Models of energy transition at the community level

While the resources above set the global context for community energy initiatives, in the next reading the authors outline the ups and downs of the community sector in the UK. This resource is particularly important. It illustrates at the national level (*a*) how important policy settings are to driving new project development, and (*b*) how vulnerable this development is to changing political tides.

6.10 Read "The Evolution of Community Energy in the UK." (5 minutes)

Braunholtz-Speight, Tim, Sarah Mander, Matthew Hannon, Jeff Hardy, Carly McLachlan, Ed Manderson, and Maria Sharmina. "The Evolution of Community Energy in the UK," UK Energy Research Centre, September 2018. <u>http://www.ukerc.ac.uk/publications/evolution-of-community-energy-in-the-uk.html</u> (http://www.ukerc.ac.uk/publications/evolution-of-community-energy-in-the-uk.html)

So from New Zealand and the UK through to the experiences in many examples below across the globe we see the development, significance, and on the ground challenges to the development of energy democracy. For more on the term "energy democracy" see Sweeny (2013) in the further readings section.

6.11 Watch "Ten Years of Community Energy-Scottish Communities Lead the Way." (21:37)



Scotland is one jurisdiction where community energy is making huge strides. Keep track of the diverse contexts, grid linkages, and models of community ownership depicted in the next video. Note the ownership types and the role of government policy; in particular, the role of Community Energy Scotland

and the strategic array of functions this Scotland-wide intermediary organization fulfills to advance community energy.

In 2015, Hawaii passed legislation committing the State to achieve 100% renewable power by 2045. An energy transition underway at that time met with challenges, and integrating household solar into the grid became a major difficulty. This video (produced months before the Governor signed off on the 100% renewable legislation) illustrates the challenges: managing the technical requirements of the grid (back up storage, reliability, infrastructure costs, upgrades) and the competing interests at play in the scaling up of these technologies

6.12 Watch "Utility vs. Homeowners over Solar Power." (4:34)



6.13 Watch "Tesla Powerwall 2." (9:53; watch first 9:53 minutes)



 Fully Charged. "Tesla Powerwall 2," video, 28:14, posted by fullychargedshow to YouTube, August 31, 2017.

 https://www.youtube.com/watch?v=nWLzIrGGuxQ

 (https://www.youtube.com/watch?v=nWLzIrGGuxQ)

Meanwhile, in Kauai, a small island in the Hawaiian archipelago, people were dependent on imported diesel fuel for electricity generation. When the State decided in 2015 to commit to 100% renewable electricity, the shift to renewables gathered speed. By 2017 the co-operatively owned Kauai Island Utility Co-operative negotiated a partnership with Tesla to build a solar farm and an energy storage facility, one of the first in the world to locate solar generation and storage on the same site. For 2019, they expect that 70% of their power will be generated by renewables: primarily solar. The interplay of Tesla's storage technology innovation, legislative targets for transition, community ownership, and the multi-level benefits emerging is well illustrated in this video.