McKinsey Curve Project

Emily Briscoe

Color Code and Interventions

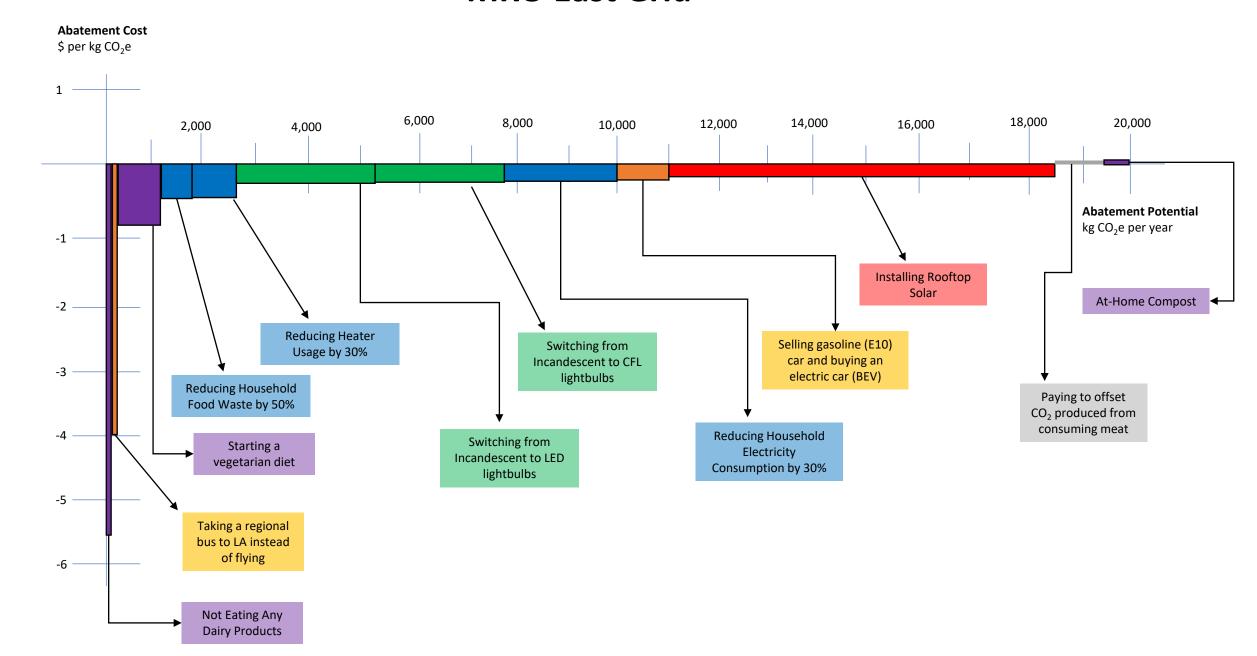
Color Code:

- Purple = Food, agriculture, diet, or waste management intervention (behavioral or technological)
- Red = power generation or electricity storage intervention on your property
- Orange = transportation intervention (behavioral or technological)
- Green = home technological intervention (i.e., energy efficiency)
- Blue = home behavioral intervention (i.e., conservation)
- Grey = Other category

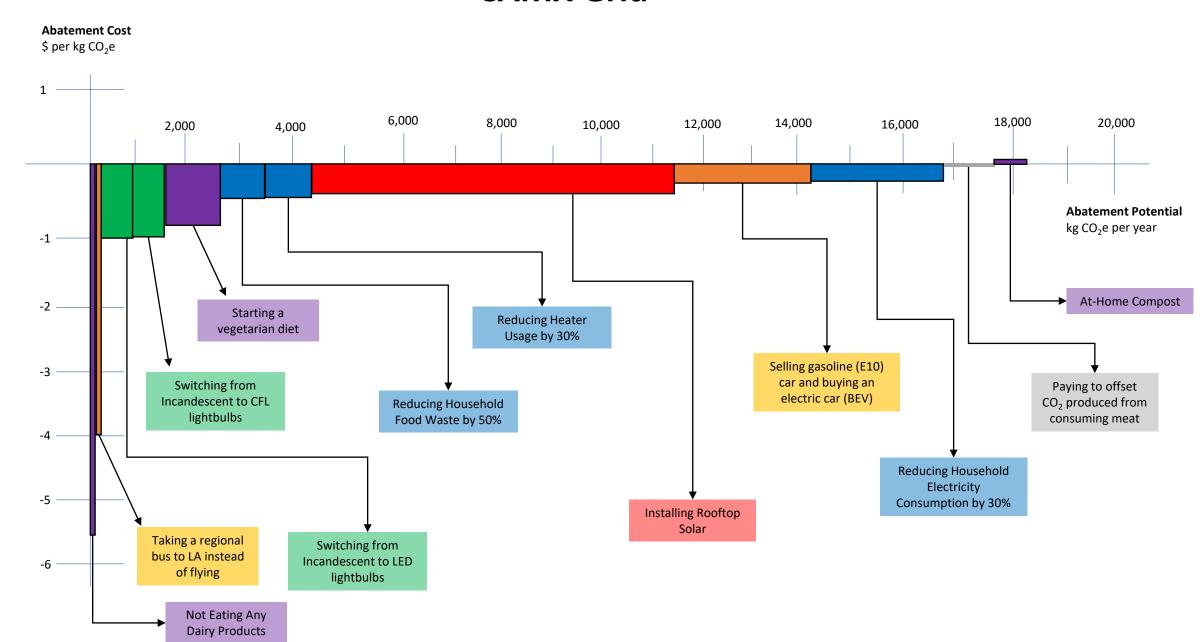
Interventions:

