

Module 6 resources

Objective 6.1

- 6.0 Disobedient Productions. "Disobedience 2016 Full Movie," video, 40:57, posted by Climate State to YouTube, September 2016. <https://www.youtube.com/watch?v=8I7qCiqm8n0>
(<https://www.youtube.com/watch?v=8I7qCiqm8n0>)
- 6.1 U.S. Department of Energy. "What is the Smart Grid?" video, 5:18, posted by the creator to YouTube, June 4, 2013. <https://www.youtube.com/watch?v=JwRTpWZReJk>
(<https://www.youtube.com/watch?v=JwRTpWZReJk>)
- 6.2 Green Ox Energy Solutions & Solar Technology. "Micro Grids Using Renewable Energy Storage in Remote Locations," video, 7:43, posted by the creator to YouTube, June 6, 2011. <https://www.youtube.com/watch?v=Qm79X8zfPCE> (<https://www.youtube.com/watch?v=Qm79X8zfPCE>)
- 6.3 ABB, "What is a MicroGrid?" video, 2:09, posted by the creator to Youtube, November 7, 2017. <https://www.youtube.com/watch?v=cIBKlmtQom8> (<https://www.youtube.com/watch?v=cIBKlmtQom8>)
- 6.4 The Real News Network. "As California Fires Worsen, Environmentalists Demand a Green New Deal," video, 13:19, posted by the creator to YouTube, and posted on The Real News Network with transcript, November 16 2018. <https://therealnews.com/stories/as-california-fires-worsen-environmentalists-demand-a-green-new-deal> (<https://therealnews.com/stories/as-california-fires-worsen-environmentalists-demand-a-green-new-deal>)
- 6.5 Drawdown.org. "Electricity Generation Sector Summary," accessed January 25, 2019. <https://www.drawdown.org/solutions/electricity-generation> (<https://www.drawdown.org/solutions/electricity-generation>)

Objective 6.2

- 6.6 IRENA Coalition for Action. "Community Energy: Broadening the Ownership of Renewables," 2018. http://coalition.irena.org/-/media/Files/IRENA/Coalition-for-Action/Publication/Coalition-for-Action_Community-Energy_2018.pdf (http://coalition.irena.org/-/media/Files/IRENA/Coalition-for-Action/Publication/Coalition-for-Action_Community-Energy_2018.pdf)
- 6.7 World Future Council. "100% Renewable Energy with Anna Leidreiter," video, 15:54, posted by the creator to YouTube, August 2, 2016. <https://www.youtube.com/watch?v=i56fjDvWhb8>
(<https://www.youtube.com/watch?v=i56fjDvWhb8>)
- 6.8a World Future Council. "A Record Breaking Year for Renewable Energy and Community Energy," June 1, 2016. <https://www.worldfuturecouncil.org/record-breaking-year-for-renewables-and-community-energy/> (<https://www.worldfuturecouncil.org/record-breaking-year-for-renewables-and-community-energy/>)
- 6.8b World Future Council. "Community Energy—A Global Movement," video, 1:17, posted by the creator to YouTube, May 31, 2016. https://youtu.be/o_u12-HQra4 (https://youtu.be/o_u12-HQra4)

[HQra4](#)

