



Appendix E: Reduction Measures, Assumptions and Attributed Reductions

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APPENDIX E1: 2020

Transportation Reduction Measures

2020

Pavley I and II and Low Carbon Fuel Standard Calculated on Transportation Tab

R1-T 4 Tire Pressure Program

The AB32 early action measure involves actions to ensure that vehicle tire pressure is maintained to manufacturer specifications. By 2020, this requirement will reduce emissions in California by approximately 0.55 MMTCO₂e, representing 0.3 percent of emissions from passenger/light-duty vehicles in the State.

Reduction to automobiles & light duty		
Trucks	=	0.30%

R1-T 5 Low Rolling Resistance Tires

This AB32 early action measure would increase vehicle efficiency by creating an energy efficiency standard for automobile tires to reduce rolling resistance. By 2020, this requirement will reduce emissions in California by approximately 0.3 MMTCO₂e, representing 0.2 percent of emissions from passenger/light-duty vehicles in the State.

Reduction to automobiles & light duty		
Trucks	=	0.20%

R1-T 6 Low Friction Engine Oils

This AB32 early action measure would increase vehicle efficiency by mandating the use of engine oils that meet certain low friction specifications. By 2020, this requirement will reduce emissions in California by approximately 2.8 MMTCO₂e, representing 1.7 percent of emissions from passenger light-duty vehicles in the State.

Reduction to automobiles & light duty		
Trucks	=	1.70%

R1-T 7 Goods Movement Efficiency Measures

This AB32 early action measure targets system wide efficiency improvements in goods movement to achieve GHG reductions from reduced diesel combustion. By 2020, this requirement will reduce emissions in California by approximately 3.5 MMTCO₂e, representing 1.6 Percent of emissions from all mobile sources (on-road and off-road) in the State.

Reduction afforded to Medium and Heavy Duty Vehicle emissions	=	1.60%
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R1-T 8 Heavy-Duty Vehicle GHG Emission Reduction (Aerodynamic Efficiency)

This AB32 early action measure would increase heavy-duty vehicle (long-haul trucks) efficiency by requiring installation of best available technology and/or CARB approved technology to reduce aerodynamic drag and rolling resistance. By 2020, this requirement will reduce emissions in California by approximately 0.93 MMTCO₂e, representing 1.9 percent of emissions from heavy-duty vehicles in the State.

Reduction afforded to Heavy Duty Vehicles emissions	=	1.90%
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R1-T 9 Medium and Heavy Duty Vehicle Hybridization

The implementation approach for this AB 32 measure is to adopt a regulation and/or incentive program that reduce the GHG emissions of new trucks (parcel delivery trucks and vans, utility trucks, garbage trucks, transit buses, and other vocational work trucks) sold in California by replacing them with hybrids. By 2020, this requirement will reduce emissions in California by approximately 0.5 MMTCO₂e, representing 0.2 percent of emissions from all on-road mobile sources in the State. This reduction is also equivalent to a 1.0 percent reduction of emissions from all heavy-duty trucks in the State.

Reduction afforded to passenger cars	=	0.20%
Reduction afforded to heavy duty trucks	=	1.00%

R1-T 10 Regional SB 375 Targets

Regional transportation emission reduction targets have been established. Statewide, this requirement is expected to reduce emissions by 5 MMTCO_{2e}, which is equivalent to 2 percent of emissions from all mobile emission sources. ARB, in conjunction with SCAG, has adopted a target of an 8% decrease in transportation emissions by 2020 for the region. Many of the other reduction strategies included will work toward achieving this target.

Reduction afforded to mobile emission sources = 6.00%

R1-T 11 CA High Speed Rail

California's planned high speed rail system is anticipated to reduce transportation emissions by 1 MMTCO_{2e}. This amounts to 0.4% of the State's transportation emissions. There are stations planned in or near Riverside County, so the County will experience a similar reduction in emissions.

Reduction afforded to mobile emission sources = 0.00%

IM-T 1 Employment Based Trip and VMT Reduction

Implementation of this measure would require adopting a voluntary trip reduction ordinance that promotes commuter-choice programs, employer transportation management, guaranteed ride home programs and commuter assistance and outreach type programs intended to reduce commuter vehicle miles traveled. A guaranteed ride home program is a program that ensures employees that take advantage of carpooling opportunities are guaranteed a safe ride home should the employee miss the carpool pick-up time due to work related activities. This could be as simple as the employer paying for taxi service for the employee. This measure would require employers with more than 100 employees within the unincorporated County to establish a trip reduction plan that would incorporate annual employee commute surveys, marketing of commute alternatives, ride matching assistance, and transit information at a minimum. This reduction measure adds to and enhances Mobility Policies 2.G-2 and 2.G-3.

Assumptions:

- * By 2020, this measure results in a 0.2% reduction in passenger/light-duty VMT in the County.
- * The percentage reduction reflects growing decentralized & geographically extensive transportation network in the County.
- * Measures R1-T1 through R1-T7 are implemented

IM-T1 Reductions:

Reduction afforded to passenger/light duty VMT in county	=	25.00%	
% Eligible Employees	=	80.00%	(CAPCOA estimate)
% Reduction Afforded	=	20.00%	

IM-T 2 Increased Residential Density

Designing the Project with increased densities, where allowed by the General Plan and/or Zoning Ordinance reduces GHG emissions associated with traffic in several ways. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. This strategy also provides a foundation for implementation of many other strategies which would benefit from increased densities

From CAPCOA: % VMT reduction = A * B where: A is the % increase in housing density and B is the elasticity of VMT to housing density.

Assumptions:

- * Assume housing density increases by 150%
- * Elasticity of VMT w.r.t. housing density is 0.07
- * Measures R2-T2, R2-T3, R2-T5, R2-T6, R2-T8, and R3-T1 are implemented.

Reductions:

Reduction afforded to passenger/light duty VMT in county	=	13.50%
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IM-T 3 Mixed Use Development

The demand for transportation is influenced by the density and geographic distribution of people and places. Whether neighborhoods have sidewalks or bike paths, whether homes are within walking distance of shops or transit stops will influence the type and amount of transportation that is utilized. By changing the focus of land use from automobile centered transportation, a reduction in vehicle miles traveled will occur. Implementation of Policies LU1.2 (Balanced Land Use Pattern), LU1.3 (Adequate Land Use Supply), LU 3.5 (Infill Development), LU 3.9 (Rural Hubs), LU 3.12 (Mixed Use); Mobility Policies M 3.1 (Transit Service for Residents), M 3.2 (Transit in New Development), M 3.3 (Transit Integration); and Agricultural Policies AG 4.4 (Farm worker Housing), AG 4.6 (Local Processing), AG 4.7 (Local Purchasing), and AG 4.12 (Support Uses) will all work together to provide a reduction in VMT for the County, by changing the

focus of land use away from vehicle centered transportation to the increased densities and lay-outs that foster the implementation and use of alternate modes of transportation.

Assumptions:

- * Assumes low range VMT reduction of 9%.
- * Measures R2-T2, R2-T3, R2-T5, R2-T6, R2-T8, and R3-T1 are implemented.

Reductions:

Reduction afforded to passenger/light duty
VMT in county = 15.00%

IM-T 4 Preferential Parking

Implementation of this reduction measure would encourage the County to adopt a comprehensive parking program for public and private parking lots that facilitate carpooling and alternate transportation. Incentives to encourage carpooling and the use of alternate transportation methods could include:

- ❖ Providing reserved preferential parking spaces for car-share, carpool, and ultra-low or zero emission vehicles;
- ❖ Provide larger parking spaces that can accommodate vans used for ride-sharing programs and reserve them for vanpools; and include adequate passenger waiting/loading areas;
- ❖ Consider restricting the number of parking spaces within the County by sharing parking among different land uses where feasible. For example in areas where there are multiple land uses provide resident restricted parking during nighttime hours (7pm to 7am) and open the parking lot for use by patrons of the surrounding commercial buildings during daytime hours; and
- ❖ Provide convenient pedestrian pathways through parking areas.

Assumptions:

- * The percentage reduction reflects growing decentralized & geographically extensive transportation network in the County.
- * Measures R1-T1 through R1-T7 and R2-T1 - R2-T2 are implemented
- * Reduction is equal to 0.6% from all vehicle miles traveled by passenger and light duty vehicles in the County.

Reductions:

Reduction afforded to passenger/light duty

VMT in county = 0.60%

IM-T 5

Roadway Improvements Including Signal Synchronization and Transportation Flow Management

A study examined traffic conditions in Southern California using energy and emissions modeling and calculated the impacts of 1) congestion mitigation strategies to smooth traffic flow, 2) speed management techniques to reduce high free-flow speeds, and 3) suppression techniques to eliminate acceleration/deceleration associated with stop-and-go traffic. Using typical conditions on Southern California freeways, the strategies could reduce emissions by 7 to 12 percent. (from CAPCOA) Emissions reductions are highly dependent on current level of congestion on roadways.

Assumptions:

- * Results in a 7-12% reduction in emissions (From CAPCOA)
- * 12% reduction in emissions used as a conservative estimate
- * Measures R1-T1 through R1-T7 and R2-T1 - R2-T3 are implemented

Reductions:

Reduction afforded to passenger/light duty
VMT in county = 12.00%

IM-T 6 Provide a Comprehensive System of Facilities for Non-motorized Transportation

Mobility Goal M 5, and land use policies LU 1.10 (Efficient Land Use Patterns) and LU 4.8 (Quality New Development) require the County to address bicycle and pedestrian facilities. These goals and policies should: encourage the creation of bike lanes and walking paths directed to the location of schools, provide adequate bicycle parking; and encourage the development of bicycle stations, attended parking, and other attended bicycle support facilities at intermodal hubs. Bicycle stations are full-service bicycle facilities that in addition to providing secure, guarded bicycle parking could include other amenities such as “valet” bicycle service, showers, bicycle rentals, or repair services. These types of requirements are intended for large residential and non-residential development as well as large employers (500 or more employees). In addition, the establishment of multi-use trails that promote off-street bicycle and pedestrian travel as well as secure bicycle racks along these pathways will encourage their use.

