

Energy Supply and Demand | Additional resources:

- Podcast: [ETT Episode 3](#)
- Video: "Energy vs IEA Oil and Gas Scenarios" by Energy vs Climate. This video provides a comprehensive overview of global energy trends, using data visualizations to explain complex concepts. [Available on YouTube.](#)
- Publication: "[Energy Transitions: Global and National Perspectives](#)" by Vaclav Smil. This book offers a detailed analysis of past and potential future energy transitions. Available on Amazon and other book retailers.
- Website: International Energy Agency (IEA) - World Energy Outlook. This site provides annual reports and data on global energy supply and demand trends. <https://www.iea.org/topics/world-energy-outlook>
- Video: TED Talk - "How to transform apocalypse fatigue into action on global warming" by Per Espen Stoknes. This talk discusses psychological barriers to addressing climate change and energy issues. [Available on the TED website.](#)
- Article: "IEA Cuts 2025 Oil Demand Forecast, Lifts Supply View" by The Wall Street Journal. This article explores recent trends in energy supply and demand, including the impact of global events. [Available on The Wall Street Journal website](#) (may require subscription).

Future Role of Fossil Fuels | Additional resources:

- Podcast: [ETT Episode 6](#)
- Website: [International Energy Agency \(IEA\) - World Energy Outlook 2022](#)
 - The IEA's annual World Energy Outlook provides comprehensive analysis and projections on future energy trends, including demand growth, fuel mix, and the role of different energy sources. The 2022 edition specifically explores various scenarios for the energy transition.
- Podcast: Energy Policy Now (Ep. "[Energy Transition and Opportunity in the Oil Patch](#)")
 - This episode from the Kleinman Center for Energy Policy features a discussion with experts on the energy industry growth shifts to the clean sector, oil and gas industry workers seek a path forward.
- Article: "[Renewable Energy](#)" (National Geographic)
 - This National Geographic site provides teaching resources about renewable energy for grades 2-12.
- Publication: "[BP Energy Outlook 2023 edition](#)"
 - BP's annual Energy Outlook provides a detailed analysis of long-term energy trends, including projections for different fuel sources, demand growth, and potential transition paths.
- Podcast: "The Energy Gang" (Greentech Media) - Episode on "[Will oil, gas and coal peak by 2030?](#)"
 - This episode from the popular Energy Gang podcast features a discussion with industry experts on IEA's views and progress in the transition away from fossil fuels.

- Article: "[Grace on fossil fuel industry ties](#)" (University of Cambridge)
 - A report into the impacts of implementing the Grace on the fossil fuel industry ties to Cambridge University's mission.

Realities in Power Generation | Additional resources:

- Podcast: [ETT Episode 7](#)
- Video: "How the Electricity Grid Works" by Practical Engineering: This YouTube video provides a clear, visual explanation of how the power grid functions, including generation, transmission, and distribution. [Available on YouTube](#).
- Podcast: "The Energy Gang" episode on "[How will utilities meet surging power demand?](#)": This episode discusses the challenges and opportunities facing utility companies in the era of clean energy transition. Available on major podcast platforms.
- Publication: "[Renewable Energy Integration: Practical Management of Variability, Uncertainty, and Flexibility in Power Grids](#)" by Lawrence E. Jones: This book offers insights into the technical challenges of integrating renewable energy into the grid. Available on Amazon and other book retailers.
- Website: U.S. Energy Information Administration (EIA) - Electricity Explained. This site provides comprehensive information on electricity generation, delivery, and use in the United States. <https://www.eia.gov/energyexplained/electricity/>
- Video: TED Talk - "The Missing Link to Renewable Energy" by Donald Sadoway: This talk discusses the importance of energy storage in the context of renewable energy integration. [Available on the TED website](#).
- Article: "More Energy on Less Land: The Drive to Shrink Solar's Footprint" by Yale Environment 360. This article explores how utility companies are adapting to the changing energy landscape. [Available on the Yale Environment 360 website](#).

Recruiting the next generation energy workforce | Additional resources:

- Podcast: [ETT Episode 13](#)
- Video: "U.S. Energy Secretary Jennifer Granholm at #EmpowermentSummit2024" by the National Urban League: A short, informative video discussing the changing landscape of energy jobs and the skills needed for the future workforce. [Available on YouTube](#).
- Podcast: "The Energy Gang" episode on "Everyone is worrying about rising demand for electricity. Do Microsoft and Google have an answer?" This episode discusses the skills gap in the clean energy sector and strategies for workforce development. [Available on major podcast platforms](#).
- Publication: "The Future of Jobs in Energy" report by the World Economic Forum. This report provides insights into how jobs in the energy sector are evolving and what skills will be in demand. [Available on the World Economic Forum website](#).
- Website: U.S. Department of Energy's "Energy Careers" portal. This site offers information on various energy careers, educational requirements, and industry trends. <https://www.energy.gov/careers/energy-careers>