- 6.9 Berka, Anna, Julie MacArthur, Steve Matthewman, Stephen Poletti, and Maria Bargh. "Policy Strategies for Inclusive Renewable Energy in Aotearoa New Zealand," Auckland Policy Commons (blog), December 6, 2018. <https://www.policycommons.ac.nz/2018/12/06/policy-strategies-for-inclusive-renewable-energy-in-aotearoa-new-zealand/> (<https://www.policycommons.ac.nz/2018/12/06/policy-strategies-for-inclusive-renewable-energy-in-aotearoa-new-zealand/>)
- 6.10 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. <http://www.ukerc.ac.uk/publications/evolution-of-community-energy-in-the-uk.html> (<http://www.ukerc.ac.uk/publications/evolution-of-community-energy-in-the-uk.html>)
- 6.11 Community Energy Scotland. "Ten Years of Community Energy—Scottish Communities Lead the Way," video, 21:37, posted by DingwallCES to YouTube, March 18, 2013. <https://www.youtube.com/watch?v=5QtvyrQHJQE> (<https://www.youtube.com/watch?v=5QtvyrQHJQE>)
- 6.12 Braund, Erik and Eugene Yi. "Utility vs. Homeowners Over Solar Power," Video, 4:24, the New York Times online, April 19, 2015. <http://www.nytimes.com/video/business/energy-environment/10000003613973/utility-vs-homeownersover-solar-power.html> (<http://www.nytimes.com/video/business/energy-environment/10000003613973/utility-vs-homeownersover-solar-power.html>)
- 6.13 Fully Charged. "Tesla Powerwall 2," video, 28:14, posted by fullychargedshow to YouTube, August 31, 2017. <https://www.youtube.com/watch?v=nWLzlrGGuxQ> (<https://www.youtube.com/watch?v=nWLzlrGGuxQ>)
- 6.14 Kress, Nele. "Interview on the Energy Transition in Germany: We Need a Citizen-Oriented Energy Supply," World Future Council, September 27, 2018. <https://www.worldfuturecouncil.org/interview-energy-transition-in-germany/> (<https://www.worldfuturecouncil.org/interview-energy-transition-in-germany/>)
- 6.15 Lewis, Michael and Pat Conaty. "Fossil Fuel Free Kristianstad," Canadian Centre for Community Renewal, March 5, 2012. http://www.communityrenewal.ca/sites/all/files/resource/i42012MAR05_Kristianstad.pdf (http://www.communityrenewal.ca/sites/all/files/resource/i42012MAR05_Kristianstad.pdf)
- 6.16 Henniecke, Peter. "Hope Is Rational—Germany's Radical Shift to Renewables and Efficiency," Renew Economy, November 19, 2018. <https://reneweconomy.com.au/hope-is-rational-germanys-radical-shift-to-renewables-and-efficiency-68663/> (<https://reneweconomy.com.au/hope-is-rational-germanys-radical-shift-to-renewables-and-efficiency-68663/>)
- 6.17 Lewis, Mike. "Kirklees, UK," Canadian Centre for Community Renewal, May 20, 2011. http://www.communityrenewal.ca/sites/all/files/resource/i42011MAY20_KES.pdf (http://www.communityrenewal.ca/sites/all/files/resource/i42011MAY20_KES.pdf)

Supplementary Resources

Objective 6.1

Maria Gallucci. "Rebuilding Puerto Rico's Power Grid: The Inside Story." IEEE Spectrum, March 12, 2018.

<https://spectrum.ieee.org/energy/policy/rebuilding-puerto-ricos-power-grid-the-inside-story>
(<https://spectrum.ieee.org/energy/policy/rebuilding-puerto-ricos-power-grid-the-inside-story>) An extensive exploration of the aftermath of Hurricane Maria and the multiple challenges and contradictions of rebuilding the Puerto Rico electrical grid. One year after Maria, the author identifies the full extent of the hurricane's impacts on the centralized grid, why managers were unprepared for its impacts, the flawed recovery plans, and Puerto Rico's financial inability to invest in rebuilding a resilient system. Since the storm, many on the island are turning to local micro-grids. However, wind turbines and solar farms can also be vulnerable to extreme weather.

Teske, Sven, Joanna Mills, Tina Loeffelbein, and Martin Kaiser. "World Energy (R)evolution: A Sustainable World Energy Outlook 2015 Executive Summary," Greenpeace, September 2015, as accessed through <https://www.greenpeace.org/archive-international/en/publications/Campaign-reports/Climate-Reports/Energy-Revolution-2015/> (<https://www.greenpeace.org/archive-international/en/publications/Campaign-reports/Climate-Reports/Energy-Revolution-2015/>) A clean energy transition for electricity, transport, and heating is possible. It can create millions of jobs and extend access to poor and underserved areas of the globe. The investment necessary, however, is in the order of \$1.6 trillion a year to reach 100% renewable. Greenpeace Reports have historically predicted clean energy trends more accurately than the International Energy Agency and US Energy Information Agency. The executive summary provides an excellent overview of key points.

REN21. "Renewables Global Futures Report: Great Debates Towards 100% Renewable Energy," Report, Paris: REN21 Secretariat, 2017. <http://www.ren21.net/future-of-renewables/global-futures-report/>
(<http://www.ren21.net/future-of-renewables/global-futures-report/>) The REN 21 is a widely cited, data-rich annual publication that illustrates issues and trends in the renewable energy sector. It provides an excellent overview of the technological, policy and economic challenges around the globe and in different national contexts.

REN21. "Chapter 7: Community Renewable Energy" in Global Status Report, Paris: Renewable Energy Policy Network, 2016. <http://www.ren21.net/gsr-2016/chapter07.php> (<http://www.ren21.net/gsr-2016/chapter07.php>)

The Agenda on TVO, "Jeremy Rifkin: The Third Industrial Revolution," video, 25:33, posted by The Agenda with Steve Paikin to YouTube, August 26, 2012. <https://www.youtube.com/watch?v=9e0UofNMzKM>
(<https://www.youtube.com/watch?v=9e0UofNMzKM>)

Wood, Elisa. "Three Big Energy Ideas to watch in 2019," MicroGrid Knowledge, January 4, 2019. <https://microgridknowledge.com/microgrids-macrogrid-green-new-deal/>
(<https://microgridknowledge.com/microgrids-macrogrid-green-new-deal/>) Discusses green new deal, and advances in grid flexibility and modular microgrids.

