Fresno Council of Governments

2035 Tulare St., Ste. 201 tel 559-233-4148
Fresno, California 93721 fax 559-233-9645

www.fresnocog.org

April 25, 2017

Mary Nichols, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 9581

Re: SB 375 Greenhouse Emission Reduction Target for the Fresno County Region

Dear Chair Nichols,

First of all, I would like to express my appreciation for your leadership in addressing air quality and climate change issues in the state and in the San Joaquin Valley. I would also like to thank your staff for working with the regions on the SB 375 target recommendation process, taking into consideration the different needs and resources available at the regions.

As pointed out in the valley-wide letter to ARB in December 2016, the San Joaquin Valley MPOs have made significant achievement towards the targets set in 2010, and are continuing our efforts to reduce VMT through integrated transportation and land use planning.

Fresno COG's first SCS, if implemented, would achieve 11% of GHG reduction by 2035, exceeding the -10% target set by the ARB for the Valley. However, due to the new clean car/fuel measures that will be implemented state-wide, it will be much cheaper to drive and thus more VMT will be generated, which is known as the "VMT effect". The new clean car/fuel programs are reflected in EMFAC 2014 and the VMT effect has been tested and proved by MPO models. With the VMT effect, MPOs will have to look for additional VMT reduction beyond the previous SCS even if just to reach what was achieved in the pre-EMFAC 2014 SCS.

With that said, Fresno COG is committed to working with the state on developing ambitious and achievable targets. The Region will be looking at enhanced alternative transportation strategies and implementation of the newly updated general plans to help the state achieve SB 32 goals. Fresno COG is proposing 13% per capita reduction of GHG by 2035 as the new target for the region. This new target is ambitious given the VMT effect described above, but can be achieved if the general plans are implemented on schedule and there is no major disruption of funding flowing into the region. The draft target will be brought to the COG Policy Board for approval in late May.

Thank you for the opportunity to recommend the target. Should you have any questions regarding the proposed draft target, please feel free to contact me or my staff Kristine Cai at 559-233-4148 or kcai@fresnocog.org.

Sincerely,

Tony Boren

Executive Director

Fresno COG 2016-2017 Target Recommendation Report

I. Overview of Fresno COG Target Recommendation

In 2010, The California Air Resources Board set the greenhouse gas emission reduction targets for Fresno COG and the other seven MPOs in the San Joaquin Valley at 5% per capita reduction by 2020 and 10% reduction by 2035. Fresno COG's 2014 RTP/SCS demonstrated that Fresno region would be able to exceed the targets by achieving 9% reduction by 2020 and 11% reduction by 2035 if the SCS is implemented.

Since the adoption of the 2014 RTP/SCS, Fresno COG has been working collaboratively with the local governments, the San Joaquin Air Quality Control District, transit operators, Caltrans, community organizations and other local and state partners in implementing the first SCS. As the implementation efforts continue in full strength in the land use area in the Fresno region, Fresno COG anticipates that transportation related SCS strategies will be strengthened compared to the 2014 RTP/SCS for the following reasons: 1) emerging technology in zero-emission vehicles and near-zero-emission vehicles becomes more accepted by consumers 2) funding from the State and other sources provides incentives for installation of more charging stations for electric vehicles, which helps to expedite the market penetration of the clean vehicles. 3) the Transportation Network Companies (TNC) such as Uber and Lyft has been expanding in the Valley, although mostly in the urban areas. Other shared mobility service such as CalVans' vanpool program for farmworkers and commuters in the rural counties has received more support due to its high cost-effectiveness. Two non-profit community groups in Fresno County have just recently received grants from Just Transit to address the transportation needs in the rural communities through shared mobility programs (Green Raiteros serving Huron area and Van y Vienen serving Cantua Creek and El Porvnir). 4) With the completion of several Active Transportation Plans(ATP) in the region and a couple of more in the pipeline, it is expected that many more active transportation projects will be carried through the planning and funding process compared to the first SCS. 5) Fresno COG has initiated efforts to develop the first regional long range transit plan in the Fresno region, which will provide input to the long range transit strategies in the future SCSes. Although the long range transit plan will be completed in 2019, and can't provide direct input to the target recommendation process, additional transit services beyond the 2014 SCS that have been initiated by the transit operators are added in the 2017 target.