- ❖ Proximity to bike lanes;
- ❖ Elimination of impediments to bicycle and pedestrian circulation;
- ❖ Secure bicycle storage;
- ❖ Bicycle and pedestrian incentive programs; and
- ❖ Showers and lockers.

Assumptions:

- * The percentage reduction reflects growing decentralized & geographically extensive transportation network in the County.
- * Measures R1-T1 through R1-T7 and R2-T1 - R2-T5 are implemented are implemented
- * Results in a 0.65% reduction in vehicle miles traveled by passenger cars and light duty trucks

Reductions:

Reduction afforded to passenger/light duty VMT County from bike facilities at non-residential	=	0.65%
% Reduction from pedestrian facilities	=	14.00%

IM-T 7 Expand Renewable Fuel/Low-Emission Vehicle Use

Implementation of the following would promote the expanded use of renewable fuel and low-emission vehicles:

- ❖ Collaboration between local and regional governments and business to foster the increased use of renewable fuels. This can be accomplished by coordinating the siting of new alternative fueling/recharging locations for example.
- ❖ Providing preferential parking for ultra low-, zero- emission, and alternative fuel vehicles;
- ❖ Collaboration with energy providers to ensure the availability of necessary facilities and infrastructure to encourage the use of privately owned zero emission vehicles. This can be accomplished by having conveniently located charging and fueling stations for these vehicles.

- ❖ Provide incentives for taxicabs to use gas-electric hybrid vehicles or, at a minimum, smaller more fuel-efficient vehicles.

Assumptions:

- * Each passenger vehicle (27.5 mpg avg) is replaced with similar electric vehicle
- * 95% decrease in emissions is afforded for each vehicle
- * Measures R1-T1 through R1-T7 and R2-T1 - R2-T6 are implemented

Reductions:

Emissions Reduction from each vehicle		
exchanged for electric vehicle	=	95.0%
% of electric vehicles in 2020	=	25.00%
Reduction afforded to passenger/light duty VMT (=	23.75%

IM-T 8 Anti-Idling Enforcement

This measure involves the adoption and enforcement of an Anti-Idling Policy for heavy-duty diesel trucks, including local delivery trucks and long-haul truck transport within the County. This policy would prohibit idling of on and off-road heavy duty diesel vehicles for more than 5 minutes. This policy would be implemented by requiring signage at all loading docks and along truck routes informing drivers of the requirement to shut down their trucks after five minutes of idle time at loading docks and parking areas. By 2020 a 100% compliance with the anti-idling rules will reduce emissions in California by approximately 0.7 MMTCO₂e, representing 1.9 percent of emissions from heavy-duty diesel vehicles.

Assumptions:

- * By 2020, this measure results in a 1.9% reduction in VMT from Medium Duty Vehicles in the County.
- * By 2020, this measure results in a 1.9% reduction in VMT from Heavy Duty Vehicles in the County.
- * Measures R1-T1 through R1-T7 are implemented

Reductions:

Reduction afforded to Medium and Heavy		
Duty Vehicle Emissions	=	3.61%

IM-T 9 Increase Public Transit

Assumes an increase in public transit coverage to expand upon Riverside County's one existing metrolink station.
Estimated increase of 15 percent

Assumptions:

- * All default values from CAPCOA
- *
- * Measures R1-T1 through R1-T7 are implemented

Reductions:

% increase in transit coverage	=	30.00%
city or transit ridership with respect to service coverage	=	1.01
Existing transit mode share (default for suburban area)	=	1.30%
Adjustments from transit ridership increase to VMT	=	0.67
Total Reductions afforded to passenger vehicles	=	26.391%

IM-T 10 Employee Commute Alternative Schedule

Assumes 30% of employees are eligible.
The 30% are evenly split between 9/80 schedule, 4 day-40 hour work week, and 1.5 days of telecommuting
Numbers from CAPCOA
10% 9/80: 0.7% VMT reduction
10% 4day: 1.5% VMT reduction
10% 1.5 day tele commute: 2.2% VMT reduction

Total reduction afforded to passenger vehicles: = 10.7%

Energy Reduction Measures

2020

R1-E 1 Renewable Portfolio Standard for Building Energy Use

Senate Bills (SBs) 1075 (2002) and 107 (2006) created the State's Renewable Portfolio Standard (RPS), with an initial goal of 20 percent renewable energy production by 2010. Executive Order (EO) S-14-08 establishes a RPS target of 33 percent by the year 2020 and requires State agencies to take all appropriate actions to ensure the target is met. The 33 percent RPS by 2020 goal is supported by the California Air Resources Board (CARB), though its feasibility is not certain due to current limitations in production and transmission of renewable energy.

Assumptions:

- * Southern California Edison reaches its 33% goal for 2020.
- * Assumes that in 2008 SCE's renewable portfolio was at 14% with respect to California's RPS.
- * Assumes a 19% reduction in emissions from existing kWhs used.
- * Assumes R1-E2 through R1-E6 have been implemented.

Reductions:

% Reduction Afforded = 19.00%

R1-E 2 & 3 AB1109 Energy Efficiency Standard for Lighting

Assembly Bill (AB1109) mandated that the California Energy Commission (CEC) on or before December 31, 2008, adopt energy efficiency standards for general purpose lighting. These regulations, combined with other State efforts, shall be structured to reduce State-wide electricity consumption in the following ways:

- ❖ R1-E2: At least 50 percent reduction from 2007 levels for indoor residential lighting by 2018; and
- ❖ R1-E3: At least 25 percent reduction from 2007 levels for indoor commercial and outdoor lighting by 2018.

Assumptions:

- * Assumes 20% of residential electrical use is from lighting.
- * Assumes 37.14% of commercial/industrial electrical usage is from lighting.
- * Assumes 5.5% of commercial electrical usage is from outdoor streetlights and area lights.

Reductions:

% reduction from residential electrical use = 10.00%
% reduction from commercial/industrial electrical use = 10.66%

R1-E 4 Electrical Energy Efficiency

This measure captures the emission reductions associated with electricity energy efficiency activities included in CARB's AB32 Scoping Plan that are not attributed to other R1 or R2 reductions, as described in this report. This measure includes energy efficiency measures that CARB views as crucial to meeting the State-wide 2020 target, and will result in additional emissions reductions beyond those already accounted for in California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24, Part 6 of the California Code of Regulations; hereinafter referred to as, "Title 24 Energy Efficiency Standards"), the County's adopted Green Building ordinance (effective January 1, 2011), etc. By 2020, this requirement will reduce emissions in California by approximately 21.3 MMTCO₂e, representing 17.5 percent of emissions from all electricity in the State. This measure includes the following strategies:

- ❖ "Zero Net Energy" buildings (buildings that combine energy efficiency and renewable generation so that they, based on an annual average, extract no energy from the grid);
- ❖ Broader standards for new types of appliances and for water efficiency;
- ❖ Improved compliance and enforcement of existing standards;
- ❖ Voluntary efficiency and green building targets beyond mandatory codes;
- ❖ Voluntary and mandatory whole-building retrofits for existing buildings;
- ❖ Innovative financing to overcome first-cost and split incentives for energy efficiency, on-site renewables, and high efficiency distributed generation;
- ❖ More aggressive utility programs to achieve long-term savings;
- ❖ Water system and water use efficiency and conservation measures;
- ❖ Additional industrial and agricultural efficiency initiatives; and
- ❖ Providing real time energy information technologies to help consumers conserve and optimize energy performance.

Assumptions:

- * The percent reduction from California's emissions from various energy efficiency measures is equal to the County's emissions from this measures or 17.5%.
- * Assumes application only to New development

Reductions:

% reduction afforded	=	17.50%
% New Residential	=	38.43%
% New Commercial	=	62.98%
% reduction applied to residential	=	6.72%
% reduction applied to commercial	=	11.02%

R1-E 5 Natural Gas Energy Efficiency

This measure captures the emission reductions associated with natural gas energy efficiency activities included in CARB's AB32 Scoping Plan that are not attributed to other R1 or R2 reductions, as described in this report. This measure includes energy efficiency measures that CARB views as crucial to meeting the State-wide 2020 target, and will result in additional emissions reductions beyond those already accounted for in California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24, Part 6 of the California Code of Regulations; hereinafter referred to as, "Title 24 Energy Efficiency Standards"), the County's adopted Green Building ordinance(effective January 1, 2011), etc. By 2020, this requirement will reduce emissions in California by approximately 4.3 MMTCO₂e, representing 6.2 percent of emissions from all natural gas combustion in the State. This measure includes the following strategies:

- ❖ "Zero Net Energy" buildings (buildings that combine energy efficiency and renewable generation so that they, based on an annual average, extract no energy from the grid);
- ❖ Broader standards for new types of appliances and for water efficiency;
- ❖ Improved compliance and enforcement of existing standards;
- ❖ Voluntary efficiency and green building targets beyond mandatory codes;
- ❖ Voluntary and mandatory whole-building retrofits for existing buildings;
- ❖ Innovative financing to overcome first-cost and split incentives for energy efficiency, on-site renewables, and high efficiency distributed generation;
- ❖ More aggressive utility programs to achieve long-term savings;
- ❖ Water system and water use efficiency and conservation measures;
- ❖ Additional industrial and agricultural efficiency initiatives; and
- ❖ Providing real time energy information technologies to help consumers conserve and optimize energy performance.

