Perspective: Supplementary Information

Seawater Electrolysis for Hydrogen Production: A Solution Looking for a Problem?

M.A. Khan,[1] Tareq Al-Attas,[1] Soumyabrata Roy,[2] M.M. Rahman,[2] Noreddine Ghaffour,[3] Venkataraman Thangadurai,[4] Stephen Larter,[5] Jinguang Hu,[1*] Pulickel M. Ajayan,[2*] Md Golam Kibria[1*]

Table S1. Input parameters for PEM electrolyzer system based on production capacity of 50 tons H_2/day (costs in 2016 $). [1]

Stack cost ($/kW)	342
Mechanical BoP ($/kW)	36
Electrical BoP ($/kW)	82
Total cost ($/kW)	460
O&M (%)	3%
Stack electrical usage (kWh/kg)	50.4
BOP electrical usage (kWh/kg)	5.04
Total energy of PEM H_2 plant (kWh/kg)	55.44
Stack replacement cost (% of installed capital costs)	15%
Outlet H_2 pressure (bar)	20
Stack replacement interval (years)	7
Installation cost (% of uninstalled capital)	12%
Current Density (A/cm^2)	2
Cell Voltage (V)	1.9

1. Peterson, D.; Vickers, J.; DeSantis, D., Hydrogen production cost from PEM electrolysis—2019. *DOE Hydrogen Fuel Cells Program Record 19009* **2020**.