MIT Club of Northern California. "Does Solar + Storage = Grid 2.0?" video, 1:49:58, posted by the creator to YouTube, October 2, 2015. https://www.youtube.com/watch?v=9IGYrEk_PFE
(https://www.youtube.com/watch?v=9IGYrEk_PFE) For details on the solar energy and storage revolution, including implications for transforming the grid, listen to this MIT panel about the state of things in 2015.

Young, Fiona and Kalina Georgieva. "Community and Locally Owned Renewable Energy in Scotland at September 2015," Energy Saving Trust, October 2015. <http://www.energysavingtrust.org.uk/sites>

[/default/files/reports](#)

[/Community%20and%20locally%20owned%202015%20report_final%20version%20171115.pdf](#)

<http://www.energysavingtrust.org.uk/sites/default/files/reports>

[/Community%20and%20locally%20owned%202015%20report_final%20version%20171115.pdf](#) Executive Summary – Summary report of Scottish progress against targets.

Roberts, David. “Utilities Have a Problem: The Public Wants 100% Renewable Energy, and Quick,” Vox, October 11, 2018. <https://www.vox.com/energy-and-environment/2018/9/14/17853884/utilities-renewable-energy-100-percent-public-opinion> (<https://www.vox.com/energy-and-environment/2018/9/14/17853884/utilities-renewable-energy-100-percent-public-opinion>) A fascinating analysis that contrasts public attitudes versus utility owners attitudes towards a rapid transition to 100% renewable energy. This report is useful context for understanding the politics of energy utilities.

Hargreaves, Tom, Sabine Hielscher, Gill Seyfang, and Adrian Smith. “Grassroots innovations in community energy: The role of intermediaries in niche development.” *Global Environmental Change* 23(5), October 2013, pp 868-880. <https://doi.org/10.1016/j.gloenvcha.2013.02.008> (<https://doi.org/10.1016/j.gloenvcha.2013.02.008>); article available through https://ueaeprints.uea.ac.uk/43024/1/CISE_GEC.pdf (https://ueaeprints.uea.ac.uk/43024/1/CISE_GEC.pdf) University researchers offer rich insights, particularly the strategic importance of organizations like Community Energy Scotland. They make use of transitions studies perspectives.

Sustainable Economics Law Centre. “Energy is Like WHOA,” video, 1:53, posted by the creator to YouTube, July 4, 2018. <https://youtu.be/bOdfwgQHF64> (<https://youtu.be/bOdfwgQHF64>) Community Renewable Energy.

Objective 6.2

Sweeny, Sean. “Resist, Reclaim, Restructure: Unions and the Struggle for Energy Democracy,” discussion paper, Trade Unions for Energy Democracy, New York, April 2013. http://unionsforenergydemocracy.org/wp-content/uploads/2014/05/resistreclaimrestructure_2013_english.pdf (http://unionsforenergydemocracy.org/wp-content/uploads/2014/05/resistreclaimrestructure_2013_english.pdf) Energy democracy is a term increasingly used by social movement actors interested in just climate and energy transitions. This report by Sean Sweeny for Unions for Energy Democracy, outlines the key role that democratizing energy systems can play in climate change mitigation. Sweeny focuses on three key concepts: resisting the fossil fuel industries, reclaiming infrastructure from private actors, and restructuring energy systems so that they work for the social, environmental, economic, and cultural needs of the population.

Farrell, John and Maria McCoy. “Video: Advancing Energy Democracy with Community Renewable Energy,” video (28:53) and article, posted to YouTube and Institute for Local Self Reliance by the creator, October 11, 2018. <https://ilsr.org/video-advancing-energy-democracy-with-community-renewable-energy/> (<https://ilsr.org/video-advancing-energy-democracy-with-community-renewable-energy/>) The Institute for Local Self Reliance in the U.S. is one of the best sites for practical resources on organizing, owning, financing, and advocating for community energy. See Module 4: Starting Community-Owned Clean Energy Projects, and the video interview with the Shiloh Temple community solar project in north Minneapolis, a local ownership form of energy democracy. The video also discusses barriers to similar projects, and how communities can overcome those barriers, included in ILSR’s Community Power Toolkit.

Solar Energy Industries Association. “Community Solar,” accessed January 27, 2019.

