

# Daniel L. Sanchez

## **Position/Department/Division/Institution/Organization**

Assistant Cooperative Extension Specialist,  
Department of Environmental Science, Policy, and Management  
University of California-Berkeley

## **Country**

USA

## **Career history**

Daniel L. Sanchez is an engineer and energy systems analyst studying the commercialization and deployment of energy technologies that remove CO<sub>2</sub> from the atmosphere. Sanchez's work and engagement spans the academic, nongovernmental, and governmental sectors. As an Assistant Cooperative Extension Specialist, he runs the Carbon Removal Lab, which aims to commercialize sustainable negative emissions technologies, and supports outreach to policymakers and technologists in California and across the United States. Prior to joining the faculty of UC Berkeley, Daniel was a AAAS Congressional Science and Engineering Fellow serving in the Office of Senator Michael Bennet (D-CO). He has previously held positions with the Advanced Research Projects Agency-Energy, Green for All, and the California Public Utilities Commission. He holds a PhD and MS from UC Berkeley's Energy and Resources Group, and a BSE in chemical and biomolecular engineering from the University of Pennsylvania.

## **Awards/Publications**

Selected publications:

D.L. Sanchez, N. Johnson, S. McCoy, P.A. Turner, K.J. Mach. "Near-term deployment of carbon capture and storage from biorefineries in the United States" Proceedings of the National Academies of Sciences, 115, 4875-4880 (2018)

<http://www.pnas.org/content/pnas/115/19/4875.full.pdf>.

D.L. Sanchez, D.M. Kammen. "A commercialization strategy for carbon-negative energy" Nature Energy, 1, 1-4 (2016). doi: 10.1038/NENERGY.2015.

D.L. Sanchez, D.S. Callaway. "Optimal scale of bioenergy with carbon capture and storage (BECCS) facilities" Applied Energy (2016) doi:10.1016/j.apenergy.2016.02.134

D.L. Sanchez, J.H. Nelson, J. Johnston, A. Mileva, D. Kammen. “Biomass enables the transition to a carbon-negative power system across western North America.” *Nature Climate Change*, 5, 230–234 (2015).

E. Baik, D.L. Sanchez, et al. “Geospatial Analysis of the Near-Term Technical Potential for BECCS in the U.S.” *Proceedings of the National Academies of Sciences*, 115, 3290-3295 (2018). LEYBOURNE, M., BATTEN, W. M. J., BAHAJ, A. S., MINNS, N. & O'NIANS, J. (2011). Preliminary design of the OWEL wave energy converter commercial demonstrator. World Renewable Energy Congress, Linköping, Sweden.

LEYBOURNE, M., BATTEN, W. M. J., BAHAJ, A. S., MINNS, N. & O'NIANS, J. (2012) Preliminary Design of the OWEL Wave Energy Converter Pre-Commercial Demonstrator. *Renewable Energy*. Available online 13 September 2012, ISSN 0960-1481, 10.1016/j.renene.2012.08.019.

BUSH, H., LEYBOURNE, M., HUSSEY, J. & MINNS, N. (2013). Environmental Considerations for the Development of a Multi-Technology, Tidal Array Site in England. 10th European Wave and Tidal Energy Conference, Aalborg, Denmark.

ROC, T., GREAVES, D., CONLEY, D.C. & LEYBOURNE, M. (2013). Optimising commercial-scale TEC arrays: genetic algorithm, Fractal & Eco-mimicry. 10th European Wave and Tidal Energy Conference, Aalborg, Denmark.

LEYBOURNE, M. (2013). Development and Evaluation of the Hydrodynamic Design of the OWEL Wave Energy Converter. EngD. Thesis. University of Southampton, UK

LEYBOURNE, M. (2016). India Ventures into Offshore Wind. *Energy Focus – Spring 2016*, EIC pp128-131

YATES, C.M. & LEYBOURNE, M. (2016). Indian offshore wind: ambitions, opportunities and challenges. *Institution of Engineering and Technology (IET). Eng. Technol. Ref.*, pp. 1–11. DOI: 10.1049/etr.2016.0114

HUSSEY, J., MINNS, N., LEYBOURNE, M. & ABUNDO, M. (2016). Reduction in the Cost of Tidal Energy Through the Exploitation of Lower Flow Resources. *Proc. of the 3rd Asian Wave & Tidal Energy Conference (AWTEC 2016)*. pp 662-666

LEYBOURNE, M. & HUSSEY, J. (2016) A Review of India’s Developing Offshore Wind Market and Opportunities. *Proc. of the 3rd Asian Wave & Tidal Energy Conference (AWTEC 2016)*. pp 677-680

BAWN, G., LEBOE, D., JEDDERE-FISHER, S., CONRON, R. & LEYBOURNE, M. (2016).

Design of a Floating Platform for Shallow Water Tidal Stream Energy Resources. Proc. of the 3rd Asian Wave & Tidal Energy Conference (AWTEC 2016). pp 941-945

BAWN, G., LEBOE, D., JEDDERE-FISHER, S., CONRON, R. & LEYBOURNE, M. (2017). The

Design Process for a Floating Platform Operating in Shallow Water Tidal Flows with Vertical Axis Turbines. METS, USA

YATES, C. & LEYBOURNE, M. (2019). Financing Offshore Wind in Taiwan. Journal of National

Development Studies. Vol. 18 No. 2, pp125-152. DOI:10.6164/JNDS.201906\_18(2).0003

### **Areas of expertise**

carbon dioxide removal, energy systems modeling, bioenergy, climate policy