cities, 40% of MUDs are duplexes and triplexes, it is really not a monolithic problem. And if we want to solve it, I think we have had to pick a high-resolution look.

MSRC-TAC Chair Dan York commented, you suggested providing some guidance. I represent the cities of Riverside County and in our community, for example what we see is a mixed use and or even a multi-family unit, it is always undersupplied with parking to begin with and then you start putting in a component for charging. We have had projects, we have put in charging, now you have somebody who is parking in the charging space, but is not using the charger or camping out all night and then the rest of the folks are not able to use it, that has been a problem.

Then they come over to City Hall and camp out at City Hall. The guidance would go back to the COGs and to the planning directors who would actually be able to give guidance to the developers, whatever comes out of this study would be helpful. In that there may be a parking analysis for the apartments and their visitors, but there may be an additional number of spaces per unit or whatever else that would come about above and beyond the regular to be able to provide for this that would be helpful for new developments. For existing developments, how to tackle existing developments? And how do you transform that? That kind of guides back to either the COG which would then speak to all planning directors or one-on-one directed to the cities would be greatly beneficial for us agencies.

Mr. Olson commented, did you look into any of the curbside charging whether that would have an impact at all? Mr. DeShazo replied, I could not tell in your scenario whether that was publicly accessible charging or MUD charging, it sounded like it was publicly accessible. Mr. York replied, some of these apartment complexes, they are gated, there are only so many spots. We had one development that we conditioned that they provide so many charging stations as a condition of their development, but they are really only for the users within that community. Mr. DeShazo replied, for Burbank when it received funding from the MSRC, those were the first curbside installations in Southern California. We actually picked their locations based on land use and predicted utilization rates. I think they had six curbside charging stations that were funded. That has become a much more frequent focus. The City of Santa Monica wanted to do an analysis for all of their public parking spaces. One of the things we need to do as a state and a community is actually look at utilization rates and user characteristics by different types of charging sectors, and we have the capacity to do that collectively, but it's going to take a state agency like the CEC or the CPUC to ask for the data and to then analyze it carefully. Because one of the one of the fundamental questions is how effective is curbside versus other types of charging currently. 10% of all new cars now are PEVs. We have reached this point, despite lots of challenges, where the market is growing noticeably. This is more PEVs than we are selling in the year that we have ever sold of hybrids. Hybrids almost never broke even 8% on a typical year. Making progress trying to figure out how to support the infrastructure piece is really important.

One of the things we all recognize is the workplace charging market has grown the most quickly of all segments, and yet there are still a lot of challenges in making sure that adequate workplace charging is provided. We were asked to use the existing data to identify where additional workplace chargers were needed based on current charging capacity deficits, by comparing the current vehicles that arrive within a travel analysis zone, within a workplace community, with the charging capacity that is currently there. Calculating the VMT that is needed, electric VMT (eVMT) that is needed to kind of make sure that all those vehicles are maximizing the eVMT that they are capable of. In the first Scenario, you leave your home and get to work, but you do not have enough charge to get all the way home. Basically, if you could charge at work, you would be able to make it home on the additional top off you got at work. In Scenario 2, you cannot even get to work before you run out of charge. Maybe you are driving a Prius or a C-Max or something and if you could charge at work, you could at least part of the way back home on this much power. Our analysis will basically be for every cluster of workplaces. We are going to be adding up to look at how much more eVMT you could get if you fully met the charging needs of drivers who were showing up and not able to charge. There is a method that we have used to do this where we are essentially looking at existing charging capacities at workplaces. We are looking at all the vehicles that show up in that space and what their state of charge is and we are

asking how much more charging capacity would they need to be able to fully utilize the battery capacity that they have in making that commuting trip. The nice thing about this analysis is, it is based on using the regional travel demand model. It is based on actual charging capacity and actual travel behavior and vehicles today. There is no forecasting. The numbers are the number of workplaces, each of these are by travel analysis zone which is basically how we are able to use SCAG's travel demand model to predict the number of PEVs that are showing up at work every morning. We know the make and model, the battery capacity, and how far they traveled. We can give them a score based on the charging deficit that exists in each of these areas. So, there might be two or three charging stations there we take those into account. We look at the number of vehicles that could have charged given their state of charge and benefited from that we add that up and then we rank each of the travel analysis zones in terms of score. We are able to do that for all of South Coast service territory. It helps you and other folks that want to provide outreach.