Assumptions:

- * The percent reduction from California's emissions from various energy efficiency measures is equal to the County's emissions from this measures or 6.2%.
- * Assumes application only to New development

Reductions:

% reduction afforded	=	6.20%
% New Residential	=	38.43%
% New Commercial	=	49.01%
% reduction applied to residential	=	2.38%
% reduction applied to commercial	=	3.04%

R1-E 6 Increased Combined Heat and Power

This measure captures the reduction in building electricity emissions associated with the increase of combined heat and power activities, as outlined in CARB's AB32 Scoping Plan. The Scoping Plan suggests that increased combined heat and power systems, which capture "waste heat" produced during power generation for local use, will offset 30,000 GWh State-wide in 2020. Approaches to lowering market barriers include utility-provided incentive payments, a possible CHP portfolio standard, transmission and distribution support systems, or the use of feed-in tariffs. By 2020, this requirement will reduce emissions in California by approximately 6.7 MMTCO₂e, representing 7.6 percent of emissions from all electricity in the State.

Assumptions:

- * The percent reduction from California's emissions is equal to the County's emissions from this measures or 7.6%.

Reductions:

% reduction afforded = 7.60%

R1-E 7 Industrial Efficiency Measures

This measure captures the reduction in industrial building energy emissions associated with the energy efficiency measures for industrial sources included in CARB's AB32 Scoping Plan. By 2020, this requirement will reduce emissions in California by approximately 1.0 MMTCO₂e, representing 3.9 percent of emissions from all industrial natural gas combustion in the State. CARB proposes the following possible State-wide measures:

- ❖ Oil and gas extraction;
- ❖ GHG leak reduction from oil and gas transmission;
- ❖ Refinery flare recovery process improvements; and
- ❖ Removal of methane exemption from existing refinery regulations.

Assumptions:

- * The percent reduction from California's emissions is equal to the County's emissions from this measures or 3.9%.
- * Assumes applies to all residential, commercial, and industrial land uses.

Reductions:

% reduction afforded = 3.90%

R2-E 1 Residential Energy Efficiency Program

This measure involves the adoption of a program that facilitates energy efficient design for all new residential buildings to be 20% beyond the current Title 24 Standards . This energy efficiency requirement is equal to that of the LEED for Homes and ENERGY STAR programs.

The 2008 Title 24 Energy Standards were adopted by the Energy Commission on April 23, 2008, with the 2008 Residential Compliance Manual adopted by the Commission on December 17, 2008. Compliance with the 2008 standards went into effect January 1, 2010. In an effort to meet the overall goal of the California Energy Efficiency Strategic Plan of reaching zero net energy for residential buildings by 2020, the stringency of the Title 24 Energy Standards as regulated and required by the State will continue to increase every three years. As energy efficiency standards increase the County may want to periodically re-evaluate their percentage beyond Title 24 goal to ensure it is still a feasibly achievable goal.

- ❖ Install energy efficient appliances, including air conditioning and heating units, dishwashers, water heaters, etc.;
- ❖ Install solar water heaters;
- ❖ Install top quality windows and insulation;
- ❖ Install energy efficient lighting;
- ❖ Optimize conditions for natural heating, cooling and lighting by building siting and orientation.
- ❖ Use features that incorporate natural ventilation;
- ❖ Install light-colored "cool" pavements, and strategically located shade trees along all bicycle and pedestrian routes; and
- ❖ Incorporate skylights; reflective surfaces, and natural shading in buildings design and layouts.

The County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (33 points) the developer will meet the requirements of this measure. This system will assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the strategies outlined in the bullet points above.

Assumptions:

- * Applies to new development only.
- * Assumes new development to be 20% beyond current Title 24.

Reductions:

% of new residential development	=	38.43%
% reduction afforded	=	20.00%
Total % reduction	=	7.69%

R2-E 2 Residential Renewable Energy Program

This measure facilitates the voluntary incorporation of renewable energy (such as photovoltaic panels) into new residential developments. For participating developments, renewable energy application should be such that the new home’s projected energy use from the grid is reduced by 50%. The California Energy Commissions’ New Solar Homes Partnership is a component of the California Solar Initiative and provides rebates to developers of 6 or more units where 50% of the units include solar power. In addition this measure would encourage that all residents be equipped with “solar ready” features where feasible, to encourage future installation of solar energy systems. These features should include the proper solar orientation (south facing roof sloped at 20° to 55° from the horizontal), clear access on south sloped roofs, electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water systems, and space provided for a solar hot water tank. The incentive program should provide enough funding and other incentives as shown in the R3 measures to result in approximately fifty percent of new residential development participation in this program, thereby resulting in a 25% reduction in electrical consumption from new residential developments.

As an alternative to, or in support of, providing onsite renewable energy, the project proponent can buy into a purchased energy offset program that will allow for the purchase of electricity generated from renewable energy resources offsite. Purchased energy offsets (or a combination of incorporated renewables and purchased offsets) must be equal to 25% of the total projected energy consumption for the development. See R3-E3 for further details on the financing program.

Assumptions:

- * Applies to new development only.
- * Assumes that 50% of new development will participate.
- * Assumes that those developments participating will reduce electrical use by 50%.

Reductions:

% of residential that is new	=	38.43%
% reduction from energy use	=	65.00%
% participating	=	50.00%
Total % reduction	=	12.49%

R2-E 3 Residential Retrofit Implementation Program

This measure would initiate a County program that facilitates the incorporation of energy reduction measures for residential buildings undergoing major renovations. AB 811 is a potential funding source to the County for implementing incentive programs to encourage residences within the County to undertake energy efficiency retrofitting and reducing energy consumption in retrofitted homes by a minimum of 15%. As with the new development, the County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (100 points) the developer will meet the requirements of this measure. This system will be provided to assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following:

- ❖ Replace inefficient air conditioning and heating units with new energy efficient models;
- ❖ Replace older, inefficient appliances with new energy efficient models;
- ❖ Replace old windows and insulation with top-quality windows and insulation;
- ❖ Install solar water heaters;
- ❖ Replace inefficient and incandescent lighting with energy efficient lighting; and
- ❖ Weatherize the existing building to increase energy efficiency.

Assumptions:

- * Applies to existing development only.
- * Assumes that 30% of existing development will participate.
- * Assumes that those developments participating will increase efficiency by 20%.
- * Assumes reduction from electrical and natural gas.

Reductions:

% of 2020 that is existing residential development	=	61.57%
% reduction applied	=	50.00%
% existing homes participating	=	30.00%
Total % reduction	=	9.24%

R2-E 4 Residential Renewable Retrofit Program

This measure will initiate an incentive program that encourages residents to retrofit their homes with photovoltaic panels such that 50% of all of the home's electrical usage is offset. The California Energy Commission's Solar Initiative has incentives available to home owners.

Assumptions:

- * Applies to existing development only.
- * Assumes that 25% of existing development will participate.
- * Assumes that those developments participating will reduce emissions from electricity by 60%.
- * Assumes reduction from electricity.

Reductions:

% of 2020 that is existing residential development	=	61.57%
% reduction applied	=	65.00%
% existing homes participating	=	30.00%
Total % reduction	=	12.01%

R2-E 5 Commercial Energy Efficiency Program

This measure involves the adoption of a County Program that facilitates the energy efficient design for all new commercial buildings within Sutter Pointe to be 20% beyond the current Title 24 Standards which expands the new development requirements set forth in the Sutter Pointe Specific Plan EIR. This voluntary energy efficiency requirement is 10% greater than the minimum requirements of the LEED and ENERGY STAR programs. As energy efficiency standards increase the County may want to periodically re-evaluate their percentage beyond Title 24 goal to ensure it is still a feasibly achievable goal.

As described in R2-E1 above, the County could provide all developers with a list of potentially feasible GHG reduction measures that reflect the current state of the regulatory environment. The County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (100 points) the developer will meet the requirements of this measure. This system will provide flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following:

- ❖ Install energy efficient appliances, including air conditioning and heating units, dishwashers, water heaters, etc.;
- ❖ Install solar water heaters;
- ❖ Install top quality windows and insulation;
- ❖ Install energy efficient lighting;
- ❖ Optimize conditions for natural heating, cooling and lighting by building siting and orientation.
- ❖ Use features that incorporate natural ventilation;
- ❖ Install light-colored "cool" pavements, and strategically located shade trees along all bicycle and pedestrian routes; and

- ❖ Incorporate skylights; reflective surfaces, and natural shading in buildings design and layouts.

Assumptions:

- * Applies to new development only.
- * Assumes new development to be 28% beyond current Title 24.

Reductions:

% new com/ind that is new	=	62.98%
% reduction afforded	=	28.00%
Total % reduction	=	17.63%

R2-E 6 Commercial/Industrial Renewable Energy Program

This measure would facilitate the voluntary incorporation of renewable (solar or other renewable) energy generation into the design and construction of new commercial, office, and industrial developments. Renewable energy generation shall be incorporated such that a minimum of 20% of the project’s total energy needs are offset. In addition this measure would encourage all facilities be equipped with “solar ready” features where feasible, to facilitate future installation of solar energy systems. These features should include the proper solar orientation (south facing roof sloped at 20^o to 55^o from the horizontal), clear access on south sloped roofs, electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water systems, and space provided for a solar hot water tank.

