

IMPLEMENTATION PLAN – ENERGY AND CONSERVATION ACTION STRATEGY (ECAS)

Over the past several years, California’s State legislature has adopted a series of laws mandating reductions in greenhouse gas (GHG) emissions (i.e. Executive Orders S-3-05 and S-01-07, AB 32 and SB 375). These new requirements have implications for private industry, State agencies, and local governments like the City of Vacaville. In response to the targets set by State legislators, as well as to make Vacaville a more sustainable city, the City Council adopted the Energy and Conservation Action Strategy (ECAS) concurrently with the General Plan on August 11, 2015.

The ECAS identifies and addresses GHG emissions from building energy use, transportation, solid waste, agriculture, and water use. It meets the requirements of a qualified GHG reduction strategy by identifying current and future GHG emissions, by setting a target for GHG reduction and containing measures that demonstrably meet this target, by being adopted publicly following environmental review, and by containing efforts to monitor plan implementation.

Implementation of the ECAS will guide Vacaville’s actions through a series of communitywide and municipal GHG emissions reduction measures to decrease the City’s contribution to GHG emissions. Communitywide GHG emission reduction measures are exclusively aimed to increase energy independence; reduce spending on gas, electricity, and water; and improve air quality from non-City operations, such as private development. With implementation of the ECAS, the City of Vacaville will reduce its GHG emissions by 21.7 percent below Vacaville’s 2020 business-as-usual forecast, and individual projects will be able to streamline their GHG analysis by complying with the ECAS.

If the ECAS fails to meet its adopted target, it is at risk of no longer meeting the standards for a qualified GHG reduction strategy, which may render it subject to legal challenge if used to streamline CEQA environmental review for proposed projects. In addition, not having a qualified GHG reduction strategy would render the City of Vacaville ineligible for certain grant funding opportunities.

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Action Number	City Department(s)	Status
Land Use		
LU-1 - Encourage all new residential, commercial, and public buildings and places of assembly to include a principal functional entry that faces a public space such as a street, square, park, paseo, or plaza, in addition to any entrance from a parking lot. For other, less public buildings such as warehouses, manufacturing, and storage buildings, encourage entries to ancillary office, break room, or staff uses to face a public space.	CD	
LU-2 - Require new residential projects to include a pedestrian or bicycle through-connection in any new cul-de-sacs, unless prohibited by topographical conditions or other site-specific constraints.	CD & PW	
LU-3 - Require that new neighborhoods be based on traditional residential development patterns (i.e. interconnected streets or a grid pattern) in a variety of densities with a pedestrian-friendly network of streets and parks, unless prohibited by topographical conditions or other site-specific constraints.	CD & PW	
LU-4 - Require adequate pedestrian access to or through all new commercial, residential, and mixed-used development. New pedestrian infrastructure shall incorporate amenities such as street trees to shade sidewalks, lighting, benches, signage, and pedestrian signalization at major transportation points to increase pedestrian convenience, comfort, and safety.	CD & PW	
LU-5 - Encourage a variety of local-serving commercial uses and encourage mixed-use development in the Downtown and RUHD Overlay areas, reducing VMT.	CD & CMO	
LU-6 - During Design Review, encourage street and house orientation in new neighborhoods and roof types that maximize the south-facing exposure of new homes, unless prohibited by topographical conditions or other site-specific constraints.	CD & PW	
LU-7 - Continue to promote the development of employment-generating uses.	CD & CMO	
LU-8 - Discourage density reductions on infill sites within ¼-mile of retail and employment centers and transit routes.	CD	

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Action Number	City Department(s)	Status
LU-9 - Require development on infill sites within ¼-mile of retail and employment centers, transit routes, and recreation areas to provide pedestrian and bicycle connections to those destinations.	CD & PW	
LU-10 - As part of each Housing Element Update, continue to study the skills and education levels of Vacaville residents and the housing choices of Vacaville employees, and use the information as a guide for recruiting new firms and housing types to the city to reduce vehicle miles traveled (VMT).	CD, PW, & CMO	
Transportation		
TR-1 - Develop and implement a Bikeway Plan that provides connections to the existing bikeway network and improves access to schools, Downtown, and large employment sites in the northeast quadrant of the city, and include strategies to support bicycle use.	PW & CD	
TR-2 - Continue to require bike parking in new commercial developments and at park-and-ride lots. Long-term parking and areas that are protected from the elements should be provided at park-and-ride lots and for employees in commercial areas. Short-term parking, such as U-racks, should be provided for visitors in commercial areas in close proximity to store entrances.	CD & PW	
TR-3 - Revisit off-street parking ordinances to encourage shared parking and parking maximums. Reduce required parking as an incentive for infill development and the installation of bikeways and bicycle parking.	CD & PW	
TR-4 - Implement a voluntary employer-based trip reduction program for all existing and future employers. The program could include a resource page on the City's website for trip reduction information, a direct link to the Solano-Napa Commuter Information Program website, and promotional events. The City could also encourage employers, including State and County government employers in Vacaville (e.g. the California Medical Facility) to implement ride-sharing programs, such as a carpooling matching service and preferred parking for vanpools and carpools.	PW & CMO	

