

**Carbon Footprint Estimate for UCD "Odyssey" field trip (est. 35 persons)**

**Research station estimates**

	Monthly energy bill (\$\$)	KWh	MWh	lbs CO2	MtCO2	MtCO2/day	Odyssey Share
Electricity	2000	20000	20	13305	6.04	0.201	1.21
	Monthly energy bill (\$\$)	Gallon	kg CO2				6 days
Propane	1000	298.5075	1713.4		1.71	0.057	0.34
<b>Total</b>					<b>7.75</b>	<b>0.26</b>	<b>1.55</b>

**Vehicle CO2 emissions**

Unit #	Notes	miles 2008	MPG City	MPG HWY	Combined	Gallons Used	YR.MK.MD
4075	ICLEI 2008 PROTOCOL	1012	14	19		61.33	2007 DODGE DURANGO 4X4
3656		981	11	16	13	75.46	2002 DODGE AB-2500
3362	E-350 not listed, used E-150	990	13	18	15	66.00	2004 FORD E-350
4141	no official EPA, used webiste estimate	1034	12	16		73.86	2008 CHEVROLET EXPRESS
3245		1012	13	18	15	67.47	2003 FORD E-150
3401	E-350 not listed, used E-150	997	13	18	15	66.47	2004 FORD E-350
<b>Total</b>		<b>6026</b>			<b>Total gal. MT CO2</b>	<b>410.59</b>	<b>3.62</b>

**Assumptions**

Assumes electricity costs are x cents/KWh	x=	0.1
Southern California Edison emission rate = 665.26 lbs CO2/MWh		
Metric Ton = 2204.623		
2/23/09 wholesale price of propane = 77.1 cents/ gallon (but not in Bishop)	propane=	3.35
Emission factor for propane = 5.74 kg CO2/gallon		
www.fueleconomy.gov [official EPA MPG used]		
Motor Gasoline emission factor = 8.81 kgCO2/gallon		

**Odyssey Carbon emissions**

	MtCO2
Vehicle emissions (6 vehicles)	<b>3.62</b>
Electricity and propane	<b>1.55</b>
<b>Total</b>	<b>5.17</b>

**Carbon offset \$donation to NativeEnergy.com**

cost per metric ton of CO2 to build CO2-free power sources =	\$14
<b>donation =</b>	<b>\$72</b>