As an alternative to, or in support of, providing onsite renewable energy, the project proponent can buy into an offset program that will allow for the purchase of renewable energy resources offsite. Purchased energy offsets (or a combination of incorporated renewables and purchased offsets) must be equal 20% of the total projected energy consumption for the development. See R3-E3 for further details on the financing program.

Assumptions:

- * Applies to new development only.
- * Assumes that 75% of new development will participate.
- * Assumes that those developments participating will reduce electrical use by 65%.

Reductions:

% of com/ind development from growth	=	62.98%
% reduction from program	=	65.00%
% of participation	=	75.00%
Total % reduction	=	30.70%

R2-E 7 Commercial/Industrial Retrofit Program

This measure encourages all commercial or industrial buildings undergoing major renovations to reduce their energy consumption by a minimum of 20%. As with the new development, a menu of options will be provided to assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following:
(Includes both energy efficiency and renewable energy technologies)

- * Replace inefficient air conditioning and heating units with new energy efficient models;
- * Replace older, inefficient appliances with new energy efficient models;
- * Replace old windows and insulation with top-quality windows and insulation;
- * Install solar water heaters;
- * Replace inefficient and incandescent lighting with energy efficient lighting; and
- * Weatherize the existing building to increase energy efficiency.

Assumptions:

- * Applies to existing development only.
- * Assumes that 25% of existing development will participate.
- * Assumes that those developments participating will increase efficiency by 25%.
- * Assumes reduction from electrical and natural gas.

Reductions:

% from existing com/ind development	=	37.02%
% reduction applied	=	40.00%
% of participation	=	30.00%
Total % reduction	=	4.44%

R2-E 8

Induction Streetlight Retrofits

The new lamps are estimated to last 5 times longer and consume 50% less energy than the HPS lamps.

Assumptions:

- * Applies to streetlight electricity consumption
- * Assumes 20% of lamps will be retrofitted
- * Retrofitted lamps will use 50% less energy

Reductions:

% reduction applied	=	50.00%
% streetlights retrofitted	=	100.00%
% 2020 comm electricity use from streetlights	=	7.65%
Total % reduction	=	3.83%

Area Source Reduction Measures

2020

R2-L1	Electric Landscaping Equipment		
	49.5% % reduction		<i>CAPCOA report</i>
R2-L2	SCAQMD Healthy Hearths Program No new wood burning devices in homes		
R2-L3	10 to 25 Mandatory Curtailment days		
	Total Heating Days		120 (November-February)
	% Reduction		0.125

Purchased Water Reduction Measures

2020

R1-W 1 Renewable Portfolio Standard (33% by 2020) Related to Water Supply and Conveyance

This measure would increase electricity production from eligible renewable power sources to 33 percent by 2020. A reduction in GHG emissions results from replacing natural gas-fired electricity production with zero GHG-emitting renewable sources of power. By 2020, this requirement will reduce emissions from electricity used for water supply and conveyance in California by approximately 21.3 MMTCO₂e, representing 15.2 percent of emissions from electricity generation (in-State and imports).

Assumptions:

- * The percent reduction from California's emissions is equal to the County's emissions from electricity used for water supply and conveyance or 21%.
- * Assumes applies to all residential, commercial, and industrial land uses.

Reductions:

% reduction afforded = 19.00%

R2-W 1 Water Use Reduction Initiative

This initiative would reduce emissions associated with electricity consumption for water treatment and reduction and therefore are included with the energy reductions. This measure encourages the County to adopt a per capita water use reduction goal in support of the Governors Executive Order S-14-08 which mandates the reduction of water use of 20 percent per capita. The County's adoption of a water use reduction goal would introduce requirements for new development and would provide cooperative support for water purveyors that are required to implement these reductions for existing developments. The County would also provide internal reduction measures such that County facilities will support this reduction requirement. The following represent potential programs that can be implemented to attain this reduction goal.

Water Conservation Program:

Under this program the excessive watering of landscaping, excessive fountain operation, watering during peak daylight hours, water of non-permeable surfaces, excessive water use for noncommercial washing, and water use resulting in flooding or runoff would be prohibited. In addition the program

would encourage efficient water use for construction activities, the installation of low-flow toilets and showerheads for all new developments, use of drought-tolerant plants with efficient landscape watering systems for all new developments, recycling of water used for cooling systems, use of pool covers, and the posting of water conservation signage at all hotels.

New Development Incentives:

Provide incentives for developers to comply with the California Green Building Standards Code as requirements for all new development. Under this Code new developments are required to reduce indoor potable water use by 20% beyond the Energy Policy Act of 1992 fixture performance requirements, and to reduce outdoor potable water use by 50% from a mid-summer baseline average consumption through irrigation efficiency, native plant selection, the use of recycled water and/or captured rainwater for example.

Water Meter Program:

Encourage water providers to install water meters for all County homes not using wells. This would provide for a better accounting of County water usage and provide potential costing per usage to help offset costs of the implementation of water conservation programs.

Water Efficiency Pricing Program

Under this program, the County would encourage water suppliers to adopt a water conservation pricing schedule (i.e. tiered rate) to encourage efficient water use. Notices could be provided in each billing showing water use budgets and the relationship between the budget and the actual usage.

Water Efficiency Retrofit Program:

This program would encourage upgrades in water efficiency for renovations or additions of residential, commercial, office, and industrial properties equivalent to that of new developments. The County would work with local water purveyors to achieve consistent standards, and to develop, approve, and review procedures for implementation.

Water Efficiency Training and Education:

Under this measure the County, in coordination with local water purveyors would implement a public information and education program that promotes water conservation. The program could include certification programs for irrigation designers, installers, and managers, as well as classes to promote the use of drought tolerant, native species and xeriscaping.

R2-W 1 Water Use Reduction Initiative

Increased Recycled Water Use:

Promote the use of municipal wastewater and graywater for agricultural, industrial and irrigation purposes. This measure would be subject to approval of the State Health Department and compliance with Title 22 provisions. This measure would facilitate the following:

- ❖ Inventory of non-potable water uses that could be substituted with recycled or graywater;
- ❖ Determination of the feasibility of producing and distributing recycled water for groundwater replenishment;
- ❖ Determine the associated energy/GHG tradeoffs for treatment/use vs. out of basin water supply usage; and
- ❖ Cooperation and coordination with responsible agencies to encourage the use of recycled water where energy tradeoffs are favorable.

Assumptions:

- * Applies to all land uses (existing and new development)
- * Assumes emission reduction of 20%.
- * Assumes reduction to electricity used to treat and convey water and wastewater.
- * Assumes that approximately 14% of the electricity usage is used to pump water from wells.

Reductions:

% reduction applied to water usage directly = 20.00%

IM-W 1 Increase Reclaimed Water Use

This measure would increase electricity production from eligible renewable power sources to 33 percent by 2020. A reduction in GHG emissions results from replacing natural gas-fired electricity production with zero GHG-emitting renewable sources of power. By 2020, this requirement will reduce emissions from electricity used for water supply and conveyance in California by approximately 21.3 MMTCO_{2e}, representing 15.2 percent of emissions from electricity generation (in-State and imports).

Assumptions:

- * Percent of total water use coming from reclaimed is 5%
- * Percentage reduction GHG by using reclaimed rather than potable water is 81%

Reductions:

% reduction afforded = 4.05%

Solid Waste Reduction Measures

2020

IM-W 1 County Diversion Program

This measure would implement a County wide waste diversion plan to further the goal of diverting 75% of all waste from landfills by 2020. The following is a potential list of waste reduction measures that will further strengthen existing waste reduction/diversion programs.

- ❖ Provide outreach and education programs for residential, commercial, and industrial land uses in order to further promote existing County diversion programs;
- ❖ Increase disposal fees and/or reduce residential pick-up frequency;
- ❖ Encourage businesses to adopt a voluntary procurement standard and prioritize those products that have less packaging, are reusable, recyclable, or compostable;
- ❖ Support State level policies that provide incentives for efficient and reduced packaging waste for commercial products;

- ❖ Expand list of recyclable materials;
- ❖ Work with Recology to develop and provide waste audits;
- ❖ Make recycling and composting opportunities mandatory at all public events;
- ❖ Establish an appliance end-of-life requirement;
- ❖ For new developments, require the use of recycled-content materials, or recycled materials;
- ❖ Require a minimum of 15% of materials used in construction be sourced locally, as feasible; and
- ❖ Encourage the use of recycled building materials and cement substitutes for new developments.

Assumptions:

- * Assumes an existing diversion rate of 53%
- * Assumes 2020 goal of 80% diversion rate.
- * Does not apply to construction activities
- * % reduction applied is equivalent to: $(80-53)/47$

Reductions:

% reduction applied	=	57.45%
% not from construction activities	=	81.20%
% reduction applied	=	46.65%

IM-W 2

Construction Diversion Program

This IM also implements General Plan Policies AQ 4.1 and AQ 5.1 by giving incentives through points within the Screening Table to new development that provided diversion of 70% of construction waste. This provides a 20% increase in diversion beyond AB2176, § 42911, that requires development projects to provide adequate areas for collecting and loading recyclable materials and ensures a 50% diversion rate prior to being issued a building permit.