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TR-5 - Encourage employers to allow telework (where employees work from home or other satellite locations close to home), institute flexible work schedules, and provide employer-sponsored vanpools.	PW	
TR-6 - Continue to support school districts and the Solano Transportation Authority in encouraging participation in Schoolpools, a ridesharing program for school children, and/or work with a private entity to establish a transportation service for children to schools, households, and other activities.	PW	
TR-7 - Encourage new, large employers, defined as having a minimum of 100 employees, to provide employer-sponsored shuttles or vanpools (operated by employees) that provide direct service between major employment centers and the Vacaville Transportation Center.	PW	
TR-8 - Encourage new employers to offer employee parking cash-out. Parking cash out allows workers to receive a regular payment when they consistently forgo the use of a parking spot their vehicle would otherwise occupy.	PW	
TR-9 - Expand the transit network as demand warrants, funding allows, and State farebox recovery is achieved to include service to large employers and park-and-ride lots, and ensure that information about transit connections is added to the City Coach and City of Vacaville's websites.	PW	
TR-10 - Develop a pedestrian plan and implement network improvements, especially where needed to fill in gaps in the existing network. Include baseline data with goals to increase the percent of walking for transportation purposes.	PW, CD, & CS	
TR-11 -Require the provision of secure bike parking, protected from the elements, for multi-unit residential developments that lack individual garages.	CD	

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TR-12 - Require developments requiring specific plans to provide land for multi-use trails that connect to existing or future bikeways, according to the adopted bikeway plan.	CD & PW	
TR-13 - Encourage employers to provide end-of-trip facilities for bicyclists, such as secure parking and locker, shower, and changing room facilities.	PW & CD	
TR-14 - Support existing programs that provide incentives for developers and private business to install electric charging vehicle stations in residential and commercial developments.	PW	
TR-15 - Continue to install electric vehicle charging stations in high traffic areas. As charging stations are installed, continue to update the City's map of electric vehicle charging stations on its website and provide information to the Solano Transportation Authority for their public outreach.	PW	
TR-16 - Continue to use solar panels to power or supplement electric vehicle charging stations where geographically possible, demand warrants, and funding allows.	PW	
TR-17 - As new development occurs or parking lots are re-striped, evaluate the demand for designated preferred parking spaces for low-carbon, electric, and carpool vehicles in City-owned lots and Downtown.	PW	
TR-18 -Continue to coordinate with STA on TDM planning, TDM activities, TDM requirements, and education and outreach programs through the Solano Napa Commuter Information (SNCI) website.	PW	
TR-19 - Provide a prominent link on the City's website to the Solano Transportation Authority's (STA) Commuter Info website, and work with STA to provide up-to-date commute information in Vacaville.	CMO & PW	

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TR-20 - Support efforts by the school districts to improve transit options for students, which could include reinstatement of school busing or working with the Solano Transportation Authority to provide free or subsidized bus passes to students in Vacaville.	CMO & Solano Transportation Authority	
TR-21 - Continue to market, promote, and educate students and parents about the benefits of using public transit as a mode of travel to school, considering the comments and concerns of the Vacaville and Travis School Districts.	PW	
TR-22 - Coordinate with local schools and the school district to improve walking and biking access to school by providing input and staff support for Safe Routes To School grant applications and implementation of projects	PW	
TR-23 -Encourage the State of California to reinstate school busing.	CMO	
TR-24 - Implement improvements to transit stops, such as real-time transit information and shelters, where demand warrants and funding allows, and access for passengers arriving by foot, and require transit stop improvements as conditions of approval for nearby development as appropriate.	PW	
TR-25 - Continue to implement strategies to improve signalization, incident responsiveness, traveler information systems (such as wayfinding and real-time traveler information), and active traffic management to smooth traffic flow as budget and staff levels allow.	PW	
TR-26 -Continue to include pedestrian, bicycle and transit facilities in projects funded by Vacaville’s transportation impact fee program, and consider including specific improvements to pedestrian, bicyclist and transit facilities as part of the Transportation Impact Fee updates if a nexus between those improvements and new development can be demonstrated.	PW & CD	
TR-27 -Require electric loading docks for large developments with 100 or more employees that receive deliveries by refrigerated trucks.	CD	

