

**CTP 2040 PAC Survey Strategies Results**

Strategies		Implementation	Inside – X Outside - O	Effect - High, Moderate, Marginal
Pricing	VMT fee	Increase auto operating costs by \$.05 <sup>1</sup> /mile in 2025 indexed to inflation	X	<b>Moderate:</b> ~20% increase in AO costs.
	Regional gas tax/national tax assumption	Increase auto operating costs by \$.10 <sup>2</sup> to \$.15 <sup>1</sup> per gallon of fuel and index to inflation, starting in 2017. <b>(Note: Auto operating costs assumed to remain fairly constant over time as gasoline price increases are offset by increased fuel economies and conversion to alternative fuels.)</b>	X	<b>Marginal:</b> <5% increase in AO costs. Auto operating costs are assumed to be in the \$.022 to \$.024 range. \$0.15 per gallon = <\$.01 per mile increase.
	Congestion pricing	Charge \$0.30 to \$8.00 <sup>3</sup>	X/O	<b>Depends:</b> Higher tolls can be assessed in the model for peak periods versus off-peak; Depending on trip lengths, this could be a significant increase in driving costs. A \$1.00 toll on a 10 mile trip adds \$0.10 per mile cost (about 40% of the auto operating cost).

<b>Transportation Alternatives</b>	Telecommute	Aggressively support a statewide telecommute program. SCAG reduces millions of miles of VMT per day through the telecommute program to produce a 1% reduction in VMT. <sup>45</sup> ARB literature review shows increased workforce telecommuting by 1.5%, thus reducing VMT by 1.1%. <sup>6</sup>	X/O	<b>Marginal:</b> Assuming SCAG assumptions are achievable. Telecommuting assumptions can be assessed either in or out of the model.
	Park and ride lots	Caltrans is relinquishing park and ride lots, but it is still important to support them. Check RTPs and see if there is growth trend in park and ride lots. <b>(TAC recommends removal)</b>	X	n/a
	Carpool <b>(Need to talk to SANDAG for statewide applicability)</b>	Aggressively support a statewide carpooling program. SANDAG increases carpooling by 70% to receive ~1% reduction in VMT. <sup>578</sup>	O	<b>Marginal:</b> Assuming SANDAG assumptions are achievable.
	Car sharing <b>(This will need to be focused in on the most dense areas)</b>	Aggressively support a statewide car sharing program. MTC increased car sharing to 15% adoption rate which reduces emissions by 2.6% per capita in 2020 and 2035. <sup>9</sup>	O	<b>Marginal to moderate:</b> Assuming MTC assumptions are achievable.

<b>Mode Shift</b>	Expand <b>and enhance</b> transit and passenger rail	Increase and improve frequency by doubling it (which may include Bus Rapid Transit or BRT)	X/O	<b>Moderate to marginal:</b> Transit shares would likely increase by substantial margins, although statewide transit mode shares would still be low relatively low compared to auto mode.
	Expand bike	Identifying what is the maximum contribution bike and pedestrian infrastructure can contribute towards VHD and GHG reductions.	O	<b>Marginal:</b> Bicycling is a very small mode share. However, a review of what might potentially be achieved should be reviewed.
	Expand pedestrian		O	<b>Marginal to moderate:</b> Walking is a substantial mode share, but trip lengths are very short, resulting in relatively small contributions to GhG reductions.

<b>Operational Efficiency</b>	HOV/HOT lanes	Utilize the existing capacity in the HOV/HOT lanes for complete system operational efficiencies. (Also, increasing occupancy requirements and determining expansion through new lanes or replacing existing general purpose lanes. PAC discussion required)	X/O	<b>Moderate to marginal:</b> Unclear on impacts of raising occupancy requirements, other than faster HOV/HOT lane speeds relative to mixed flow lanes.
	Incident and emergency management	SACOG identified an aggressive deployment of incident management reducing GHG by <0.5% in 2020 and 1.0% in 2030. <sup>10</sup>	O	<b>Marginal:</b> Assuming SACOG assumptions are achievable.
	Caltrans' Transportation Management System Master Plan	TMS includes ramp metering, incident management, and traveler information can produce an estimated 1-2% reduction in GHG per capita. <sup>11</sup>	O	Assumptions are achievable.
	Intelligent Transportation System and advance vehicle and roadside communication	SACOG identified an aggressive deployment of ITS reducing GHG by 0.24% in 2020 and 0.62% in 2030. <sup>12</sup>	O	<b>Marginal:</b> Assuming SACOG assumptions are achievable.