% reduction applied is equivalent to: 20/50

Reductions:

% reduction applied	=	40%
% from construction activities	=	18.80%
% reduction applied	=	7.52%

APPENDIX E2: 2035

Transportation Reduction Measures

2035

Pavley I and II and Low Carbon Fuel Standard Calculated on Transportation Tab

R1-T 4 Tire Pressure Program

The AB32 early action measure involves actions to ensure that vehicle tire pressure is maintained to manufacturer specifications. By 2020, this requirement will reduce emissions in California by approximately 0.55 MMTCO₂e, representing 0.3 percent of emissions from passenger/light-duty vehicles in the State.

Reduction to automobiles & light duty Trucks = 0.30%

R1-T 5 Low Rolling Resistance Tires

This AB32 early action measure would increase vehicle efficiency by creating an energy efficiency standard for automobile tires to reduce rolling resistance. By 2020, this requirement will reduce emissions in California by approximately 0.3 MMTCO₂e, representing 0.2 percent of emissions from passenger/light-duty vehicles in the State.

Reduction to automobiles & light duty Trucks = 0.20%

R1-T 6 Low Friction Engine Oils

This AB32 early action measure would increase vehicle efficiency by mandating the use of engine oils that meet certain low friction specifications. By 2020, this requirement will reduce emissions in California by approximately 2.8 MMTCO₂e, representing 1.7 percent of emissions from passenger light-duty vehicles in the State.

Reduction to automobiles & light duty Trucks = 1.70%

R1-T 7 Goods Movement Efficiency Measures

This AB32 early action measure targets system wide efficiency improvements in goods movement to achieve GHG reductions from reduced diesel combustion. By 2020, this requirement will reduce emissions in California by approximately 3.5 MMTCO₂e, representing 1.6 Percent of emissions from all mobile sources (on-road and off-road) in the State.

Reduction afforded to Medium and Heavy Duty
Vehicle emissions = 1.60%

R1-T 8 Heavy-Duty Vehicle GHG Emission Reduction (Aerodynamic Efficiency)

This AB32 early action measure would increase heavy-duty vehicle (long-haul trucks) efficiency by requiring installation of best available technology and/or CARB approved technology to reduce aerodynamic drag and rolling resistance. By 2020, this requirement will reduce emissions in California by approximately 0.93 MMTCO₂e, representing 1.9 percent of emissions from heavy-duty vehicles in the State.

Reduction afforded to Heavy Duty Vehicles
emissions = 1.90%

R1-T 9 Medium and Heavy Duty Vehicle Hybridization

The implementation approach for this AB 32 measure is to adopt a regulation and/or incentive program that reduce the GHG emissions of new trucks (parcel delivery trucks and vans, utility trucks, garbage trucks, transit buses, and other vocational work trucks) sold in California by replacing them with hybrids. By 2020, this requirement will reduce emissions in California by approximately 0.5 MMTCO₂e, representing 0.2 percent of emissions from all on-road mobile sources in the State. This reduction is also equivalent to a 1.0 percent reduction of emissions from all heavy-duty trucks in the State.

Reduction afforded to passenger cars = 1.00%
Reduction afforded to heavy duty trucks = 2.00%

R1-T 10 Regional SB 375 Targets

Regional transportation emission reduction targets have been established. Statewide, this requirement is expected to reduce emissions by 5 MMTCO_{2e}, which is equivalent to 2 percent of emissions from all mobile emission sources. ARB, in conjunction with SCAG, has adopted a target of an 8% decrease in transportation emissions by 2020 for the region. Many of the other reduction strategies included will work toward achieving this target.

Reduction afforded to mobile emission sources = 8.00%

R1-T 11 CA High Speed Rail

California's planned high speed rail system is anticipated to reduce transportation emissions by 1 MMTCO_{2e}. This amounts to 0.4% of the State's transportation emissions. There are stations planned in or near Riverside County, so the County will experience a similar reduction in emissions.

Reduction afforded to mobile emission sources = 0.00%

IM-T 1 Employment Based Trip and VMT Reduction

Implementation of this measure would require adopting a voluntary trip reduction ordinance that promotes commuter-choice programs, employer transportation management, guaranteed ride home programs and commuter assistance and outreach type programs intended to reduce commuter vehicle miles traveled. A guaranteed ride home program is a program that ensures employees that take advantage of carpooling opportunities are guaranteed a safe ride home should the employee miss the carpool pick-up time due to work related activities. This could be as simple as the employer paying for taxi service for the employee. This measure would require employers with more than 100 employees within the unincorporated County to establish a trip reduction plan that would incorporate annual employee commute surveys, marketing of commute alternatives, ride matching assistance, and transit information at a minimum. This reduction measure adds to and enhances Mobility Policies 2.G-2 and 2.G-3.

Assumptions:

- * By 2035, this measure results in a 25% reduction in passenger/light-duty VMT in the County. The percentage reduction reflects a growing decentralized and geographically extensive transportation network in the County.
- * Measures R1-T1 through R1-T7 are implemented

Reductions:

Reduction afforded to passenger/light duty VMT in county	=	25.00%
% Eligible Employees	=	80.00%
% Reduction Afforded	=	20.00%

IM-T 2 Increased Residential Density

Designing the Project with increased densities, where allowed by the General Plan and/or Zoning Ordinance reduces GHG emissions associated with traffic in several ways. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. This strategy also provides a foundation for implementation of many other strategies which would benefit from increased densities

From CAPCOA: % VMT reduction = A * B where: A is the % increase in housing density and B is the elasticity of VMT with respect to housing density.

Assumptions:

- * Assume housing density increases by 150%
- * Elasticity of VMT w.r.t. housing density is 0.07
- * Measures R2-T2, R2-T3, R2-T5, R2-T6, R2-T8, and R3-T1 are implemented.

Reductions:

Reduction afforded to passenger/light duty VMT in county	=	17.50%
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IM-T 3 Mixed Use Development

The demand for transportation is influenced by the density and geographic distribution of people and places. Whether neighborhoods have sidewalks or bike paths, whether homes are within walking distance of shops or transit stops will influence the type and amount of transportation that is utilized. By changing the focus of land use from automobile centered transportation, a reduction in vehicle miles traveled will occur. Implementation of Policies LU1.2 (Balanced Land Use Pattern), LU1.3 (Adequate Land Use Supply), LU 3.5 (Infill Development), LU 3.9 (Rural Hubs), LU 3.12 (Mixed Use); Mobility Policies M 3.1 (Transit Service for Residents), M 3.2 (Transit in New Development), M 3.3 (Transit Integration); and Agricultural Policies AG 4.4 (Farm worker Housing), AG 4.6 (Local Processing), AG 4.7 (Local Purchasing), and AG 4.12 (Support Uses) will all work together to provide a reduction in VMT for the County, by changing the focus of land use away from vehicle centered transportation to the increased densities and lay-outs that foster the implementation and use of alternate modes of transportation.

Assumptions:

- * Assumes low range VMT reduction of 9%.
- * Measures R2-T2, R2-T3, R2-T5, R2-T6, R2-T8, and R3-T1 are implemented.

Reductions:

$$\begin{array}{rcl} \text{Reduction afforded to passenger/light duty} & & \\ \text{VMT in county} & = & 12.00\% \end{array}$$

IM-T 4 Preferential Parking

Implementation of this reduction measure would encourage the County to adopt a comprehensive parking program for public and private parking lots that facilitate carpooling and alternate transportation. Incentives to encourage carpooling and the use of alternate transportation methods could include:

- ❖ Providing reserved preferential parking spaces for car-share, carpool, and ultra-low or zero emission vehicles;
- ❖ Provide larger parking spaces that can accommodate vans used for ride-sharing programs and reserve them for vanpools; and include adequate passenger waiting/loading areas;
- ❖ Consider restricting the number of parking spaces within the County by sharing parking among different land uses where feasible. For example in areas where there are multiple land uses provide resident restricted parking during nighttime hours (7pm to 7am) and open the parking lot for use by patrons of the surrounding commercial buildings during daytime hours; and

- ❖ Provide convenient pedestrian pathways through parking areas.

Assumptions:

- * 0
- * Measures R1-T1 through R1-T7 and R2-T1 - R2-T2 are implemented
- * Reduction is equal to 0.1% from all vehicle miles traveled by passenger and light duty vehicles in the County.

Reductions:

$$\frac{\text{Reduction afforded to passenger/light duty}}{\text{VMT in county}} = 1.00\%$$

IM-T 5

Roadway Improvements Including Signal Synchronization and Transportation Flow Management

A study examined traffic conditions in Southern California using energy and emissions modeling and calculated the impacts of 1) congestion mitigation strategies to smooth traffic flow, 2) speed management techniques to reduce high free-flow speeds, and 3) suppression techniques to eliminate acceleration/deceleration associated with stop-and-go traffic. Using typical conditions on Southern California freeways, the strategies could reduce emissions by 7 to 12 percent. (from CAPCOA) Emissions reductions are highly dependent on current level of congestion on roadways.

Assumptions:

- * Results in a 7-12% reduction in emissions (From CAPCOA)
- * 12% reduction in emissions used as a conservative estimate
- * Measures R1-T1 through R1-T7 and R2-T1 - R2-T3 are implemented

Reductions:

$$\frac{\text{Reduction afforded to passenger/light duty}}{\text{VMT in county}} = 12.00\%$$

IM-T 6 Provide a Comprehensive System of Facilities for Non-motorized Transportation

Mobility Goal M 5, and land use policies LU 1.10 (Efficient Land Use Patterns) and LU 4.8 (Quality New Development) require the County to address bicycle and pedestrian facilities. These goals and policies should: encourage the creation of bike lanes and walking paths directed to the location of schools, provide adequate bicycle parking; and encourage the development of bicycle stations, attended parking, and other attended bicycle support facilities at intermodal hubs. Bicycle stations are full-service bicycle facilities that in addition to providing secure, guarded bicycle parking could include other amenities such as “valet” bicycle service, showers, bicycle rentals, or repair services. These types of requirements are intended for large residential and non-residential development as well as large employers (500 or more employees). In addition, the establishment of multi-use trails that promote off-street bicycle and pedestrian travel as well as secure bicycle racks along these pathways will encourage their use.

