County of Yolo

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INVENTORY AND FEASIBILITY STUDY TO REMOVE FOSSIL FUELS FROM YOLO COUNTY OPERATIONS

Proposed Early Action to Implement Resolution No. 20-114 Related to the Climate Crisis

PROPOSED ACTION

Yolo County will develop an inventory of all fossil fuels used in Yolo County operations and then assess the feasibility of removing these fossil fuels from use. Yolo County uses of fossil fuels include, but are not limited to, natural gas-powered hot water heaters, furnaces, and heating, ventilation, and air conditioning (HVAC) systems and gasoline-powered landscaping equipment. The inventory component of this project will include an analysis of current fossil fuel uses in County operations (including age and expected lifespan of fossil fuel-powered equipment) along with the existing electrical system capacity and the total energy requirements (assuming full-electrification) of County buildings. The feasibility study will include an evaluation of building readiness to electrify (for example, if buildings have excess capacity built into their electrical infrastructure to electrify all operations and/or install electric vehicle charging stations, or if amperage and/or voltage will need to be upgraded), priorities for electrification, cost estimates, a proposed process for measuring greenhouse gas emission reduction, potential funding sources, and a proposed timeline. This action also includes reviewing and updating, as necessary, existing policies that encourage employees to work at least part-time from home and reduce vehicle miles traveled.

Yolo County may collaborate with the Sacramento Area Council of Governments, Caltrans, and the Yolo-Solano Air Quality Management District to seek funding for both the inventory and the feasibility study. Yolo County also may work with other units of local government (such as cities, school districts, special districts, and UC Davis) to purchase new equipment as part of a consortium to seek reduced prices from companies offering the needed equipment. Yolo County has also proposed an early action to transition all County energy accounts to Ultra Green at Valley Clean Energy, meaning that if adopted, any recommendation to transition County operations to electricity recommended in the feasibility study will be powered almost exclusively by renewable energy.

BACKGROUND

Climate scientists have increasingly identified the production of natural gas as a key contributor to methane emissions, one of the greenhouse gases contributing to global warming. Fugitive emissions from transporting and producing natural gas release methane into the atmosphere. As a result, climate scientists recommend removing natural gas from operations and instead relying on electricity powered by renewable energy, such as wind and solar. If governments power their operations with electricity sourced from renewable energy instead of natural gas, it will help reduce greenhouse gas emissions that contribute to global warming and climate change impacts.

CONSISTENCY WITH EXISTING POLICIES

This proposed action is consistent with a 2008 report prepared for Yolo County by the John Muir Institute for the Environment at UC Davis entitled *Yolo County Government: An Action Plan for Reducing Greenhouse Gas Emissions Associated with County Operations*. The February 2021 *Yolo County Sustainability Plan* includes one of the recommendations from the 2008 report: specifically, the County should increase adoption of electric equipment. The 2011 Climate Action Plan does not include any policies related to removing fossil fuels from County operations, although it does encourage reducing vehicle miles travelled from new development. The *Yolo County Sustainability Plan* includes the following relevant strategies:

- Action AQ 1.2. Increase adoption of electric vehicles and equipment.
- Action AQ 1.3. Increase County employee telecommuting

BENEFITS TO DISADVANTAGED/VULNERABLE COMMUNITIES

This action will not benefit disadvantaged or vulnerable communities.

GREENHOUSE GAS EMISSION REDUCTION

There is no short-term greenhouse gas emission reduction associated with developing an inventory or feasibility study. The long-term greenhouse gas emission reductions benefits are likely low, since Yolo County does not own many buildings. According to March 11, 2021 staff report to the Valley Clean Energy Board of Directors, however, the California Air Resources Board has stated residential and commercial buildings are responsible for 25% of GHG emissions in California. Based on the California Air Resources Board's 2019 Greenhouse Gas Inventory, building electrification in California would result in an average annual savings of approximately 50 million metric tons of carbon dioxide equivalent (MTCO2e) through 2045. Yolo County will therefore be fulfilling its responsibility to help achieve this reduction through the development of an inventory, completion of a feasibility study, and implementation of any resulting feasibility study recommendations. Yolo County will develop a process to measure greenhouse gas emission reduction as part of the feasibility study.

CO-BENEFITS

The proposed action will eventually improve indoor air quality by reducing hazardous pollutants and will decrease the risk of gas leaks and associated accidents.

TRANSFORMATIVE/REPLICABLE ELEMENTS

If implementation of the feasibility study recommendations results in discussions with other agencies to jointly purchase new equipment to eliminate gas use, the project may influence other jurisdictions to purchase equipment to reduce use of natural gas.

DEGREE OF READINESS

Per the 2008 *Yolo County Government: An Action Plan for Reducing Greenhouse Gas Emissions Associated with County Operations,* which is still relevant today, Yolo County first needs to develop

an inventory, by Department, of all equipment and appliances that utilize natural gas by type and by the age and lifespan of the equipment. According to the 2008 report, the inventory should begin with the most energy-intensive and long-lifetime equipment. Once the inventory is complete, Yolo County can develop a cost estimate and timeline for electrical system upgrades (if necessary) and equipment replacement, as well as work with other jurisdictions to research opportunities to jointly purchase equipment to reduce costs. Given that the County recently made a sizeable investment of heating and air conditioning equipment upgrades, among others, throughout County facilities, a complete phase-out of such equipment will take several years as it is currently in the beginning of its life cycle. Equipment which was not recently updated would be eligible for more accelerated replacement. Yolo County estimates it can contract with an entity to develop the inventory and feasibility study in 2022, complete the inventory and feasibility study in early 2023, and start working with the County's Department of General Services to replace eligible equipment as early as spring/summer 2023, if feasible. The goal would be to start installation of eligible equipment in late 2023 and continue until the phase out of natural gas in Yolo County operations is complete. This project, and the associated costs outlined below, only covers the development of the inventory and feasibility study, not the replacement of equipment.

COSTS

Yolo County estimates the cost of developing the inventory and feasibility study is at least $250,000. The feasibility study will include cost estimates for implementing recommendations to remove fossil fuels from County operations such as completing electrical system upgrades and replacing equipment.

FUNDING

Yolo County will seek grants to develop the inventory and feasibility study but may also allocate General Fund or American Rescue Plan funds as part of the annual budget process.

CONCERNS

According to a March 11, 2021 Valley Clean Energy staff report to the Board of Directors on building electrification, retrofitting buildings may be complicated and potentially expensive unless the building owner is undertaking an extensive remodel. Through the feasibility study, the County will need to evaluate whether to integrate potential electrification improvements into planned retrofits of existing buildings, whether to ensure retrofits of existing buildings are required to remove fossil fuel use, whether to require all new County buildings to remove fossil fuels from operations, and whether to undertake retrofits that remove fossil fuels even if existing equipment has not reached the end of its useful life.

PARTNERS

Yolo County may collaborate with the Sacramento Area Council of Governments, Caltrans, and the Yolo-Solano Air Quality Management District to seek funding for this project. Yolo County also may work with other units of local government (such as cities, school districts, special districts, and UC Davis) to purchase new equipment as part of a consortium seek reduced prices from companies offering the needed equipment.

PERSONNEL

In the chart below, please list names, role, and contact information for all project leader(s) and project partners.

Name	Role (Lead or Partner)	Email	Phone
Kristen Wraithwall	Lead, Yolo County Department of Community Services	kristen.wraithwall@yolocounty.org	530-666-8047
TBD	Co-Lead, Yolo County Department of Financial Services	TBD	TBD
TBD	Co-Lead, Yolo County Administrator's Office	TBD	TBD