Mr. Olson commented, there are another 40 new models that are longer range, but you still have several hundred thousand that are short range. Mr. DeShazo commented, the longer-range vehicles present an interesting question for workplace charging because if you have a long-range vehicle, are you actually going to need to charge at your workplace? With the onset of much larger numbers of extended range vehicles, how important is workplace charging going to be? Part of that is going to turn on whether or not workplace charging can be used to provide grid services/storage.

Mr. Le commented, as a personal MUD dweller and an EV driver without access to home charging, workplace is my only option and the only option for a lot of people if we are to expand adoption. Workplace charging is an important element.

MSRC-TAC Alternate Cliff Thorne asked, have you looked at what the cost would be for a consumer? Where I work, there are people that could charge at work, but it's a lot more than what you pay at home. So, they just decide to go home on gasoline because it is going to be a dollar an hour to charge. Mr. DeShazo replied, one of the challenges is that very few EVSEs are pricing to make a reasonable profit even now. And what we all have to grapple with as policymakers and students of this challenge, we want to encourage people to charge where it's socially least costly, and everything that we know right now suggest that's going to be residential. But we are going to have some people, maybe MUD residents who can't purchase a PEV, cannot operate one unless they have access at the workplace. So, we are going to need to refine our pricing. The other little dirty secret is right now, nobody knows how to make a profit from publicly accessible charging stations. Collectively we should be encouraging an exploration of that and we all know it is going to come down to price, reasonable pricing. With that pricing, just like every other service is going to come a consideration of low-income residents. You cannot point to a public service that does not have a carve-out for that. There are going to be those things that have to be taken into consideration. Social efficiency versus equity.

**PUBLIC COMMENT:** Jason Lewis, JL Engineering, Inc., commented, the LADWP would be a great resource for you guys to do a study.

Mr. DeShazo commented, we want this resource to be available to everyone. We want it to be durable, so it will last into the future and so we are partnering with SCAG who already has used a lot of our early work. They already have an online tool. There is a map that shows the number

of charging stations at each location and PEV midday peak destination. That would be used for workplace charging identification. They are going to be integrating these new data layers for MUDs and workplaces into this tool. It will be widely available to anyone who wants it, open access and will be up for revisions if you guys or others in the future decide to update this.

MSRC-TAC Member Andy Silva commented, it's very frustrating. The County of San Bernardino tried to get some stations, our transformers could not handle the load, and our parking lot is impacted. Mr. DeShazo commented, parking system integration is one of the biggest challenges for both of these settings. Mr. Silva commented, San Bernardino County Transportation Authority is doing an electrification study for our whole county.

Mr. DeShazo commented, one of the things we are focusing on next is heavy-duty. We are looking at how to incentivize heavy-duty PEV and hydrogen options. The big challenge is going to be infrastructure. Fleet charging stations can actually offer more financial viability because the infrastructure owner gets to capture the fuel savings associated with it.

**ACTION:** No further action required.

#### **Agenda Item #14 – Update on MSRC's Regional Goods Movement Program**

Ray Gorski, MSRC Technical Advisor, reported that zero and near-zero trucks were really the first one and a half or two elements of the Regional Goods Movement Program. These are the heavy-duty trucks that primarily transport goods throughout the region but there is certainly a strong element of working with both the Maritime Ports as well as the Inland Ports. Much of the goods travel from the Maritime Ports in Long Beach/Los Angeles out to the Inland Empire. In our last meeting you voted to launch the Market Acceleration Program and the MSRC concurred with your recommendation, and that is underway. However, there are a lot of additional opportunities using our Work Program funds to make investments into near zero and natural gas heavy-duty trucks. Within the next couple of months, we are going to bring forward some specific suggestions, recommendations, and options for you to consider. This would expand the number of near zero emission trucks which are conducting goods movement throughout the region. A lot of it, of course is going to be focused at the Maritime Ports because that is where the trucks originate from. You do not have an issue identifying funding opportunities for near-zero natural gas heavy-duty trucks to conduct goods movement. There are a lot of targets of opportunity. We are going to be bringing them to you and you will have the option whether or not you feel it is worth the MSRC investment. There is also a tremendous amount of stakeholder advocacy to move to the next technology level and that is zero emissions. We are cognizant of that. I am not suggesting that you take all your money and put it into the near zero element because we know there is a desire to also do zero emission trucks. However, there is a situation right now where there is a lot of activity going on, but it is being done in a more isolated manner. By this I mean that we understand that the Ports are working on conceptual plans to increase the number zero emission vehicles. We understand that transportation agencies such as Los Angeles Metro are looking for those opportunities along the 710 corridor. We are aware of other governmental partners, who are working on behalf of some of our largest cities, to implement their own goods movement programs. As staff, we have insight into what they are talking about because they publish reports and we read them all. What we see is a lot of common ground, but we do not see a strong integration of all these stakeholders currently. We are suggesting we

