

Comparison of Fuel Cell CO2 production to Solar and Wind

	Power (MW)	hrs/year	Line loss	CO2 lb/MW	Annual Tons CO2	Capacity Factor	FFPP Back Fill	FFPP Backfill (Tons CO2)	Total Tons CO2 per MWh		
Fossil Fuel Power Plant (FFPP)	9.66	8760	1.0488 <note 1>	905 <note 1>	40,160	100%	0%	0	4,157		
21 M400 Fuel Cells (Electric portion only)	9.66	8760	1.0000	769 <note 2>	32,537	100%	0%	0	3,368		
Solar	9.66	8760	1.0000	0	0	17% <note 3>	83%	33,333	3,451	(82)	82 tons more CO2 than 21 M400 Fuel Cells
Wind (corrected) <note 4>	9.66	8760	1.0000	0	0	20% <note 3>	80%	32,128	3,326	42	42 tons less CO2 than 21 M400 Fuel Cells
Wind (original) <note 4>	9.66	8760	1.0000	0	0	25% <note 5>	75%	30,120	3,118	250	250 tons less CO2 than 21 M400 Fuel Cells

notes

- 1) Source: eGRID 2018
- 2) Source: Doosan Fuel Cell America
- 3) Source: Section 2.4.2.1 *Year 10 Request for Proposals for Low and Zero Emissions Renewable Energy Credit Program*
https://www.uinet.com/wps/wcm/connect/www.uinet.com-7188/6c8133e3-1400-479c-b51f-244389f50a2c/Year+10+LREC+ZREC+RFP.pdf?MOD=AJPERES&CACHEID=ROOTWORKSPACE.Z18_J092I2G0N01BF0A7QAR8BK20A3-6c8133e3-1400-479c-b51f-244389f50a2c-nAVceUl.pdf
- 4) Wind Capacity factor was updated from 25% to 20% to align with Connecticut LREC/ZREC standards (see note 3)
- 5) 25% is an estimate on-shore wind capacity factor in New England