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Action Number	City Department(s)	Status
Green Building		
GB-1 -Allow greater permitting-related development flexibility and other incentives for LEED-Silver, Build It Green, GreenPoint or equivalent rating; for example, by giving green projects priority in plan review, processing, and field inspection services.	CD	
GB-2 - Require measures that reduce energy use through solar orientation by taking advantage of shade, prevailing winds, landscaping, and sun screens, unless prohibited by topographical conditions or other site-specific constraints.	CD	
GB-3 - Provide links to programs and information about green building, including training and technical assistance, on the City's website.	CD	
GB-4 - Coordinate with other local governments, special districts, nonprofits, and other public organizations to share resources, achieve economies of scale, and develop green building policies and programs that are optimized on a regional scale.	CD	
GB-5 -Develop a "heat island" mitigation plan that includes guidelines for cool roofs, cool pavements, and strategically placed shade trees.	CD	

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Renewable Energy		
<p>RE-1 - Require that new or major rehabilitations of commercial, office, or industrial development greater than or equal to 10,000 square feet in size incorporate solar or other renewable energy generation to provide 15 percent or more of the project's energy needs unless prohibited by topographical conditions or other site-specific constraints. Major rehabilitations are defined as additions of 25,000 square feet of office/retail commercial or 100,000 square feet of industrial floor area. Remove regulatory barriers to incorporating renewable energy generation.</p>	CD	
<p>RE-2 -Encourage residential projects of ten units or more to participate in the California Energy Commission's New Solar Homes Partnership, which provides rebates to developers of six units or more who offer solar power in 50 percent of new units and is a component of the California Solar Initiative, or a similar program with solar power requirements equal to or greater than those of the California Energy Commission's New Solar Homes Partnership.</p>	CD	
<p>RE-3 - Work with PG&E to develop an Alternative Energy Development Plan that:</p> <ul style="list-style-type: none"> • Establishes citywide measurable goals. • Identifies the allowable and appropriate alternative energy facility types within the city, such as solar photovoltaic (PV) on residential and commercial roofs and wind turbines for home use. • Proposes phasing and timing of alternative energy facility and infrastructure development. • Establishes development review protocol for new alternative energy projects. • Reviews City policies and ordinances to address alternative energy production. • Identifies optimal locations and the best means to avoid noise, aesthetic, and other potential land use compatibility conflicts (e.g., installing tracking solar PV or an-gling fixed solar PV in a manner that reduces glare to surrounding land uses). 	CD & PW	

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<p>RE-4 - Coordinate with other local governments, special districts, nonprofits, and other public organizations to share resources, achieve economies of scale, and develop alternative energy policies and programs that are optimized on a regional scale. As part of this measure, explore creation of a community choice aggregation program with the County of Solano.</p>	<p>CD & PW</p>	
<p>RE-5 - Require that all new buildings be constructed to allow for the easy, cost-effective installation of future solar energy systems, unless prohibited by topographical conditions or other site-specific constraints. "Solar ready" features should include: proper solar orientation (i.e. south-facing roof area sloped at 20° to 55° from the horizontal); clear access on the south sloped roof (i.e. no chimneys, heating vents, plumbing vents, etc.); electrical conduit installed for solar electric system wiring; plumbing installed for solar hot water system; and space provided for a solar hot water storage tank.</p>	<p>PW & CD</p>	
<p>RE-6 - Encourage the installation of solar photovoltaic arrays in new parking lots and replacement in existing parking lots.</p>	<p>CD</p>	
<p>Energy Conservation</p>		
<p>EC-1 - Mandate the use of energy-efficient appliances in new development that meet Energy Star standards and the use of energy-efficient lighting technologies that meet or exceed Title 24 standards.</p>	<p>CD</p>	
<p>EC-2 - Partner with Pacific Gas & Electric and other appropriate energy providers to promote energy conservation, including the following: <input type="checkbox"/> Conduct outreach to educate the public about available rebates and other incentives from energy providers. <input type="checkbox"/> Promote the purchase of ENERGY STAR appliances. <input type="checkbox"/> Inform the public about where to find low-cost compact fluorescent light (CFL) bulbs and/or fixtures. <input type="checkbox"/> Offer a halogen torchiere lamp exchange to community members. <input type="checkbox"/> Promote energy efficiency audits of existing buildings to check, repair, and readjust heating, ventilation, air conditioning, lighting, water heating equipment, insulation and weatherization.</p>	<p>CD</p>	

