

CTP 2040 Strategies Matrix - Summary of Strategies and Estimated Impacts on VMT Reduction

	Unit of Measure:	Range of values		VMT Reduction (estimated)		Comments	Recommendations
		Low	High	Low	High		
Pricing							
Road User Charge (RUC)	per mile	+9%	+100%	-3%	-23%	9% to 100% increase in auto operating costs; MPO RUCs raised auto operating costs by 5 to 30%	RUC, gas tax and congestion pricing combined into a single fee - called RUC. Doubling auto operating costs through a RUC in 2010 resulted in a statewide reduction of VMT by 24%. Additional 2040 tests have already been conducted.
Gas Tax	per gallon: per mile equivalent:	\$ 0.10 < \$ 0.01	\$ 0.15 < \$ 0.01	< 1%	< 1%	Gas tax increase proposals would have a negligible impact. Each 40 cent increase amounts to ~5% increase in auto operating costs.	
Congestion Pricing	per mile	\$ 0.10	\$ 0.25	-11%	-27%	Congestion pricing would have a more significant impact on auto operating costs. Question is to extent (All roads? Only congested facilities?) and time (what parts of the day?) these charges are assessed. Direct modeling would be complicated and time consuming to implement.	
Transportation Alternatives							
Telecommute/Work at Home	Reduced GhG	-0.13%	-0.39%	-0.13%	-0.39%	Source: SACOG	Off model calculation
Carpoolers	Increased number of carpoolers			TBD	TBD		Additional investigation needed.. Off-model analysis likely to be used.
Car Sharing	Net 5% increase in adoption rates -- short distance travel	-0.12%	-1.10%	-0.12%	-1.10%	Low end: SACOG; High end: MTC (Assumes 5% net increase for short dist personal travel w/ 26.9% reduction in VMT.)	Off model calculation
Mode Shift							
Transit Service Improvements	Changes in transit service characteristics: Headways, in-vehicle times, out-of-vehicle times & fares .	2x transit service; 2x transit speeds		In progress			Will test a model run that doubles transit services, doubles transit speeds, assumes free fares and reduces wait times for transit services..
		Free fares					
		Reduced transfer wait times					
Bus Rapid Transit	Ridership change from conversing Local Bus Routes to BRT	0.07%		0.07%		Increased ridership from BRT Handbook (TCRP 118). Calculations entail converting change in ridership to mode share to VMT savings	Off model calculation; Working assumptions are utilized.
High Speed Rail	HSR fares	Reduce HSR fares by 50% in 2040		In progress			
Expand Bike	Increased bicycle mode shares	% Increase in bike infrastructure (Low)/ 2x bike share (High)		0.4% -- high estimate		High VMT reduction assumes doubling of mode share, with 50% of new trips from vehicle modes @ 3.0 miles per bike trip.	Evaluated off-model
Expand Pedestrian	Increased pedestrian shares	% Increase in sidewalk improvements (Low)/ 2x walk share (High)		0.2% -- high estimate		High VMT reduction assumes doubling of mode share, with 50% of new trips from vehicle modes @ 0.25 miles per walk trip.	Evaluated off-model
Carpool Lane Requirements	Increased HOV occupancy requirements	Change 2+ occupancy to 3+		In Progress		Model run underway; results TBD -- may be available for 8/19 CTP PAC Meeting.	Increasing 2+ carpool requirements to 3+ will be tested.
HOV/HOT Lanes	Change to VMT	Added HOV lanes, especially interregional connectors; and in-fill missing gaps		TBD	TBD	Impact of this change is not known. Will be tested to assess impacts	To be modeled with CSTDm; ID of proposed locations is needed.
Operational Efficiency							
Incident/Emergency Management	Reduced VMT, GHG			TBD	TBD	1.0% reduction in GHG - SACOG.	Off-model application
Caltrans' (TMS) Master Plan	Reduced VMT, GHG			TBD	TBD	1.2% reduction in GHG - ARB	Off-model application
ITS/TSM	Reduced VMT, GHG	0.09%	0.62%	0.09%	0.62%	Source: SACOG	Off model
Eco-driving	Reduced fuel consumption			TBD	TBD	2.7% reduction in fuel consumption - ARB	Off-model application