

CMAQ COST-EFFECTIVENESS THRESHOLD DOCUMENTATION FOR THE KERN COG 2017 FTIP

The Congestion Mitigation and Air Quality (CMAQ) program provides funding for transportation projects or programs that contribute to attainment or maintenance of the national ambient air quality standards. All San Joaquin Valley Metropolitan Planning Organizations (MPOs) adopted policies in 2007 for distributing at least 20 percent of the CMAQ funds to projects that meet a cost-effectiveness threshold for emission reductions beginning in Fiscal Year (FY) 2011. For the 2017 Federal Transportation Improvement Program (FTIP), this applies to years 2016-2017 through 2017-2018. Kern Council of Governments (Kern COG) has made every effort to expend the minimum 20 percent funding for cost-effective projects over the course of the FTIP and the attached documentation demonstrates that Kern COG has met the 20 percent funding goal.

Project eligibility continues to be based on federal CMAQ guidance. MPOs can fund projects within local jurisdictions or contribute funding to the San Joaquin Valley Air Pollution Control District (SJVAPCD) grant incentive programs to meet the cost-effectiveness threshold requirements. Funds contributed to the SJVAPCD grant incentive programs will be assumed to have met the threshold, as that threshold is more stringent than the one established by the CMAQ cost-effectiveness policy.

Emission benefits and cost-effectiveness calculations are based on the applicable pollutants for the region, including the components of ozone (nitrogen oxides [NO_x] and reactive organic gases [ROG]) and particulate matter (PM). The “Methods to Find the Cost-Effectiveness of Funding Air Quality Projects” document developed by the Air Resources Board (ARB) is currently the appropriate methodology for calculating cost-effectiveness. Cost-effectiveness is expressed as dollars spent per pound of pollutant reduced (ROG + NO_x + PM₁₀). The cost-effectiveness threshold for the 2017 FTIP is \$45 per pound (\$90,000 per ton) and is based on CMAQ dollars only, not total project cost.

Kern COG has identified, through existing programmed projects in those years or other selection methods, projects that qualify for the cost-effectiveness policy. The Kern COG Congestion Mitigation Air Quality Program Policy provides the scoring criteria developed in consultation with local jurisdictions and transit agencies in Kern County. The Kern COG Board of Directors approved the Kern COG Congestion Mitigation Air Quality Program Policy November 15, 2012. The Kern COG Board of Directors approved the Kern COG CMAQ Local Cost-Effectiveness Policy September 20, 2007.

Kern COG issued a call for projects April 2015 that incorporated the CMAQ cost effectiveness policy to identify at least 20% of the CMAQ funds for projects that meet a cost-effectiveness threshold of \$30 per pound. The call for projects was initiated to program \$9,901,220 CMAQ funds in fiscal year 16/17 and \$9,901,220 CMAQ funds in fiscal year 17/18. Based on the CMAQ Policy approved by the Kern COG Board, Kern COG will allocate a minimum of \$3.96 million of those funds to projects that meet the cost effectiveness threshold.

A draft CMAQ Program of Projects was presented for review during the March 2016 Transportation Technical Advisory Committee and Transportation Planning Policy Committee meetings. The Kern COG Board approved the final CMAQ Program of Projects March 2016. Kern COG then incorporated the approved program of projects into the 2017 Federal Transportation Improvement Program.

As stated in the Cost-Effectiveness Policy, Kern COG has agreed to post information related to the implementation of the cost-effectiveness CMAQ policy on its website. Attached is documentation that fulfills this requirement and demonstrates that Kern COG has estimated the amount of funding in the 2017 FTIP necessary to meet the 20 percent cost-effectiveness goal and provided a summary of the CMAQ projects that meet the minimum cost-effectiveness threshold.

CMAQ Cost-Effectiveness Documentation for the Kern COG 2017 FTIP

<u>Year</u>	<u>Estimated CMAQ Apportionments</u>	<u>20 Percent Minimum</u>
FY 2016-2017	\$9,762,015	\$1,952,403
FY 2017-2018	\$10,044,520	\$2,008,904
FY 2018-2019	\$0	\$0
FY 2019-2020	\$0	\$0
Totals	\$19,806,535	\$3,961,307

Year	FTIP ID	Agency	Project Description	CMAQ Funding Amount	Estimated Cost-Effectiveness ⁽¹⁾
17/18	KER160506	Bakersfield	In Bakersfield on Truxtun Ave.: between Empire Dr. and Oak St.; operational improvements	\$2,655,900	\$17.88
16/17- 17/18	KER160507	Bakersfield	In Bakersfield: grouped projects for intersection signalization A) Union Ave at Berkshire Rd B) Stine Rd and McKee Rd	\$442,600	\$22.11 & \$39.30
16/17	KER160504	Golden Empire Transit District	In Bakersfield: Purchase two replacement 40' electric buses	\$1,327,950	\$31.81
16/17	KER160505	Kern County Superintendent of Schools	In Bakersfield: CNG school bus replacement	\$462,500	\$27.54

Year	FTIP ID	Agency	Project Description	CMAQ Funding Amount	Estimated Cost-Effectiveness ⁽¹⁾
16/17-17/18	KER160508	Kern County	In Kern County: grouped projects for shoulder improvements A) Near Buttonwillow: 7th Standard Rd from Corn Camp Rd to Buttonwillow Dr B) Near Tehachapi: Banducci Rd from Stallion Springs Dr to Pelliser Rd C) Near Buttonwillow: Corn Camp Rd from SR 58 to 7th Standard Rd D) Near Arvin: Edison Rd from SR 223 to SR 58 E) Near Wasco: Kimberlina Rd from Bell Rd to SR 43 F) In Bakersfield: Petrol Rd from Airport Dr to Greenview Ln G) In Shafter: Shafter Ave from 7th Standard Rd to Riverside Rd H) In Rosamond: 90th St West from Avenue A to Rosamond Blvd I) Near Mojave: Backus Rd from Tehachapi Willow Springs Rd to SR 14 J) Near Bakersfield: Round Mtn Rd from 3.5 East of China Grade Loop to Choctaw Valley K) Near Bakersfield: Virginia Ave from Washington St to Mt Vernon Ave	\$9,202,694	\$4.98 & \$8.97 & \$19.52 & \$18.94 & \$6.86 & \$13.92 & \$19.09 & \$21.24 & \$13.43 & \$17.33 & \$8.68
16/17-17/18	KER160509	Ridgecrest	In Ridgecrest on Sunland St: Bowman Ave to Dolphin Ave; surface unpaved street	\$676,117	\$0.52

Year	FTIP ID	Agency	Project Description	CMAQ Funding Amount	Estimated Cost-Effectiveness ⁽¹⁾
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Total CMAQ Funding Amount \$14,767,761

CMAQ Cost-Effectiveness Goal \$3,961,307

CMAQ Cost-Effectiveness Goal Met? YES

Percent of CMAQ Funds Awarded to Cost-Effective Projects 75%

(1) Cost-effectiveness for each project identified as meeting the cost effectiveness threshold must be below \$45 per pound, or \$90,000 per ton.