

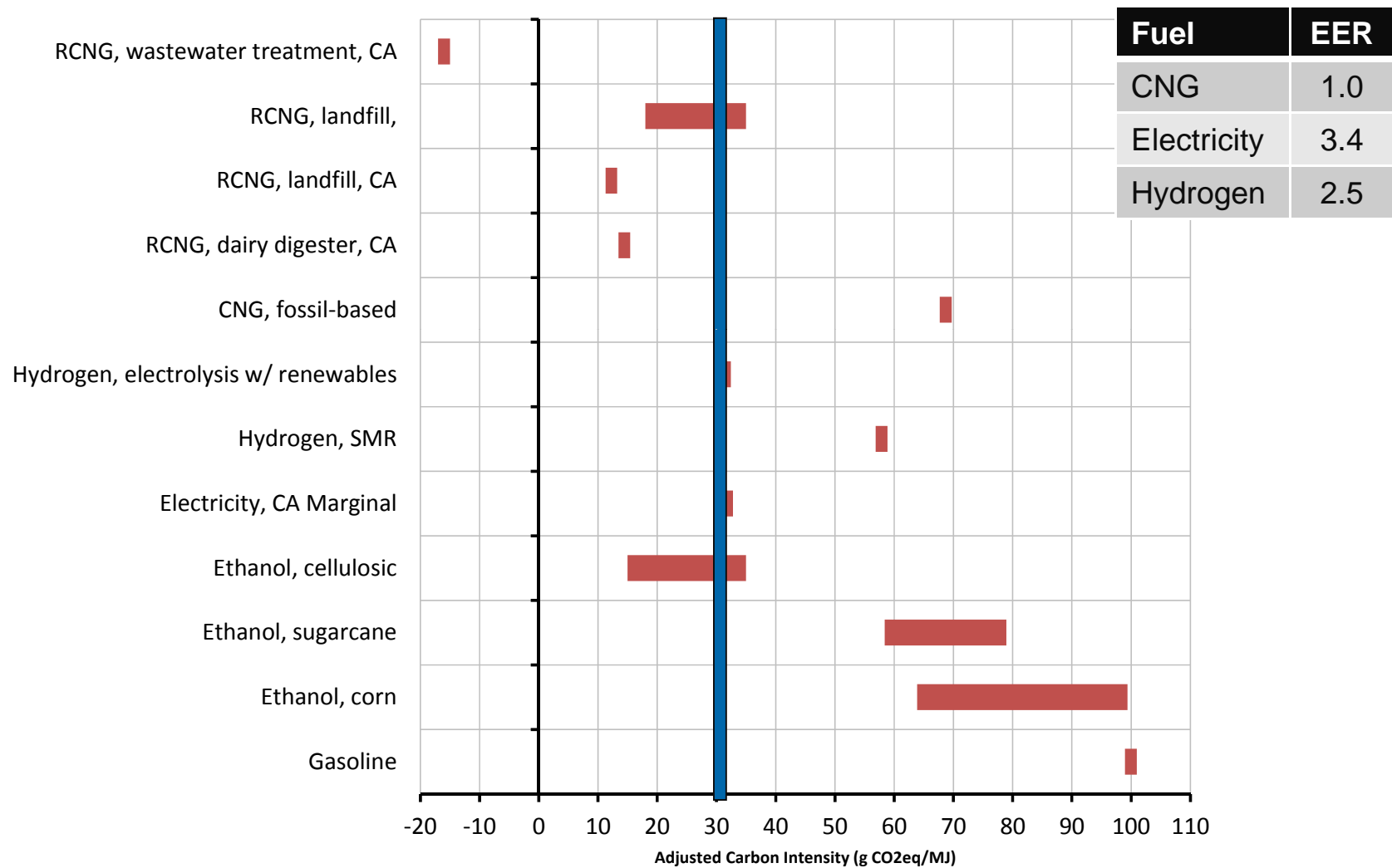


# Low Carbon Fuel Standard

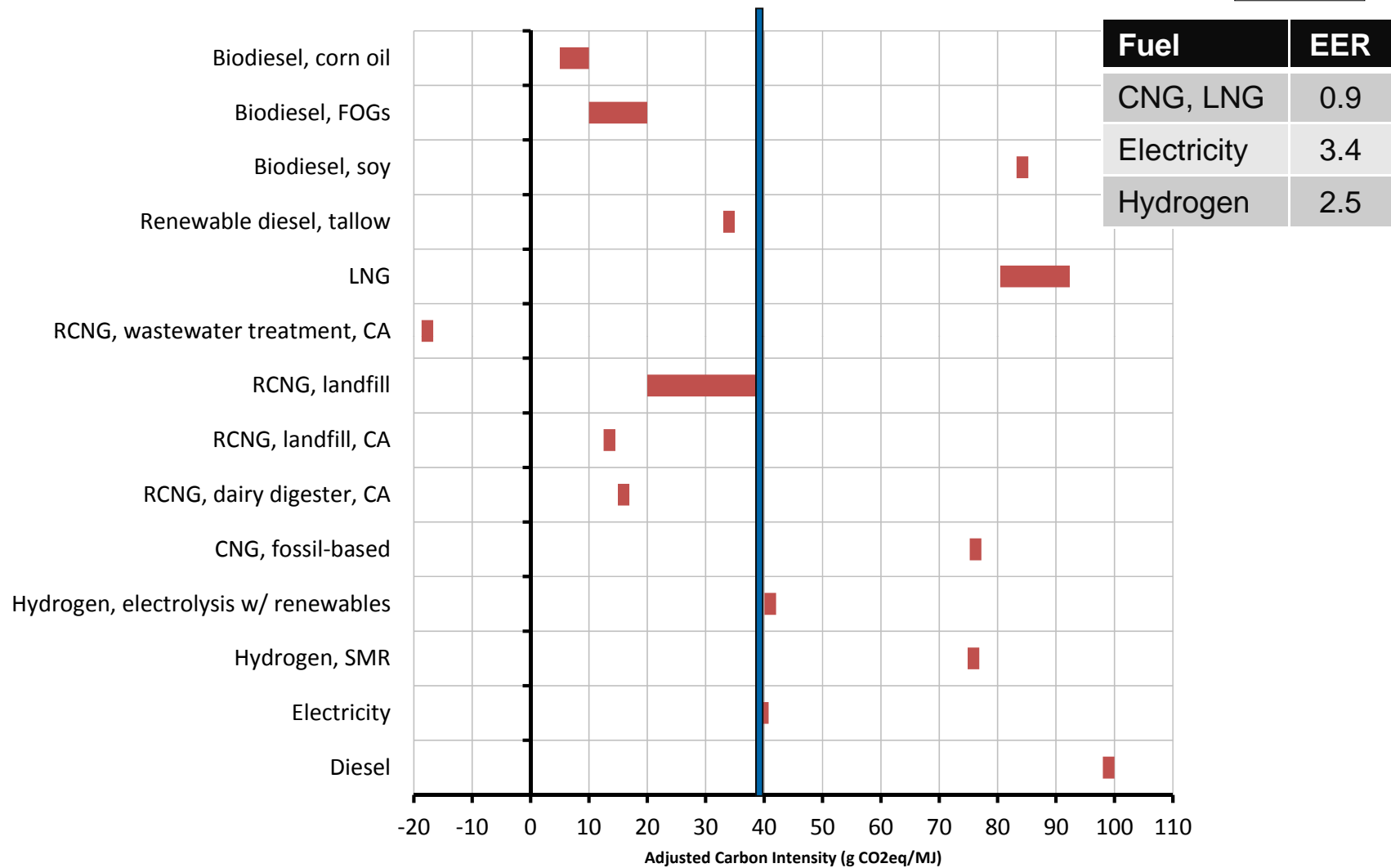


## Carbon Intensity Comparison for SoCalGas

# GASOLINE COMPARISON



DIESEL COMPARISON

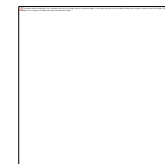


# Notes



- The value shown for gasoline is for *reformulated gasoline* – a blend of 90% (by volume) of California Reformulated Blendstock for Oxygenate Blending (CARBOB) and 10% by volume corn ethanol.
- The value shown for diesel is for ultra low sulfur diesel (ULSD).
- Some values are reported as a range because there are multiple pathways listed – based on variations in processing efficiency, feedstock type, and other variables. These ranges are illustrative – there may be some pathways slightly outside of the ranges shown.
- Energy Economy Ratio (EER): The EER value captures the efficiency of a fuel/vehicle combination relative to the fuel it is displacing (i.e., gasoline or diesel). For instance, an electric vehicle uses energy more efficiently than a combustion engine in a conventional vehicle and is assigned a EER of 3.4. These values are defined by CARB in the regulation. The carbon intensity values shown in the previous graphs have been adjusted using the EERs.
- The EER value used on Slide 2 for CNG and LNG in heavy-duty applications (replacing diesel) is 0.9, the value for spark-ignited engines. The EER value for CNG and LNG in compression-ignited engines is 1.0.

## Notes, ctd



- The indirect land use change (ILUC) adder that CARB uses for biofuel feedstocks are being revised. The current values and initially proposed values are shown in the table below. These potential changes will affect values in both of the previous graphs.

Feedstock	Current	Proposed
Corn	30.0 g/MJ	23.2 g/MJ
Sugarcane	46.0 g/MJ	26.5 g/MJ
Soy	62.0 g/MJ	30.2 g/MJ
<i>Canola</i>	<i>n/a</i>	<i>41.6 g/MJ</i>
<i>Sorghum</i>	<i>n/a</i>	<i>17.5 g/MJ</i>

*Note: Canola based biodiesel and sorghum based ethanol are not shown on the graphs*