GHG Reduction Strategy	Foundational Action(s)	Execution Timing	GHG Emissions Reduction (MT CO2e)	Substantial Evidence				Resolution Provided?
				Reference(s)	Project Example(s)	Comment(s)	Tracking Metric (s)	
Goal 1 – Transition transportation systems and mobile sources from fossil fuels to renewable fuels								
Strategy 1.1 – Provide infrastructure and incentives for electrification of passenger vehicles								
Objective 1.1.1 – Public Light Duty BEV Adoption	Implementation Measure 1.1.1.1 – Promote purchasing of electric vehicles through outreach	2030	28,165	RCEA and Schatz Energy Research Center. 2016. Northwest California Alternative Fuels Readiness Plan. https://redwoodenergy.org/wp-content/uploads/2019/02/Northwest-California-Alternative-Fuels-Readiness-Plan.pdf -	RCEA RePower Plan goal to accelerate EV adoption from 6,000 in 2025 to 22,000 EVs in 2030 -	**Limitation:** As written, the implementation actions do not support an increase adoption of EVs from 1% to 34% by 2030. The established goal exceeds the RCEA objective for entire County and relies heavily on education and incentives to enact change – this is not enforceable and does not provide strong enough support to demonstrate how the EV adoption will increase over 1,000%. **Recommendation:** Right size goal based on actions or modify actions to support such an aggressive goal and identify similar projects or County measures to demonstrate the feasibility. Include land use incentives or discentives to encourage the shift to EVs (such as coordinating with jurisdictions to adopt a preferred parking ordinance for EVs, or	Increase in EV adoption from 1% (~1,800) to 34% by 2030 (~17,652). -	
	Implementation Measure 1.1.1.2 and 1.1.1.3 – Provide incentives for EV adoption	2030						

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						no longer permitting new gas stations), identify funding or partnerships to support measure, conduct a feasibility study to identify barriers to EV adoption and develop a plan to address those barriers.		
	Implementation Measure 1.1.1.4 and 1.1.1.5 – Install public and workplace L2 and L3 charging stations	2030	Not quantified	Idaho National Laboratory. Plugged In: How Americans Charge Their Electric Vehicles. https://avt.inl.gov/sites/default/files/pdf/arra/PluggedInSummaryReport.pdf	-	**Limitation:** 1) There is not substantial evidence supporting that there are resources or the enforcement to increase the number of L3 chargers from 5 to 83. The number of existing L2 chargers was not defined so it is unclear if the RCEA network expansion would achieve the goal of ~2,500 L2 chargers installed. 2) The dates for the energy code update, adoption of the ordinance, and implementation of the North Coast Plug-In Vehicle Readiness Plans has not been established. 3) There is not sufficient details regarding what the	Install 2,486 L2 chargers and 83 L3 charging stations	

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						energy code and ordinances include to support the installation of ~2,500 public chargers. 4) It is not clear who will fund or install the light utility pole chargers. **Recommendation:** Right size goal with EV penetration [general recommendation I 1 charger per 10 EVs]. As part of implementation actions specify when the building code would be updated when the ordinances would be adopted, and include specifications of the energy code and ordinances to demonstrate how the energy code/ordinance would be implemented (e.g., how many chargers per number of employees?). Establish how many existing L2 chargers there are, to what extent RCEA plans to expand the network, and how many office/commercial buildings there are to support the installation of this number of chargers. Identify		

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						partnerships and funding to be established or relied on for implementation (i.e., RCEA). Include incentives for employees to use work chargers – such as working with local businesses to establish preferred parking for EVs.		
	Implementation Measure 1.1.1.6 – Install home EV charging infrastructure	2023	Not quantified	-	-	**Limitation:** Installation of ~5,000 home chargers is not supported by substantial evidence. 1) The number of chargers to be installed is ~45% greater than the estimated number of new residences (~3,400) indicated by the General Plan + RHNA values provided. 2) The dates for the energy code update and adoption of the ordinance has not been established. 3) There is not sufficient details regarding what the energy code and ordinances include to support the installation of ~5,000 home chargers.	Install 5,296 home charging plugs by 2030	