Although the GHG reduction benefits from the above transportation strategies can't be captured 100% due to the limitation of existing tools and data scarcity, Fresno COG has

been working closely with the ARB and other fellow MPOs on developing quantification methodologies while actively promoting and supporting such transportation strategies. The land use and transportation strategies applied in the target scenario have been run through the land use-travel forecasting-air quality modeling process. Off-model methodology was applied for strategies that the traffic model is not sensitive to, and is documented in the modeling section of this report.

II. Scenario and Process

Due to the time constraint and the availability of the modeling tools, the 2016-2017 target setting has largely remained an internal technical exchange with ARB. Fresno COG is bringing the draft target recommendation to the RTP Roundtable in April 2017, which consists of representatives from COG member agencies, the Air District, Caltrans, transit operators, community organizations, agriculture, building industry, education, health, tribal governments, etc. The RTP Roundtable is an advisory committee that provides guidance and recommendation on RTP/SCS related issues. The recommendation will also be presented to Fresno COG's Transportation Technical Committee (TTC), Policy Advisory Committee (PAC), and the Policy Board for approval in May 2017.

The target scenario is largely based on the 2014 SCS with enhancement in transportation strategies and a few general plan updates. The 2014 SCS contained draft conceptual information for City of Fresno's new 2035 general plan, which was finalized after the adoption of the 2014 SCS. The final map of City of Fresno's new general plan is incorporated into the target scenario. City of Sanger and the County of Fresno are updating/revising their general plan and the latest assumptions from the draft plans are also included in the target scenario. In addition to the transportation strategies in the 2014 SCS, the target scenario takes into consideration additional transit investment; more aggressive deployment of bike and pedestrian strategies region-wide; CalVans' vanpool program expansion with $ 3 million from the AHSC program for the Vanpool Expansion Project; more electric vehicle (EV) charging stations in the region; high speed rail operational in 2035, etc.

III. Land Use Strategies in the Target Scenario

The 2017 target scenario mostly retains the land use strategies applied in the 2014 RTP/SCS. Increased density and mixed use development are proposed in the target scenario at a scale that is appropriate for the size of the cities. Residential density will increase from an average of 4.6 units per acre to 7.4 units per acre. A range of housing opportunities and

choices are provided with a more balanced supply of various housing type. More than 45% of new housing will be multifamily and town homes, compared to 22% in the pre-SCS plans. Over 20% of new housing and 36% of new employment are allocated along the proposed high-capacity transit corridors and activity centers, which provide foundation for potential Transit Oriented Development. The target scenario reflects the sustainability principle of directing and strengthening development towards existing communities. The City of Fresno's new general plan directs about 50% of new growth in the central core, Downtown, established neighborhoods and along Bus Rapid Transit (BRT) corridors, and the rest inside the existing sphere of influence. The City of Fresno's plan proposes no sphere of influence expansion by 2035, which is a significant stride towards reining in fringe development in a traditionally sprawling region. The plan emphasizes increased land use intensity and mixed-use development at densities supportive of greater transit usage. The plan also calls for building healthy communities with safe, well maintained, and accessible streets, public utilities, education and job training, proximity to jobs, retail services, and health care, affordable housing, youth development opportunities, open space and parks and transportation options.

The target scenario also includes elements of complete neighborhood, with efficient and diverse mix of residential densities, building types and affordability which are designed to be healthy, attractive and centered by schools, parks, and public and commercial services to provide a sense of place and that provide as many services as possible within walking distance. The complete neighborhood concepts foster distinctive and attractive communities with a strong sense of place.

Farmland conservation and resource land protection are also emphasized in the target scenario. As pointed out in the 2014 SCS, farmland, open space and natural resource land are critical for the region's environmental and economic health. Farmland conversion is minimized to the extent possible with increased density and more focused development within existing urban cities. Resources lands such as critical habitat, wetlands, vernal pools riparian forest, groundwater recharge zones, Williamson Act land were identified during the 2014 SCS process. City of Fresno's new general plan set goals that "emphasize conservation, successful adaption to climate and changing resource conditions, and performance effectiveness in the use of energy, water, land, building, natural resources and fiscal resources required for long-term sustainability". The policies in the Plan preserve farmland by incentivizing new development within and adjacent to already-urbanized land. City of Clovis' updated general plan requires mitigation at 1:1 ratio of converted to preserved acreage, or payment of its valuation equivalent if the conversion of Important Farmland is deemed significant; City of Reedley's 2014 general plan provided direction for the City to develop a farmland mitigation program that requires new development within the existing