convene a second Zero/Near-Zero Emission Truck Working Group meeting--probably in February--but we focused only on this zero-emission component. We would bring in all the stakeholders including our friends from Luskin. My objective here is to recommend that the MSRC bring in the stakeholders and see if there really is there some common ground from which we can form a coalition to start working to move us forward. I cannot guarantee you that it will be successful, but if it is not successful, I can guarantee you that the MSRC will be making more investments in near zero natural gas trucks. It is important to really try to see if we can, within the next year or two, put together a program that if it will not be a final answer is going to be the start. In some conversations we have had with the MSRC and TAC members, we have heard an interest to ensure that the MSRC investments do not become stranded assets. For example, if the MSRC wants to take a role to work with organizations such as Luskin, to identify where charging stations for heavy-duty drayage trucks should be put, we want to make sure that is just the initial infrastructure and not something which is only for demonstration program which within the next couple of years is not being utilized.

MSRC-TAC Chair Dan York commented, an action from this group would probably be advantageous for staff to say that they are really on the right track. So, even though you have not asked for one, I think that might be valuable.

MSRC-TAC Member Tim Olson asked, is this focused only on drayage? Mr. Gorski replied, not necessarily. I will be honest, there is so much action in drayage area. Look at the Clean Air Action Plan, published by the Ports, and their goals for their cargo handling and then their drayage 2030-2035. If you look at the work that Metro is doing with the 710 Corridor, and their plans to have that electrified corridor. If you look at what organizations like the Los Angeles CleanTech Incubator (LACI) is doing relative to getting ready for the 2028 Olympics. If you look at the other advocacy and analysis papers which have been written, they are all saying that the Ports are a good place to start because 16,000 drayage trucks visit there. Mr. Olson commented, at our first meeting we recommended some other stakeholders that are a little more balanced with original equipment manufacturers and some of the host sites. Mr. Gorski replied, we have another category that we are working on.

**PUBLIC COMMENT:** Jason Lewis, JL Engineering, Inc., commented, I represent myself. I am a licensed professional engineer now in four states. I am the engineer on record who permitted the first heavy-duty hydrogen station in the state of California. I have done hydrogen stations now in three states. I am not the engineer of record for the Port of Los Angeles and Long Beach. I am here in support of all these efforts and it can be done. We have a hydrogen fuel vehicle. This is a good future. All efforts to reduce the consumption of petroleum are awesome. Clean up the air whether it be low NOx CNG or hydrogen vehicles. I would like to come help you spend that \$2 million left in hydrogen. If there is any effort to be made, if it be someone to talk to or connect the dots, I would like to put myself out there as a subject matter expert.

Mr. Gorski commented, at the last MSRC-TAC meeting you approved a Program Opportunity Notice (PON) for the Inland Ports. That is on the street. The MSRC concurred with your recommendation and they had it published. We have conducted one of the largest scale distributions ever. Staff mailed out over 3700 hard copies and we used the distribution list which was provided to us by the South Coast AQMD, which is using it for notification of the Indirect Source Rule for the warehouses and distribution centers in the Inland Empire. In addition, the MSRC's outreach coordinator has sent out over 500 targeted electronic copies. They've also

outreached directly to 100 local government agencies within the Inland Empire. We have also been working with industry and environmental organizations and agencies who have agreed to distribute it using their own distribution lists. It is safe to say that every effort is being put forth to make sure there is a high level of awareness. The Last Mile, this is our focus right now for the new year because this is the one we didn't spend as much effort on in the prior year because we are trying to work in coordination with other agencies and they have had their own time restrictions. There are a lot of options but what we could do next is a PON, or an RFP that is more specific. We could do the Last Mile Technical Working Group, a parallel to the one we talked about for the zero emission drayage trucks, or we can do all the above. That is what I believe we should do. We should convene a Last Mile Technical Working Group, we should have ready to go a broader Program Opportunity Notice and then collectively we should put our thinking caps on and have some specific ideas for an RFP.

**ACTION:** No further action required.

## **OTHER BUSINESS**

### **Agenda Item #15 – Other Business**

No other business.

## **PUBLIC COMMENTS:**

No public comment.

## **ADJOURNMENT**

THERE BEING NO FURTHER BUSINESS, THE MSRC-TAC MEETING  
ADJOURNED AT 2:57 P.M.

**NEXT MEETING:** Next meeting: Thursday, February 6, 2020, 1:30 p.m., at the South Coast Air Quality Management District.

(Minutes prepared by Penny Shaw Cedillo)