- ❖ Proximity to bike lanes;
- ❖ Elimination of impediments to bicycle and pedestrian circulation;
- ❖ Secure bicycle storage;
- ❖ Bicycle and pedestrian incentive programs; and
- ❖ Showers and lockers.

Assumptions:

- * 0
- * Measures R1-T1 through R1-T7 and R2-T1 - R2-T5 are implemented are implemented
- * Results in a 0.65% reduction in vehicle miles traveled by passenger cars and light duty trucks

Reductions:

Reduction afforded to passenger/light duty VMT		
County from bike facilities at non-residential	=	6.00%
% Reduction from pedestrian facilities	=	4.50%

IM-T 7 Expand Renewable Fuel/Low-Emission Vehicle Use

Implementation of the following would promote the expanded use of renewable fuel and low-emission vehicles:

- ❖ Collaboration between local and regional governments and business to foster the increased use of renewable fuels. This can be accomplished by coordinating the siting of new alternative fueling/recharging locations for example.
- ❖ Providing preferential parking for ultra low-, zero- emission, and alternative fuel vehicles;
- ❖ Collaboration with energy providers to ensure the availability of necessary facilities and infrastructure to encourage the use of privately owned zero emission vehicles. This can be accomplished by having conveniently located charging and fueling stations for these vehicles.
- ❖ Provide incentives for taxicabs to use gas-electric hybrid vehicles or, at a minimum, smaller more fuel-efficient vehicles.

Assumptions:

- * Each passenger vehicle (27.5 mpg avg) is replaced with similar electric vehicle
- * 79% decrease in emissions is afforded for each vehicle
- * Measures R1-T1 through R1-T7 and R2-T1 - R2-T6 are implemented

Reductions:

Emissions Reduction from each vehicle exchanged		
for electric vehicle	=	98.0%
% of electric vehicles in 2035	=	69.00%
Reduction afforded to passenger/light duty VMT Coun	=	67.62%

IM-T 8 Anti-Idling Enforcement

This measure involves the adoption and enforcement of an Anti-Idling Policy for heavy-duty diesel trucks, including local delivery trucks and long-haul truck transport within the County. This policy would prohibit idling of on and off-road heavy duty diesel vehicles for more than 5 minutes. This policy would be implemented by requiring signage at all loading docks and along truck routes informing drivers of the requirement to shut down their trucks after five minutes of idle time at loading docks and parking areas. By 2020 a 100% compliance with the anti-idling rules will reduce emissions in California by approximately 0.7 MMTCO₂e, representing 1.9 percent of emissions from heavy-duty diesel vehicles.

Assumptions:

- * By 2020, this measure results in a 1.9% reduction in VMT from Medium Duty Vehicles in the County.
- * By 2020, this measure results in a 1.9% reduction in VMT from Heavy Duty Vehicles in the County.
- * Measures R1-T1 through R1-T7 are implemented

Reductions:

Reduction afforded to Medium and Heavy Duty Vehicle Emissions	=	2.66%
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IM-T 9 Increase Public Transit

Assumes an increase in public transit coverage to expand upon Riverside County's one existing metrolink station. Estimated increase of 15 percent

Assumptions:

- * All default values from CAPCOA
- * Measures R1-T1 through R1-T7 are implemented

Reductions:

% increase in transit coverage	=	30.00%
Elasticity or transit ridership with respect to service coverage	=	1.01
Existing transit mode share (default for suburban area)	=	1.30%
Adjustments from transit ridership increase to VMT	=	0.67
Total Reductions afforded to passenger vehicles	=	26.391%

IM-T 10 Employee Commute Alternative Schedule

Assumes 30% of employees are eligible.

The 30% are evenly split between 9/80 schedule, 4 day-40 hour work week, and 1.5 days of telecommuting

Numbers from CAPCOA

10% 9/80: 0.7% VMT reduction

10% 4day: 1.5% VMT reduction

10% 1.5 day tele commute: 2.2% VMT reduction

Total reduction afforded to passenger vehicles: = 4.4%

Energy Reduction Measures

2035

R1-E 1 Renewable Portfolio Standard for Building Energy Use

Senate Bills (SBs) 1075 (2002) and 107 (2006) created the State's Renewable Portfolio Standard (RPS), with an initial goal of 20 percent renewable energy production by 2010. Executive Order (EO) S-14-08 establishes a RPS target of 33 percent by the year 2020 and requires State agencies to take all appropriate actions to ensure the target is met. The 33 percent RPS by 2020 goal is supported by the California Air Resources Board (CARB), though its feasibility is not certain due to current limitations in production and transmission of renewable energy.

Assumptions:

- * Southern California Edison reaches its 33% goal for 2020.
- * Assumes that in 2008 SCE's renewable portfolio was at 14% with respect to California's RPS.
- * Assumes a 19% reduction in emissions from existing kWhs used.
- * Assumes R1-E2 through R1-E6 have been implemented.

Reductions:

% Reduction Afforded = 25.00%

R1-E 2 & 3 AB1109 Energy Efficiency Standard for Lighting

Assembly Bill (AB1109) mandated that the California Energy Commission (CEC) on or before December 31, 2008, adopt energy efficiency standards for general purpose lighting. These regulations, combined with other State efforts, shall be structured to reduce State-wide electricity consumption in the following ways:

- ❖ R1-E2: At least 50 percent reduction from 2007 levels for indoor residential lighting by 2018; and
- ❖ R1-E3: At least 25 percent reduction from 2007 levels for indoor commercial and outdoor lighting by 2018.

Assumptions:

- * Assumes 20% of residential electrical use is from lighting.
- * Assumes 37.14% of commercial/industrial electrical usage is from lighting.
- * Assumes 5.5% of commercial electrical usage is from outdoor streetlights and area lights.

Reductions:

% reduction from residential electrical use	=	15.00%
% reduction from commercial/industrial electrical use	=	21.32%

R1-E 4 Electrical Energy Efficiency

This measure captures the emission reductions associated with electricity energy efficiency activities included in CARB's AB32 Scoping Plan that are not attributed to other R1 or R2 reductions, as described in this report. This measure includes energy efficiency measures that CARB views as crucial to meeting the State-wide 2020 target, and will result in additional emissions reductions beyond those already accounted for in California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24, Part 6 of the California Code of Regulations; hereinafter referred to as, "Title 24 Energy Efficiency Standards"), the County's adopted Green Building ordinance (effective January 1, 2011), etc. By 2020, this requirement will reduce emissions in California by approximately 21.3 MMTCO₂e, representing 17.5 percent of emissions from all electricity in the State. This measure includes the following strategies:

- ❖ "Zero Net Energy" buildings (buildings that combine energy efficiency and renewable generation so that they, based on an annual average, extract no energy from the grid);
- ❖ Broader standards for new types of appliances and for water efficiency;
- ❖ Improved compliance and enforcement of existing standards;
- ❖ Voluntary efficiency and green building targets beyond mandatory codes;
- ❖ Voluntary and mandatory whole-building retrofits for existing buildings;
- ❖ Innovative financing to overcome first-cost and split incentives for energy efficiency, on-site renewables, and high efficiency distributed generation;
- ❖ More aggressive utility programs to achieve long-term savings;
- ❖ Water system and water use efficiency and conservation measures;
- ❖ Additional industrial and agricultural efficiency initiatives; and
- ❖ Providing real time energy information technologies to help consumers conserve and optimize energy performance.

Assumptions:

- * The percent reduction from California's emissions from various energy efficiency measures is equal to the County's emissions from this measures or 17.5%.
- * Assumes application only to New development

Reductions:

% reduction afforded	=	20.00%
% New Residential	=	48.07%
% New Commercial	=	72.62%
% reduction applied to residential	=	9.61%
% reduction applied to commercial	=	14.52%

R1-E 5 Natural Gas Energy Efficiency

This measure captures the emission reductions associated with natural gas energy efficiency activities included in CARB's AB32 Scoping Plan that are not attributed to other R1 or R2 reductions, as described in this report. This measure includes energy efficiency measures that CARB views as crucial to meeting the State-wide 2020 target, and will result in additional emissions reductions beyond those already accounted for in California's Energy Efficiency Standards for Residential and Non-Residential Buildings (Title 24, Part 6 of the California Code of Regulations; hereinafter referred to as, "Title 24 Energy Efficiency Standards"), the County's adopted Green Building ordinance(effective January 1, 2011), etc. By 2020, this requirement will reduce emissions in California by approximately 4.3 MMTCO₂e, representing 6.2 percent of emissions from all natural gas combustion in the State. This measure includes the following strategies:

- ❖ "Zero Net Energy" buildings (buildings that combine energy efficiency and renewable generation so that they, based on an annual average, extract no energy from the grid);
- ❖ Broader standards for new types of appliances and for water efficiency;
- ❖ Improved compliance and enforcement of existing standards;
- ❖ Voluntary efficiency and green building targets beyond mandatory codes;
- ❖ Voluntary and mandatory whole-building retrofits for existing buildings;
- ❖ Innovative financing to overcome first-cost and split incentives for energy efficiency, on-site renewables, and high efficiency distributed generation;
- ❖ More aggressive utility programs to achieve long-term savings;
- ❖ Water system and water use efficiency and conservation measures;
- ❖ Additional industrial and agricultural efficiency initiatives; and
- ❖ Providing real time energy information technologies to help consumers conserve and optimize energy performance.