<https://www.seia.org/initiatives/community-solar> (<https://www.seia.org/initiatives/community-solar>)

There are many policies being invented that are being used to extend opportunities for part-ownership by citizens or other forms of citizen benefits, all of which are contributing to community solar expansion in the U.S. This article summarizes several ownership opportunities and benefits being advanced in the U.S.

The Solutions Project website, accessed January 27, 2019. <http://thesolutionsproject.org> (<http://thesolutionsproject.org>) The Solutions Project brings together unlikely allies to invest in promising solutions aimed at accelerating the transition to clean energy.

Farrell, John. "5 Barriers to and Solutions for Community Renewable Energy," video (16:43) and article, posted to YouTube and Institute for Local Self Reliance by the creator, May 3, 2013. <https://ilsr.org/5-barriers-solutions-community-renewable-energy/> (<https://ilsr.org/5-barriers-solutions-community-renewable-energy/>) This section of the website provides an excellent summary of barriers and solutions—US based but with references to other countries. There is much here that relates to issues of ownership structure and finance which varies to some extent between jurisdictions. Solutions to the barriers are highlighted in a very helpful way and, while it may not be directly applicable to your context, it will stimulate thinking and focus your research.

Community Energy Scotland, website, accessed January 27, 2019.

<http://www.communityenergyscotland.org.uk/> (<http://www.communityenergyscotland.org.uk/>)

Eigg Electric. "Renewable Energy for the Isle of Eigg," video, 9:54, posted to YouTube by Isle Eigg.

<https://www.youtube.com/watch?v=I3n-6YHquno> (<https://www.youtube.com/watch?v=I3n-6YHquno>)

The people of community-owned Isle of Eigg switch on their own renewable electricity supply in February 2008. See www.islandsgoinggreen.org (<http://www.islandsgoinggreen.org>) for more information.

O'Brien-Applegate, Joseph, and Tom Bourgeois. "Sharing Resiliency Lessons Learned from Japan on the Anniversary of Hurricane Sandy," Microgrid Knowledge. November 8, 2018.

<https://microgridknowledge.com/resiliency-lessons-japan-hurricane-sandy/>

(<https://microgridknowledge.com/resiliency-lessons-japan-hurricane-sandy/>) Applications of micro-grids in cities in Japan that combine heat and power. The authors glean lessons from Japanese initiatives that would be more resilient in the face of disasters such as Hurricane Sandy in New York.

Farrell, John. "Solar Co-ops Support Clean Energy Advances in D.C.—Episode 64 of Local Energy Rules Podcast," article and podcast (28:41), Institute for Local Self Reliance. November 13, 2018.

<https://ilsr.org/solar-co-ops-support-clean-energy-advances-in-d-c-episode-64-of-local-energy-rules-podcast/> (<https://ilsr.org/solar-co-ops-support-clean-energy-advances-in-d-c-episode-64-of-local-energy-rules-podcast/>)

Discusses support for developing solar co-operatives across 10 American states and 3000 homes.

Lewis, Michael, and Pat Conaty. *The Resilience Imperative: Co-operative Transitions to a Steady State Economy*. Gabriola Island: New Society Publishers, 2012.

MacArthur, Julie. *Empowering Electricity: Co-operatives, Sustainability, and Power Sector Reform in Canada*. Vancouver, BC: University of British Columbia Press, 2016.

Policy Auckland. [Policy Strategies for Inclusive Renewable Energy](https://cdn.auckland.ac.nz/assets/auckland/arts/our-research/research-institutes-centres-groups/ppi/policy-briefings/policy-strategies-for-inclusive-renewable-energy.pdf) (<https://cdn.auckland.ac.nz/assets/auckland/arts/our-research/research-institutes-centres-groups/ppi/policy-briefings/policy-strategies-for-inclusive-renewable-energy.pdf>) Policy Briefing, 2018.

Department of Energy and Climate Change (DECC). *UK Community Energy Strategy*. London, 2014.

IPCC. "Climate Change 2014: Mitigation of Climate Change," summary and full report, Intergovernmental Panel on Climate Change, Cambridge University Press, Cambridge, UK and New York, NY, USA, 2014. <http://mitigation2014.org/report> (<http://mitigation2014.org/report>)

REN21. "Renewables 2018 Global Status Report," Paris: REN21 Secretariat, 2018. <http://www.ren21.net/gsr-2018/>

REN21. "Renewables Global Futures Report: Great Debates Towards 100% Renewable Energy," Paris: REN21 Secretariat, 2017. <http://www.ren21.net/future-of-renewables/global-futures-report/> (<http://www.ren21.net/future-of-renewables/global-futures-report/>)