<b>Public Education/ Behavior</b>	Eco-Driving – Passenger	A collection of driving behavior that increase vehicle fuel efficiency and thus greenhouse gas (GHG) emissions. <sup>13</sup>	O	
	Reduce Speed Limits	Speed limits and enforcement can play a role in reducing fuel consumption, which impacts GHG emissions. <sup>14</sup>	O	
	Voluntary Travel Behavior Change	This program changes travel behavior by targeting their individual attitudes, goals, and behaviors, increasing their awareness of travel choice impacts, and providing the skills to analyze and change their travel behavior. <sup>15</sup>	O	

<sup>1</sup> Pg. 95; <http://www.scagrtpt.net/PDFs/Complete2012RTP-low.pdf>

<sup>2</sup> Pg. 5; [http://onebayarea.org/pdf/final\\_supplemental\\_reports/FINAL\\_PBA\\_Financial\\_Assumptions.pdf](http://onebayarea.org/pdf/final_supplemental_reports/FINAL_PBA_Financial_Assumptions.pdf)

<sup>3</sup> Pg.8; [http://www.alamedactc.org/files/managed/Document/11114/AlamedaCTC\\_I-680\\_Annual\\_Report\\_FY11-12.pdf](http://www.alamedactc.org/files/managed/Document/11114/AlamedaCTC_I-680_Annual_Report_FY11-12.pdf) and <http://fastrak.511sd.com/san-diego-toll-roads/i-15-express-lanes>

<sup>4</sup> Pg. 81; <http://dot.ca.gov/hq/tsip/hpms/hpmslibrary/prd/2011prd/2011prd.pdf>

<sup>5</sup> Pg. 97; <http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf>

<sup>6</sup> Pg. 2, [http://www.arb.ca.gov/cc/sb375/policies/telecommuting/telecommuting\\_brief120313.pdf](http://www.arb.ca.gov/cc/sb375/policies/telecommuting/telecommuting_brief120313.pdf)

<sup>7</sup> Pg. 10; <http://nhts.ornl.gov/2009/pub/stt.pdf>

<sup>8</sup> Pg. 4; [http://www.arb.ca.gov/cc/sb375/mpo/sandag/targets\\_sandag72710.pdf](http://www.arb.ca.gov/cc/sb375/mpo/sandag/targets_sandag72710.pdf)

<sup>9</sup> Pg. 85; [http://onebayarea.org/pdf/final\\_supplemental\\_reports/FINAL\\_PBA\\_Predicted\\_Traveler\\_Responses.pdf](http://onebayarea.org/pdf/final_supplemental_reports/FINAL_PBA_Predicted_Traveler_Responses.pdf)

<sup>10</sup> Pg. 311; <http://www.sacog.org/2035/files/MTP-SCS/appendices/C-4%20SACSIM%20Documentation.pdf>

<sup>11</sup> Pg. 20; <http://www.arb.ca.gov/cc/sb375/mpo/prelimreport.mtc.sacog.sandag.scag.pdf>

<sup>12</sup> Pg. 316; <http://www.sacog.org/2035/files/MTP-SCS/appendices/C-4%20SACSIM%20Documentation.pdf>

<sup>13</sup> Pg. 51, [http://www.dot.ca.gov/hq/tpp/offices/osp/ctp2040/ctp2040\\_tac/jan\\_9\\_2013/Interregional\\_GHG\\_Final\\_Report\\_2-14-14.pdf](http://www.dot.ca.gov/hq/tpp/offices/osp/ctp2040/ctp2040_tac/jan_9_2013/Interregional_GHG_Final_Report_2-14-14.pdf)

<sup>14</sup> Pg. 52, [http://www.dot.ca.gov/hq/tpp/offices/osp/ctp2040/ctp2040\\_tac/jan\\_9\\_2013/Interregional\\_GHG\\_Final\\_Report\\_2-14-14.pdf](http://www.dot.ca.gov/hq/tpp/offices/osp/ctp2040/ctp2040_tac/jan_9_2013/Interregional_GHG_Final_Report_2-14-14.pdf)

<sup>15</sup> Pg. F-6, [http://www.dot.ca.gov/hq/tpp/offices/osp/ctp2040/ctp2040\\_tac/jan\\_9\\_2013/Interregional\\_GHG\\_Final\\_Report\\_2-14-14.pdf](http://www.dot.ca.gov/hq/tpp/offices/osp/ctp2040/ctp2040_tac/jan_9_2013/Interregional_GHG_Final_Report_2-14-14.pdf)