Assumptions:

- * The percent reduction from California's emissions from various energy efficiency measures is equal to the County's emissions from this measures or 6.2%.
- * Assumes application only to New development

Reductions:

% reduction afforded	=	8.00%
% New Residential	=	48.07%
% New Commercial	=	62.28%
% reduction applied to residential	=	3.85%
% reduction applied to commercial	=	4.98%

R1-E 6 Increased Combined Heat and Power

This measure captures the reduction in building electricity emissions associated with the increase of combined heat and power activities, as outlined in CARB's AB32 Scoping Plan. The Scoping Plan suggests that increased combined heat and power systems, which capture "waste heat" produced during power generation for local use, will offset 30,000 GWh State-wide in 2020. Approaches to lowering market barriers include utility-provided incentive payments, a possible CHP portfolio standard, transmission and distribution support systems, or the use of feed-in tariffs. By 2020, this requirement will reduce emissions in California by approximately 6.7 MMTCO₂e, representing 7.6 percent of emissions from all electricity in the State.

Assumptions:

- * The percent reduction from California's emissions is equal to the County's emissions from this measures or 7.6%.

Reductions:

% reduction afforded	=	10.00%
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R1-E 7 Industrial Efficiency Measures

This measure captures the reduction in industrial building energy emissions associated with the energy efficiency measures for industrial sources included in CARB's AB32 Scoping Plan. By 2020, this requirement will reduce emissions in California by approximately 1.0 MMTCO₂e, representing 3.9 percent of emissions from all industrial natural gas combustion in the State. CARB proposes the following possible State-wide measures:

- ❖ Oil and gas extraction;
- ❖ GHG leak reduction from oil and gas transmission;
- ❖ Refinery flare recovery process improvements; and
- ❖ Removal of methane exemption from existing refinery regulations.

Assumptions:

- * The percent reduction from California's emissions is equal to the County's emissions from this measures or 3.9%.
- * Assumes applies to all residential, commercial, and industrial land uses.

Reductions:

% reduction afforded = 5.00%

R2-E 1 Residential Energy Efficiency Program

This measure involves the adoption of a program that facilitates energy efficient design for all new residential buildings to be 20% beyond the current Title 24 Standards . This energy efficiency requirement is equal to that of the LEED for Homes and ENERGY STAR programs.

The 2008 Title 24 Energy Standards were adopted by the Energy Commission on April 23, 2008, with the 2008 Residential Compliance Manual adopted by the Commission on December 17, 2008. Compliance with the 2008 standards went into effect January 1, 2010. In an effort to meet the overall goal of the California Energy Efficiency Strategic Plan of reaching zero net energy for residential buildings by 2020, the stringency of the Title 24 Energy Standards as regulated and required by the State will continue to increase every three years. As energy efficiency standards increase the County may want to periodically re-evaluate their percentage beyond Title 24 goal to ensure it is still a feasibly achievable goal.

- ❖ Install energy efficient appliances, including air conditioning and heating units, dishwashers, water heaters, etc.;
- ❖ Install solar water heaters;
- ❖ Install top quality windows and insulation;
- ❖ Install energy efficient lighting;
- ❖ Optimize conditions for natural heating, cooling and lighting by building siting and orientation.
- ❖ Use features that incorporate natural ventilation;
- ❖ Install light-colored "cool" pavements, and strategically located shade trees along all bicycle and pedestrian routes; and
- ❖ Incorporate skylights; reflective surfaces, and natural shading in buildings design and layouts.

The County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (33 points) the developer will meet the requirements of this measure. This system will assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the strategies outlined in the bullet points above.

Assumptions:

- * Applies to new development only.
- * Assumes new development to be 20% beyond current Title 24.

Reductions:

% of new residential development	=	48.07%
% reduction afforded	=	25.00%
Total % reduction	=	12.02%

R2-E 2 Residential Renewable Energy Program

This measure facilitates the voluntary incorporation of renewable energy (such as photovoltaic panels) into new residential developments. For participating developments, renewable energy application should be such that the new home’s projected energy use from the grid is reduced by 50%. The California Energy Commissions’ New Solar Homes Partnership is a component of the California Solar Initiative and provides rebates to developers of 6 or more units where 50% of the units include solar power. In addition this measure would encourage that all residents be equipped with “solar ready” features where feasible, to encourage future installation of solar energy systems. These features should include the proper solar orientation (south facing roof sloped at 20° to 55° from the horizontal), clear access on south sloped roofs, electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water systems, and space provided for a solar hot water tank. The incentive program should provide enough funding and other incentives as shown in the R3 measures to result in approximately fifty percent of new residential development participation in this program, thereby resulting in a 25% reduction in electrical consumption from new residential developments.

As an alternative to, or in support of, providing onsite renewable energy, the project proponent can buy into a purchased energy offset program that will allow for the purchase of electricity generated from renewable energy resources offsite. Purchased energy offsets (or a combination of incorporated renewables and purchased offsets) must be equal to 25% of the total projected energy consumption for the development. See R3-E3 for further details on the financing program.

Assumptions:

- * Applies to new development only.
- * Assumes that 50% of new development will participate.
- * Assumes that those developments participating will reduce electrical use by 50%.

Reductions:

% of residential that is new	=	48.07%
% reduction from energy use	=	50.00%
% participating	=	65.00%
Total % reduction	=	15.62%

R2-E 3 Residential Retrofit Implementation Program

This measure would initiate a County program that facilitates the incorporation of energy reduction measures for residential buildings undergoing major renovations. AB 811 is a potential funding source to the County for implementing incentive programs to encourage residences within the County to undertake energy efficiency retrofitting and reducing energy consumption in retrofitted homes by a minimum of 15%. As with the new development, the County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (100 points) the developer will meet the requirements of this measure. This system will be provided to assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following:

- ❖ Replace inefficient air conditioning and heating units with new energy efficient models;
- ❖ Replace older, inefficient appliances with new energy efficient models;
- ❖ Replace old windows and insulation with top-quality windows and insulation;
- ❖ Install solar water heaters;
- ❖ Replace inefficient and incandescent lighting with energy efficient lighting; and
- ❖ Weatherize the existing building to increase energy efficiency.

Assumptions:

- * Applies to existing development only.
- * Assumes that 25% of existing development will participate.
- * Assumes that those developments participating will increase efficiency by 20%.

* Assumes reduction from electrical and natural gas.

Reductions:

% of 2020 that is existing residential development	=	51.93%
% reduction applied	=	40.00%
% existing homes participating	=	50.00%
Total % reduction	=	10.39%

R2-E 4 Residential Renewable Retrofit Program

This measure will initiate an incentive program that encourages residents to retrofit their homes with photovoltaic panels such that 50% of all of the home's electrical usage is offset. The California Energy Commission's Solar Initiative has incentives available to home owners.

Assumptions:

- * Applies to existing development only.
- * Assumes that 25% of existing development will participate.
- * Assumes that those developments participating will reduce emissions from electricity by 50%.
- * Assumes reduction from electricity.

Reductions:

% of 2020 that is existing residential development	=	51.93%
% reduction applied	=	50.00%
% existing homes participating	=	50.00%
Total % reduction	=	12.98%

R2-E 5 Commercial Energy Efficiency Program

This measure involves the adoption of a County Program that facilitates the energy efficient design for all new commercial buildings within Sutter Pointe to be 20% beyond the current Title 24 Standards which expands the new development requirements set forth in the Sutter Pointe Specific Plan EIR. This voluntary energy efficiency requirement is 10% greater than the minimum requirements of the LEED and ENERGY STAR programs. As energy efficiency standards increase the County may want to periodically re-evaluate their percentage beyond Title 24 goal to ensure it is still a feasibly achievable goal.

As described in R2-E1 above, the County could provide all developers with a list of potentially feasible GHG reduction measures that reflect the current state of the regulatory environment. The County will develop a menu of options with points assigned to them. As long as a developer meets the required point allotment (100 points) the developer will meet the requirements of this measure. This system will provide flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following:

- ❖ Install energy efficient appliances, including air conditioning and heating units, dishwashers, water heaters, etc.;
- ❖ Install solar water heaters;
- ❖ Install top quality windows and insulation;
- ❖ Install energy efficient lighting;
- ❖ Optimize conditions for natural heating, cooling and lighting by building siting and orientation.
- ❖ Use features that incorporate natural ventilation;
- ❖ Install light-colored "cool" pavements, and strategically located shade trees along all bicycle and pedestrian routes; and
- ❖ Incorporate skylights; reflective surfaces, and natural shading in buildings design and layouts.

Assumptions:

- * Applies to new development only.
- * Assumes new development to be 20% beyond current Title 24.

Reductions:

% new com/ind that is new	=	72.62%
% reduction afforded	=	30.00%
Total % reduction	=	21.78%

R2-E 6 Commercial/Industrial Renewable Energy Program

This measure would facilitate the voluntary incorporation of renewable (solar or other renewable) energy generation into the design and construction of new commercial, office, and industrial developments. Renewable energy generation shall be incorporated such that a minimum of 20% of the project’s total energy needs are offset. In addition this measure would encourage all facilities be equipped with “solar ready” features where feasible, to facilitate future installation of solar energy systems. These features should include the proper solar orientation (south facing roof sloped at 20° to 55° from the horizontal), clear access on south sloped roofs, electrical conduit installed for solar electric system wiring, plumbing installed for solar hot water systems, and space provided for a solar hot water tank.