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						Recommendation: As part of implementation actions specify when the building code would be updated when the ordinances would be adopted, define major remodels (e.g., over $50,000 in cost), and include specifications of the energy code and ordinances to demonstrate how the energy code/ordinance would be implemented. If the goal is to install more home chargers then the number of new residences anticipated, provide substantial evidence/detailed implementation actions to demonstrate how that will be achieved.		
Objective 1.1.2 – Encourage public light duty FCEV adoption	Implementation Measure 1.1.2.1 – Promote Public Adoption of FCEVs					**Limitation:** Measure is unclear and lacks specificity. How does a fleet commitment promote adoption of public FCEVs? **Recommendation:** Provide context of how measures support public adoption of		

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						FCEVs through example projects, or references.		
	Implementation Measure 1.1.2.2 – Install hydrogen fueling stations to support light duty vehicles	2025	5,871	Redwood Coast Energy Authority et al. 2017. Regional Hydrogen Readiness Plan. https://redwoodenergy.org/wp-content/uploads/2017/08/10_19_17.FINAL_FCEV_Infrastructure_Plan.pdf		**Limitation:** The supporting actions are focused on outreach and feasibility assessment. There is not a structural component or identified funding sources to permit 7 hydrogen stations. There is not substantial evidence supporting how 7 hydrogen stations support the purchase of 649 hydrogen vehicles used to quantify the GHG reductions. **Recommendation:** Provide substantial evidence (e.g., existing studies or example projects) to demonstrate how installation of hydrogen stations will lead to the purchase of 649 hydrogen vehicles by the public. Include additional actions addressing funding, structural changes, partnerships, etc. that will lead to the obtaining these 7 stations.	7 hydrogen stations (649 hydrogen vehicles)	

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Strategy 1.2 – Transition to a carbon-neutral goods-movement system								
Objective 1.2.1 – Encourage public light duty FCEV adoption	Implementation Measure 1.2.1.1 – Convene a Freight/Offroad Electrification Working Group		Not quantified	California Air Resources Board. 2019. Advanced Clean Trucks Fact Sheet. https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-trucks-fact-sheet	-	**Limitation:** The measures lack specificity and substantial evidence to demonstrate how 489 vehicles will be purchased. It is unclear if the 268 installed charging stations is in addition to the previously established charging station goals or is a subset of those stations. Measure does not reference Advanced Clean Fleets Rule. **Recommendation:** Expand the supporting actions to include specific actions on how fleets or vehicles will be identified for replacement (e.g., conduct a feasibility study to identify fleets to target for electrification, establish a timeline for replacement and tracking mechanism, investigate opportunities for enforcement such as an ordinance at the City level or unincorporated County). Include	-	
	Implementation Measure 1.2.1.2 – Incentivize accelerated zero-emission freight ahead of advanced clean truck adoption rates		8,013				489 EVs purchased to replace trucks	
	Implementation Measure 1.2.1.3 – Install "on-route" charging stations for battery electric heavy duty trucks		Not quantified				Install 268 charging stations	
	Implementation Measure 1.2.1.4 – Install hydrogen fueling for fuel cell electric heavy duty trucks		Not quantified				-	

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						substantial evidence such as an example project or study or detail the assumptions/calculations demonstrating that to meet the Advanced Clean Fleets Rule that 489 vehicles would be replaced given the total number of vehicles that need to be replaced. Include specifics regarding how incentives would be applied. Reference the Advanced Clean Fleets Rule.		
Strategy 1.3 – Decarbonize municipal fleets								
Objective 1.3.1 – Electrification of Light Duty Municipal Fleet	Implementation Measure 1.3.1.1. – Install fueling infrastructure	Not specified	-	-	-	**Limitation:** The measure lacks specificity and timeframes to decarbonize municipal fleets and does not align with the Advanced Clean Fleet Rule requirements. **Recommendation:** Update the measures and actions to reflect the Advanced Clean Fleet Rule requirements and to include specific timeframes for fleet decarbonization.	-	
	Implementation Measure 1.3.1.2. – Replace high mileage vehicles with BEVs	Not specified	238	-	-		724,612 electrified miles	
	Implementation Measure 1.3.1.3. – Replace high-mileage vehicles with FCEVs	Not specified	38	-	-		299,332 electrified miles	