- 1. Eating vegetarian
- 2. Not eating any dairy products
- 3. At-home Compost
- 4. Installing solar panels on my home
- 5. Selling my gasoline (E10) car and buying an all-electric car (BEV)
- 6. Taking the greyhound bus to LA instead of flying
- 7. Switching from incandescent to CFL lightbulbs
- 8. Switching from incandescent to LED lightbulbs
- 9. Reducing heater usage by 30% (turn thermostat up and down to reduce usage)
- 10. Reducing food waste per year by 50%
- 11. Reducing household electricity consumption by 30%
- 12. Paying to offset carbon produced annually from eating meat (same meat-eating diet calculations as in #1)

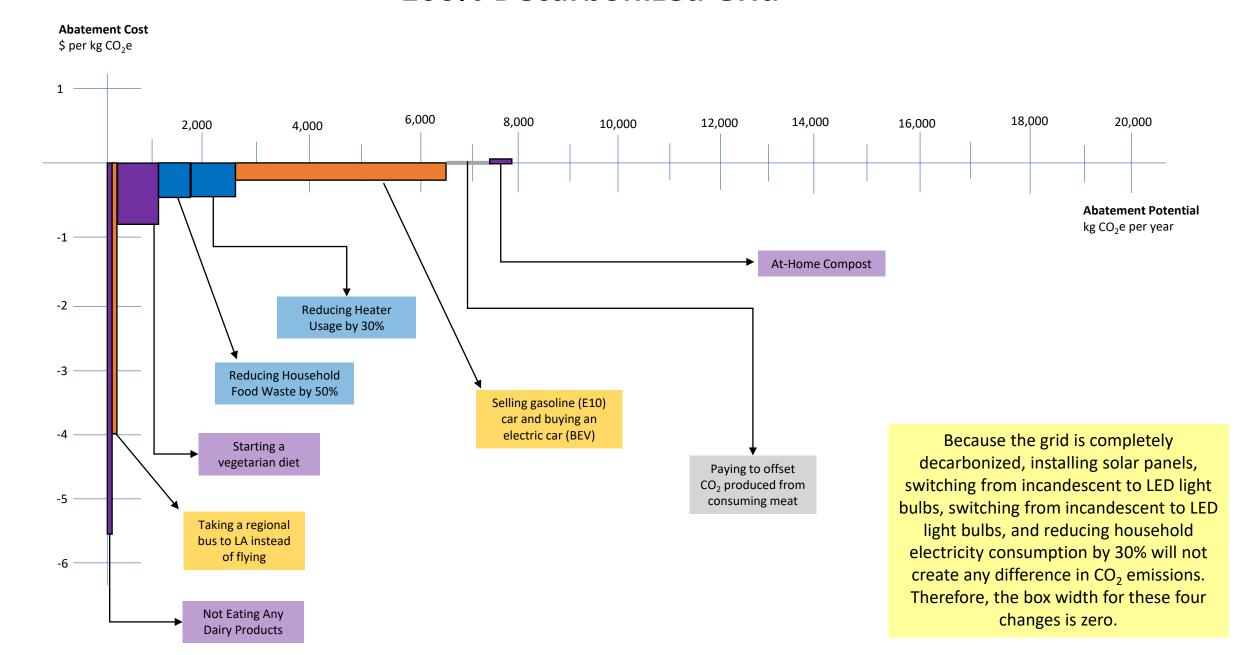
MRO East Grid



CAMX Grid



100% Decarbonized Grid



Data: MRO East Grid

Data Listed in order from lowest cost to highest cost

```
2: Net annual CO<sub>2</sub> emissions mitigated = -27.61 kg CO<sub>2</sub>, Net annual cost = -$150.80, Normalized Cost = -$5.46/kg CO<sub>2</sub>
6: Net annual CO<sub>2</sub> emissions mitigated = -52.89 kg CO<sub>2</sub>, Net annual cost = -$210.06, Normalized Cost = -$0.754/kg CO<sub>2</sub>
1: Net annual CO<sub>2</sub> emissions mitigated = -968.75 kg CO<sub>2</sub>, Net Annual cost = -$730, Normalized Cost = -$0.754/kg CO<sub>2</sub>
10: Net annual CO<sub>2</sub> emissions mitigated = -782.82 kg CO<sub>2</sub>, Net annual cost = -$319.37, Normalized Cost = -$0.408/kg CO<sub>2</sub>
9: Net annual CO<sub>2</sub> emissions mitigated = -863.63 kg CO<sub>2</sub>, Net Annual cost = -$345.75, Normalized Cost = -$0.400/kg CO<sub>2</sub>
8: Net annual CO<sub>2</sub> emissions mitigated = -2551.85 kg CO<sub>2</sub>, Net Annual cost = -$516.19, Normalized Cost = -$0.202/kg CO<sub>2</sub>
7: Net annual CO<sub>2</sub> emissions mitigated = -2351.71 kg CO<sub>2</sub>, Net Annual cost = -$471.07, Normalized Cost = -$0.200/kg CO<sub>2</sub>
11: Net annual CO<sub>2</sub> emissions mitigated = -2464.8 kg CO<sub>2</sub>, Net annual cost = -$487.72, Normalized Cost = -$0.199/kg CO<sub>2</sub>
5: Net annual CO<sub>2</sub> emissions mitigated = -977.26 kg CO<sub>2</sub>, Net Annual cost = -$184.09, Normalized Cost = -$0.188/kg CO<sub>2</sub>
4: Net annual CO<sub>2</sub> emissions mitigated = -7384.35 kg CO<sub>2</sub>, Net annual cost = -$927.86, Normalized Cost = -$0.126/kg CO<sub>2</sub>
12: Net annual CO<sub>2</sub> emissions mitigated = -1006.82 kg CO<sub>2</sub>, Net annual cost = $5.00, Normalized Cost = $0.0005/kg CO<sub>2</sub>
3: Net annual CO<sub>2</sub> emissions mitigated = -552.82 kg CO<sub>2</sub>, Net annual cost = $6.38, Normalized Cost = $0.0115/kg CO<sub>2</sub>