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<input type="checkbox"/> Encourage energy audits to be performed when residential and commercial buildings are sold. Energy audits would include information regarding the opportunities for energy efficiency improvements, and would be presented to the buyer. Commercial buildings are encouraged to be “benchmarked” using EPA’s ENERGY STAR Portfolio Manager Tool. Consider requiring energy audits if future evaluations of ECAS performance demonstrate that City is not meeting its target. <input type="checkbox"/> Promote individualized energy management planning and related services for large energy users. Fund and schedule energy efficiency retrofits or “tune-ups” of existing buildings.	CD	
EC-3 - Require all new development and major rehabilitation (i.e. additions of 25,000 square feet of office/retail commercial or 100,000 square feet of industrial floor area) projects to incorporate any combination of the following strategies to reduce heat gain for 50 percent of the non-roof impervious site landscape, which includes roads, sidewalks, courtyards, parking lots, and driveways: shaded within five years of occupancy; paving materials with a Solar Reflectance Index (SRI) of at least 29; open grid pavement system; and parking spaces underground, under deck, under roof, or under a building. Any roof used to shade or cover parking must have an SRI of at least 29.	CD	
EC-4 - Continue to replace City street lights with LED, induction, or other energy-efficient lighting, and require similar energy-efficient street lights in new development.	PW	
EC-5 - Continue to support the Yolo Solano Air Quality Management District's lawnmower exchange program for residents to exchange conventional gas-powered lawnmowers for electric and rechargeable battery-powered lawnmowers.	CMO	
EC-6 - Seek partnerships with local utilities and private entities to share resources and promote energy conservation.	PW	
EC-7 - Continue to offer innovative, low-interest financing for energy efficiency and renewable energy projects for existing and new development through the PACE program.	CMO	

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<i>Water and Wastewater</i>		
<p>WW-1 - Support the conservation measures outlined in the City's Urban Water Management Plan and implement the City's Water Efficient Landscape requirements through the following sub-measures:</p> <p>A. For all new development, require all water use and efficiency measures to comply with City Codes.</p> <p>B. At least every five years, review and update the City's Water Efficient Landscape requirements with improved conservation programs and incentives for non-residential customers.</p> <p>C. Continue to offer conservation programs and incentives to large landscape customers per the Urban Water Management Plan.</p> <p>D. Implement water efficient residential programs identified in the current Urban Water Management Plan. Continue to coordinate with local water purveyors to achieve consistent standards and review and approval processes for implementation.</p> <p>E. Expand the public information and school education program to promote water conservation and its benefits in coordination with efforts of local water purveyors. Conduct public education and outreach to reduce watering of non-vegetated surfaces and promote the use of pervious paving materials.</p> <p>F. Encourage the use of non-potable water and recovered residential rainwater for irrigation purposes.</p> <p>G. Continue to meter with commodity rates all new connections and retrofits of existing connections. Continue to provide information to customers about their water use.</p>	<p>CD & UTIL</p>	

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Action Number	City Department(s)	Status
<i>Parks, Open Space, and Ag</i>		
OS-1 - Continue to identify and inventory potential community garden and urban farm sites in existing parks, public easements, right-of-ways, and schoolyards, and develop a pro-gram to establish pesticide-free community gardens in appropriate locations.	CD, CS, & PW	
OS-2 - Encourage significant new residential developments over 50 units to include space that can be used to grow food.	CD	
OS-3 - Establish a process through which a neighborhood can propose and adopt a site as a community garden.	CD & PW	
OS-4 - Continue to support the Vacaville Farmers' Market as a source for locally-grown food.	CMO	
OS-5 - Review the City's existing open space development impact fee, and consider incorporating trail requirements into the fee program.	CS & CMO	
<i>Community Action</i>		
CA-1 - Develop and implement an outreach plan to engage local businesses in GHG emissions reduction programs.	CMO, CD, & PW	
CA-2 - Establish and maintain a "sustainability information center" at City Hall to inform the public and distribute available brochures, and provide information on sustainability on the City's website.	CMO, CD, & PW	
CA-3 - Continue to conduct outreach to encourage residents to shop locally and support local business.	CMO	
<i>Purchasing</i>		
P-1 - Develop policies, incentives, and design guidelines that encourage the public and private purchase and use of durable and nondurable items, including building materials, made from recycled materials or renewable resources.	CMO	