As an alternative to, or in support of, providing onsite renewable energy, the project proponent can buy into an offset program that will allow for the purchase of renewable energy resources offsite. Purchased energy offsets (or a combination of incorporated renewables and purchased offsets) must be equal 20% of the total projected energy consumption for the development. See R3-E3 for further details on the financing program.

Assumptions:

- * Applies to new development only.
- * Assumes that 25% of new development will participate.
- * Assumes that those developments participating will reduce electrical use by 25%.

Reductions:

% of com/ind development from growth	=	72.62%
% reduction from program	=	25.00%
% of participation	=	60.00%
Total % reduction	=	10.89%

R2-E 7 Commercial/Industrial Retrofit Program

This measure encourages all commercial or industrial buildings undergoing major renovations to reduce their energy consumption by a minimum of 20%. As with the new development, a menu of options will be provided to assure flexibility in the implementation of this reduction measure. Although not limited to these actions, this reduction goal can be achieved through the incorporation of the following: (Includes both energy efficiency and renewable energy technologies)

- ❖ Replace inefficient air conditioning and heating units with new energy efficient models;
- ❖ Replace older, inefficient appliances with new energy efficient models;
- ❖ Replace old windows and insulation with top-quality windows and insulation;
- ❖ Install solar water heaters;
- ❖ Replace inefficient and incandescent lighting with energy efficient lighting; and
- ❖ Weatherize the existing building to increase energy efficiency.

Assumptions:

- * Applies to existing development only.
- * Assumes that 25% of existing development will participate.
- * Assumes that those developments participating will increase efficiency by 25%.
- * Assumes reduction from electrical and natural gas.

Reductions:

% from existing com/ind development	=	27.38%
% reduction applied	=	40.00%
% of participation	=	60.00%
Total % reduction	=	6.57%

R2-E 8

Induction Streetlight Retrofits

The new lamps are estimated to last 5 times longer and consume 50% less energy than the HPS lamps.

Assumptions:

- * Applies to streetlight electricity consumption
- * Assumes 20% of lamps will be retrofitted
- * Retrofitted lamps will use 50% less energy

Reductions:

% reduction applied	=	50.00%
% streetlights retrofitted	=	100.00%
% 2020 comm electricity use from streetlights	=	7.65%
Total % reduction	=	3.83%

Area Source Reduction Measures

2035

R2-L1	Prohibit Gas Powered Landscape Equipment		
	49.5% % reduction		<i>CAPCOA report</i>
	SCAQMD Healthy Hearths Program		
R2-L2	No new wood burning devices in homes		
R2-L3	10 to 25 Mandatory Curtailment days		
	Total Heating Days		120 (November-February)
	% Reduction		0.125

Purchased Water Reduction Measures

2035

R1-W 1 Renewable Portfolio Standard (33% by 2020) Related to Water Supply and Conveyance

This measure would increase electricity production from eligible renewable power sources to 33 percent by 2020. A reduction in GHG emissions results from replacing natural gas-fired electricity production with zero GHG-emitting renewable sources of power. By 2020, this requirement will reduce emissions from electricity used for water supply and conveyance in California by approximately 21.3 MMTCO₂e, representing 15.2 percent of emissions from electricity generation (in-State and imports).

Assumptions:

- * The percent reduction from California's emissions is equal to the County's emissions from electricity used for water supply and conveyance or 21%.
- * Assumes applies to all residential, commercial, and industrial land uses.

Reductions:

% reduction afforded = 21.00%

R2-W 1 Water Use Reduction Initiative

This initiative would reduce emissions associated with electricity consumption for water treatment and reduction and therefore are included with the energy reductions. This measure encourages the County to adopt a per capita water use reduction goal in support of the Governors Executive Order S-14-08 which mandates the reduction of water use of 20 percent per capita. The County's adoption of a water use reduction goal would introduce requirements for new development and would provide cooperative support for water purveyors that are required to implement these reductions for existing developments. The County would also provide internal reduction measures such that County facilities will support this reduction requirement. The following represent potential programs that can be implemented to attain this reduction goal.

Water Conservation Program:

Under this program the excessive watering of landscaping, excessive fountain operation, watering during peak daylight hours, water of non-permeable surfaces, excessive water use for noncommercial washing, and water use resulting in flooding or runoff would be prohibited. In addition the program would encourage efficient water use for construction activities, the installation of low-flow toilets and showerheads for all new developments, use of drought-tolerant plants with efficient landscape watering systems for all new developments, recycling of water used for cooling systems, use of pool covers, and the posting of water conservation signage at all hotels.

New Development Incentives:

Provide incentives for developers to comply with the California Green Building Standards Code as requirements for all new development. Under this Code new developments are required to reduce indoor potable water use by 20% beyond the Energy Policy Act of 1992 fixture performance requirements, and to reduce outdoor potable water use by 50% from a mid-summer baseline average consumption through irrigation efficiency, native plant selection, the use of recycled water and/or captured rainwater for example.

Water Meter Program:

Encourage water providers to install water meters for all County homes not using wells. This would provide for a better accounting of County water usage and provide potential costing per usage to help offset costs of the implementation of water conservation programs.

Water Efficiency Pricing Program

Under this program, the County would encourage water suppliers to adopt a water conservation pricing schedule (i.e. tiered rate) to encourage efficient water use. Notices could be provided in each billing showing water use budgets and the relationship between the budget and the actual usage.

Water Efficiency Retrofit Program:

This program would encourage upgrades in water efficiency for renovations or additions of residential, commercial, office, and industrial properties equivalent to that of new developments. The County would work with local water purveyors to achieve consistent standards, and to develop, approve, and review procedures for implementation.

Water Efficiency Training and Education:

Under this measure the County, in coordination with local water purveyors would implement a public information and education program that promotes water conservation. The program could include certification programs for irrigation designers, installers, and managers, as well as classes to promote the use of drought tolerant, native species and xeriscaping.

Increased Recycled Water Use:

Promote the use of municipal wastewater and graywater for agricultural, industrial and irrigation purposes. This measure would be subject to approval of the State Health Department and compliance with Title 22 provisions. This measure would facilitate the following:

- ❖ Inventory of non-potable water uses that could be substituted with recycled or graywater;
- ❖ Determination of the feasibility of producing and distributing recycled water for groundwater

- replenishment;
- ❖ Determine the associated energy/GHG tradeoffs for treatment/use vs. out of basin water supply usage; and
- ❖ Cooperation and coordination with responsible agencies to encourage the use of recycled water where energy tradeoffs are favorable.

Assumptions:

- * Applies to all land uses (existing and new development)
- * Assumes emission reduction of 20%.
- * Assumes reduction to electricity used to treat and convey water and wastewater.
- * Assumes that approximately 14% of the electricity usage is used to pump water from wells.

Reductions:

% reduction applied to water usage directly = 30.00%

IM-W 1 Increase Reclaimed Water Use

This measure would increase electricity production from eligible renewable power sources to 33 percent by 2020. A reduction in GHG emissions results from replacing natural gas-fired electricity production with zero GHG-emitting renewable sources of power. By 2020, this requirement will reduce emissions from electricity used for water supply and conveyance in California by approximately 21.3 MMTCO₂e, representing 15.2 percent of emissions from electricity generation (in-State and imports).

Assumptions:

- * Percent of total water use coming from reclaimed is 5%
- * Percentage reduction GHG by using reclaimed rather than potable water is 81%

Reductions:

% reduction afforded = 10.00%

Solid Waste Reduction Measures

2035

IM-W 1 County Diversion Program

This measure would implement a County wide waste diversion plan to further the goal of diverting 75% of all waste from landfills by 2020. The following is a potential list of waste reduction measures that will further strengthen existing waste reduction/diversion programs.

- ❖ Provide outreach and education programs for residential, commercial, and industrial land uses in order to further promote existing County diversion programs;
- ❖ Increase disposal fees and/or reduce residential pick-up frequency;
- ❖ Encourage businesses to adopt a voluntary procurement standard and prioritize those products that have less packaging, are reusable, recyclable, or compostable;
- ❖ Support State level policies that provide incentives for efficient and reduced packaging waste for commercial products;
- ❖ Expand list of recyclable materials;
- ❖ Work with Recology to develop and provide waste audits;
- ❖ Make recycling and composting opportunities mandatory at all public events;
- ❖ Establish an appliance end-of-life requirement;
- ❖ For new developments, require the use of recycled-content materials, or recycled materials;
- ❖ Require a minimum of 15% of materials used in construction be sourced locally, as feasible; and
- ❖ Encourage the use of recycled building materials and cement substitutes for new developments.

Assumptions:

- * Assumes an existing diversion rate of 53%
- * Assumes 2020 goal of 80% diversion rate.
- * Does not apply to construction activities
- * % reduction applied is equivalent to: $(80-53)/47$

Reductions:

% reduction applied	=	57.45%
% not from construction activities	=	81.20%
% reduction applied	=	46.65%

IM-W 2

Construction Diversion Program

This IM also implements General Plan Policies AQ 4.1 and AQ 5.1 by giving incentives through points within the Screening Table to new development that provided diversion of 70% of construction waste. This provides a 20% increase in diversion beyond AB2176, § 42911, that requires development projects to provide adequate areas for collecting and loading recyclable materials and ensures a 50% diversion rate prior to being issued a building permit.

% reduction applied is equivalent to: 20/50

Reductions:

% reduction applied	=	80%
% from construction activities	=	18.80%
% reduction applied	=	15.04%

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