```

Data: CAMX Grid

Data Listed in order from lowest cost to highest cost

- 2: Net annual CO₂ emissions mitigated = -27.61 kg CO₂, Net annual cost = -\$150.80, Normalized Cost = -\$5.46/kg CO₂
- 6: Net annual CO₂ emissions mitigated = -52.89 kg CO₂, Net annual cost = -\$210.06, Normalized Cost = -\$3.97/kg CO₂
- 8: Net annual CO₂ emissions mitigated = -805.23 kg CO₂, Net annual cost = -\$798.64, Normalized Cost = -\$0.992/kg CO₂
- 7: Net annual CO₂ emissions mitigated = -742.07 kg CO₂, Net annual cost = -\$729.52, Normalized Cost = -\$0.983/kg CO₂
- 1: Net annual CO₂ emissions mitigated = -968.75 kg CO₂, Net Annual cost = -\$730, Normalized Cost = -\$0.754/kg CO₂
- 10: Net annual CO₂ emissions mitigated = -782.82 kg CO₂, Net annual cost = -\$319.37, Normalized Cost = -\$0.408/kg CO₂
- 9: Net annual CO₂ emissions mitigated = -863.63 kg CO₂, Net Annual cost = -\$345.75, Normalized Cost = -\$0.400/kg CO₂
- 4: Net annual CO₂ emissions mitigated = -7147.52 kg CO₂, Net annual cost = -\$2466.12, Normalized Cost = -\$0.345/kg CO₂
- 5: Net annual CO₂ emissions mitigated = -2810.04 kg CO₂, Net annual cost = -\$568.23, Normalized Cost = -\$0.202/kg CO₂
- 11: Net annual CO2 emissions mitigated = -2464.8 kg CO₂, Net annual cost = -\$487.72, Normalized Cost = -\$0.198/kg CO₂
- 12: Net annual CO₂ emissions mitigated = -1006.82 kg CO₂, Net annual cost = \$5, Normalized Cost = \$0.0005/kg CO₂
- 3: Net annual CO₂ emissions mitigated = -552.82 kg CO₂, Net annual cost = \$6.38, Normalized Cost = \$0.0115/kg CO₂

Data: 100% carbon-free grid

Data Listed in order from lowest cost to highest cost

- 2: Net annual CO₂ emissions mitigated = -27.61 kg CO₂, Net annual cost = -\$150.80, Normalized Cost = -\$5.46/kg CO₂
- 6: Net annual CO₂ emissions mitigated = -52.89 kg CO₂, Net annual cost = -\$210.06, Normalized Cost = -\$3.97/kg CO₂
- 1: Net annual CO₂ emissions mitigated = -968.75 kg CO₂, Net Annual cost = -\$730, Normalized Cost = -\$0.754/kg CO₂
- 10: Net annual CO₂ emissions mitigated = -782.82 kg CO₂, Net annual cost = -\$319.37, Normalized Cost = -\$0.408/kg CO₂
- 9: Net annual CO₂ emissions mitigated = -863.63 kg CO₂, Net Annual cost = -\$345.75, Normalized Cost = -\$0.400/kg CO₂
- 5: Net annual CO₂ emissions mitigated = -3655 kg CO₂, Net annual cost = -\$568.23, Normalized Cost = -\$0.155/kg CO₂
- 12: Net annual CO₂ emissions mitigated = -1006.82 kg CO₂, Net annual cost = \$5.00, Normalized Cost = \$0.0005/kg CO₂
- 3: Net annual CO₂ emissions mitigated = -552.82 kg CO₂, Net annual cost = \$6.38, Normalized Cost = \$0.0115/kg CO₂