sphere of influence to fund farmland preservation efforts. The mitigation program will require applicants seeking to annex important farmland within the existing city sphere of influence to pay a fee to city of Reedley equivalent to the cost of preserving Important Farmland on a 1 to 1 basis with land converted to urban uses. The San Joaquin Valley Greenprint project, which has been funded by the Strategic Growth Council, has been a huge undertaking in resource conservation and management in the San Joaquin Valley. It has identified challenges and opportunities for lands, waters and living resources in the Valley. The study recommends a series of strategies for the conservation and management of the resources. The results of the Greenprint will reinforce local efforts and serve as a guide to local, state, federal and private sector decision-makers as they make choices about the future of the Valley's resources.

IV. Transportation Strategies in the Target Scenario

As discussed in the Overview, transportation strategies are strengthened in the target scenario compared to the 2014 SCS. Fresno region envisions increased investment in bike, pedestrian and transit facilities, and is supportive of the emerging shared mobility service to address various transportation needs. Fresno COG and the region will continue to support the State's efforts to have cleaner vehicles and fuels through building EV charging stations and electrification of bus fleets when funding becomes available.

- Transit
  Although Fresno COG has obtained funding to develop a long range transit plan, the project will not be completed until 2019 and would not be able to provide direct input to the transit investment strategies in the target recommendation. However, in addition to all the transit projects planned in the 2014 RTP/SCS (including 5 BRT routes in the City of Fresno), the target scenario assumes increased frequency of major transit routes in the existing urban areas to 15 minutes from 30 minutes service, expanded services to new development areas in the metropolitan areas based on the updated general plans, all of which will be subject to revision after the long range transit plan is developed. Furthermore, the target scenario includes the three new college routes started by FCRTA. The bus service to the Yosemite National Park is also an addition to the transit system in the Fresno regional although the target scenario did not take credit for it since the service is only available during summer.
- Active Transportation
  As discussed in the December 2016 submittal, Fresno region has been taking a big stride in active transportation planning and investment. Fresno COG conducted a

Transportation Needs Assessment study that evaluated and identified the (active) transportation needs and gaps in the region. City of Fresno, Clovis and Coalinga have completed and adopted their individual ATPs and Fresno COG is developing a regional ATP on behalf of the rest of Fresno County. Projects from the ATPs will feed into the 2018 RTP and the subsequent RTPs. With the aggressive active transportation planning, and the funding from the existing ATP program and the SB1 for active transportation projects, Fresno COG assumes aggressive deployment of bike/ped projects in the off-model quantification of GHG reduction.

- CalVans and other vanpool and shared mobility programs
  CalVans provides vanpool services to farmworkers and commuters in the rural counties. In year 20 14/15, vans out of Fresno County traveled 29.1 million passenger miles; in 2015/16, the vans (out of Fresno County) traveled a total of 2.7 million miles with total 528,510 passengers, and the passenger miles for the vans reached 28.8 million, which is equivalent to 13,459 MT CO2e reduction. CalVans received $3 million in 2015/2016 from the AHSC program for the Vanpool Expansion project. The counties that will be covered by the project include Merced, Madera, Fresno, Tulare, Kings, Kern, Monterey and Imperial. Fleet expansion for CalVans is assumed to continue into the future target year and off-model quantification of GHG reduction benefits for the CalVans and other vanpool programs have been captured in the proposed target.

- Measure C Carpool program
  Fresno County Measure C ½-cent sales tax funded carpool program provides incentives to commuters who carpool. In year 2015/16, program participants reported 58,527 daily commute carpool VMT. It is assumed that the level of participation in this program will continue into the future target year at the same rate as the reported year.