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				Reference(s)	Project Example(s)	Comment(s)	Tracking Metric (s)	
						Include reference to Advanced Clean Fleet Rule to support the achievement of this measure as substantial evidence		
Strategy 1.4 – Work with Humboldt Transit Authority to decarbonize public transit								
Objective 1.4.1 – Achieve and exceed statewide transit electrification targets	Implementation Measure 1.4.1.1. – Install fueling infrastructure	Not specified	-		-	**Limitation:** The implementation actions lacks specificity to demonstrate how this measure will be achieved. The measure lacks context in terms of the percent that this measure is exceeding the ICT requirements already accounted for in the Legislative Adjusted Forecast. **Recommendation:** Update the actions to establish a clear plan for achieving this measure goal, such as conducting a feasibility study to identify where fueling infrastructure should be located, identification of funding or grant opportunities to obtain the buses, development of a transition plan that prioritizes which buses to replace first and	-	
	Implementation Measure 1.4.1.2. – Purchase battery electric buses	Not specified	265		-		16 electric buses	
	Implementation Measure 1.4.1.3. – Purchase fuel cell electric buses	Not specified	397	California Air Resources Board Innovative Clean Transit Rule. https://ww2.arb.ca.gov/our-work/programs/innovative-clean-transit - -	-		24 fuel cell electric buses	

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						when replacements will happen. Providing context or the percent to which the measure aims for state ICT targets to be exceeded will give the reader clarity on the emission reductions calculated (i.e., upon initial glance it appears that the reductions for this measure are quite low – however understanding that reductions are tied just to the exceedance of the state ICT legislation makes the values make sense.		
Strategy 1.5 – Promote biofuels as a transition strategy								
Objective 1.5.1 – Increase Consumption of Renewable Diesel	Implementation Measure 1.5.1.1. – Increase use of renewable diesel	Not specified	2,551	-	-	**Limitation:** Multiple tracking metrics are listed however, the calculations are based on the gallons of RD that replaces traditional diesel. The GHG reduction calculations are based on the maximum amount of renewable diesel that could be produced in the County based on population and cattle population - this calculation is fully	277,352 gallons of renewable diesel sold	

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						hypothetical and is not tied to actual RD production or sales occurring in the state or County. The % of diesel to be replaced by RD would be better supported by the state or regional trends related to RD in the total diesel pool. Implementation actions lack specificity of how they will result in 277,352 gallons replaced. **Recommendation:** Simplify the tracking metrics to just the gallons of RD sold and use the other metrics (e.g., 36 gas stations in the County supply renewable diesel) as part of the substantial evidence in the implementation action. Include the references for these metrics and include how many gas stations in total there are in Humboldt County that sell diesel to indicate the % of stations that provide renewable diesel. Clarify in metric language that the RD sold is replacing		

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						traditional diesel, not an additional sale. Support measure goal with state trends (obtained from CARB and/or California Energy commission) – for example in 2020 ~20% of total diesel pool in 2020 is biodiesel or renewable diesel (https://www.energy.ca.gov/data-reports/reports/weekly-fuels-watch/refinery-inputs-and-production). Revise implementation measures to be more specific such as the amount of gallons from the municipal fleet that can be replaced with RD and by when. Include additional implementation measures such as providing education to County residents to promote use of RD over diesel, tracking the amount of RD and diesel sold in the County to track progress, partner with gas station owners to		

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						increase the number of Humboldt County gas stations supplying RD.		
Strategy 1.6 – Promote electrification of yard equipment								
Objective 1.6.1 – Gas-powered yard equipment trade-in Program	Implementation Measure 1.6.1.1. – Trade in gas powered lawn mowers Implementation Measure 1.6.1.2. – Trade in gas powered chainsaws Implementation Measure 1.6.1.3. – Trade in gas powered trimmers	Not specified	44 36 10	-	-	**Limitation:** The implementation actions lack specificity to demonstrate how the specific metrics will be achieved. The measure doe not reference the state regulations or goals for off-road equipment emissions. The calculations are based on guessed amounts of equipment by category that are not substantiated. **Recommendation:** Include implementation actions that identify who or what organization/department will operate the trade-in program, a time frame of when it will be implemented, how it will result in trade in of lawn equipment (i.e., education campaign, incentives, ordinance), and how will the program be funded. Reference example projects or trade-in	450 lawn movers traded in for electric version 340 chainsaws traded in for electric version 420 trimmers traded in for electric version	

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						programs that are structured similarly to demonstrate effectiveness of such a program. Reference states regulation on small off-road engines (https://ww2.arb.ca.gov/news/carb-approves-updated-regulations-requiring-most-new-small-road-engines-be-zero-emission-2024). Consider using OFFROAD2021 for Humboldt County to support the numbers (e.g., OFFROAD2021 has fuel consumption by equipment type and in conjunction with average fuel use per piece of equipment per year the number of pieces of equipment could be estimated.		

Attachment C