- Electric Vehicle (EV) charging stations/infrastructure
  Regional efforts to enhance EV charging infrastructure came from both public and private sectors. A good example of the effort is the Fresno Rural Transit Agency secured funding to install public accessible solar powered charging stations at all municipal yards of the small cities that it serviced throughout the Fresno COG region. PG&E recently announced that it will significantly expand access to EV charging stations throughout Northern and Central California over the next three years. Up to 7,500 EV charging stations will be installed at apartment, condominium complexes and workplaces. An EV Regional Charger Program Off-Model spreadsheet

was developed by SANDAG. Fresno COG adopted SANDAG spreadsheet and scaled regional VMT and vehicle populations to match the Fresno Region. Within the spreadsheet, regional charger programs were assumed to increase electric mode to 41% (MTC Assumptions), and consequently increase eVMT by 11%. Factoring in CO2 emissions from electricity associated with the eVMT, the net CO2 reduction from enhanced EV charging program was calculated.

- High Speed Rail
  California High Speed Rail (HSR) is currently under construction in Fresno and other sections of its planned route through Central Valley. Once completed, the HSR will connect the region with the LA and Bay Areas with a fast and convenient mode of travel. Its impact on regional travel was implemented as a module within the VMIP2 model and can be turned on and off depending on the modeling purposes. For vehicular trips, HSR will reduce through trips trip at the model gateways, and will redirect a portion of the inter-regional trips from the gateways to the planned HSR station in downtown Fresno. The HSR module adjusted trip productions (P) and attractions (A) accordingly. The estimated ridership was based on projections found in the HSR 2012 Revised Business Plan, where high and low projected numbers were given. To be conservative, the projected low numbers were used as the HSR model input.

V. Modeling Tools and Planning Assumptions applied in the Target Scenario

Fresno COG has developed a new population/employment growth forecast that took into consideration factors such as economic development, land use planning, infrastructure investments, local demographic characteristic, regional commute patterns, etc. The new growth forecast is scheduled to be adopted by the Policy Board in late April, and is applied in the target scenario. Attached is the draft growth forecast report.

Since Fresno COG is in the process of developing 2018 RTP/SCS, the projects proposed fromin the 2014 RTP/SCS are applied in the target scenario with some additional transit projects as described in the Transportation Strategies Section. Additional bike/ped projects are assumed in the target scenario and quantified through the off-model quantification methodology from the “Moving Cooler, An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions” by Cambridge Systematics. High Speed Rail is a post processor in the MIP2 model, and ridership information from the HSR Authority was applied in the modeling of the target scenario.

The land use and transportation assumptions were run through the MIP2 model, which is newly updated with latest survey data and revised auto-operation cost that is consistent with the Big Four MPOs. Fresno COG is in the process of producing the final documentation for the MIP2 model, and will post it on the website once it is available.

EMFAC2014, the latest air quality model developed and approved by ARB, was run to produce the GHG results. Fuel efficiency from EMFAC2014 was an input to the auto operation cost in MIP2.

Off-model quantification was applied to strategies that the traffic model is not sensitive to. Vanpool VMT was derived from statistics submitted by CalVans and the rate of growth applied to the Vanpool program was based on the projection from the operator and smoothed by an algorism developed by Fresno COG. Percent of VMT reduction from carpool was assumed constant into the future. The target scenario also included GHG reduction benefits from the boost of numbers of EVs in the Fresno due to the EV charging stations that are planned to be built in the region. Quantification methodology from ""Moving Cooler, An Analysis of Transportation Strategies for Reducing Greenhouse Gas Emissions" by Cambridge Systematics was also applied to active transportation projects and other operational improvement such as ITS. Aggressive deployment was assumed for bike and pedestrian projects in the target scenario. The San Joaquin Air District's Rule 9410: Employer Based Trip Reduction was also included as part of the off-model quantification for GHG reduction.

VI. Target Recommendation

Based on the modeling of the above land use and transportation strategies in combination with the latest growth forecast, Fresno COG recommends 13% per capita GHG reduction by 2035 as the target for the Fresno County region. The -13% target is very ambitious to the Fresno region given that cars are becoming cleaner and more efficient, and thus it is less expensive to drive, which produces the VMT effect of more VMT being produced due to the cleaner cars. The region has to look for additional VMT reduction from the land use/transportation strategies to counter the VMT effect. With that said, the Fresno region will be able to achieve the proposed target if the latest general plans are implemented on schedule, and the revenue assumed for the programs and projects in the target scenario will be coming through as projected. The State will need to provide more tools for VMT reduction should any target number beyond -13% is expected for the Fresno region.

Fresno COG is taking the draft target number to the Policy Board for approval in May 2017. The -13% target will be subject to the final approval of the Fresno COG Policy Board.