- Video: TED Talk - "Imagining New Skills for the Future" by Naadiya Moosajee: This talk discusses the importance of diversity in engineering and energy fields. [Available on the YouTube TED website.](#)
- Video: "Green Skills for the Future Energy Workforce" by Sustainable Energy For All: The webinar "Green Skills for the Future Workforce" aims to promote economic growth, energy security, and environmental sustainability by showcasing the diverse skills necessary in the clean energy sector while addressing unemployment challenges.. [Available on YouTube.](#)

Realities in Transportation/Mobility | Additional resources:

- Podcast: [ETT Episode 12](#)
- Video: "The Future of Transportation" by Ryan Janzen. Janzen is co-founder and CTO of TransPod, working to design ultra-high-speed aerospace vehicles, moving passengers and cargo between cities faster, with reduced dependency on fossil fuels – creating the future of transportation. [Available on YouTube.](#)
- Podcast: "Sustainability Forum Podcast" episode on "Rethinking Urban Mobility." From the design of cities to the way we move within them, every aspect of our built environment plays a crucial role in shaping our environmental footprint. Transportation, in particular, stands at the intersection of sustainability and urban planning, offering opportunities to rethink how we move people and goods while minimizing environmental impact. [Available on major podcast platforms.](#)
- Publication: "Three Revolutions: Steering Automated, Shared, and Electric Vehicles to a Better Future" by Daniel Sperling. This book explores the converging trends of vehicle electrification, automation, and sharing services. [Available on Amazon and other book retailers.](#)
- Website: International Transport Forum - Decarbonising Transport initiative. This site provides comprehensive information on global efforts to reduce emissions in the transportation sector. <https://www.itf-oecd.org/decarbonising-transport>
- Video: TED Talk - "The Walkable City" by Jeff Speck. This talk discusses how making cities more walkable can address various urban issues, including transportation. [Available on the TED website.](#)
- Article: "The Future of Mobility Is Data, Not Cars" by Forrester. This article explores how data and connectivity are reshaping transportation systems and urban mobility. [Available on the Forrester website.](#)

Realities in Alternate Forms of Energy Supply | Additional resources:

- Podcast: [ETT Episode 10](#) & [ETT Episode 11](#)
- Video: "RFF's Advanced Energy Technologies Series: The Future of Geothermal Energy" by Resources for the Future. This YouTube video provides an in-depth look at geothermal energy, including traditional and enhanced geothermal systems. [Available on YouTube.](#)

- Podcast: "Energy Gang" episode on "Where Green Hydrogen Is Headed [Special Content]" This episode discusses the potential and challenges of hydrogen as an energy carrier. [Available on major podcast platforms.](#)
- Publication: "Carbon Capture" by Howard J. Herzog. This book provides a comprehensive overview of carbon capture and storage technologies. [Available on Amazon and other book retailers.](#)
- Website: U.S. Department of Energy - Alternative Fuels Data Center This site offers detailed information on various alternative energy sources, including hydrogen and geothermal. <https://afdc.energy.gov/>
- Video: TED Talk - "The green transition depends on the reinvention of battery technology" by Simon Clark. This talk discusses emerging battery technologies that could revolutionize energy storage. [Available on the YouTube TED website.](#)
- Article: "The Race to Crack Battery Recycling—Before It's Too Late" by WIRED. This article explores the challenges and innovations in battery recycling, a crucial aspect of sustainable energy storage. [Available on the WIRED website.](#)

At the End of the day, Physics and Economics win | Additional resources:

- Energy density
 - Video: "[Energy density in electric fields](#)" by Khan Academy - Derives an expression for the energy density of the electric field using a parallel plate capacitor.
 - Website: "[Primary, secondary, final, and useful energy: Why are there different ways of measuring energy?](#)" by Our World in Data - Explains primary, secondary, final, and useful energy, and how looking at the different stages of the energy chain can help identify inefficiencies.
- Critical minerals supply chain
 - Podcast: "[Supplying Critical Minerals](#)" by The Overtake - Explores national security concerns regarding the US manufacturing sector's dependency on foreign suppliers for critical minerals.
 - Video: "[What are critical minerals?](#)" by the International Energy Agency - Discusses what critical minerals are, why they're needed, and the supply risks to the clean energy transition.
- Primary, secondary, final, and end-use energy
 - Website: "[Shedding light on energy in Europe – 2024 edition](#)" by Eurostat - Provides statistics and infographics on energy production, consumption, and efficiency in the EU. Distinguishes between primary, secondary, and final energy.
 - Video: "[Energy Demand and End Use Data](#)" webinar by the IEA (in Chinese) - Training on energy demand and end-use data from the International Energy Agency.
- Economics of offshore wind and EV adoption
 - Podcast: "[Redefining Energy](#)" hosted by Gerard Reid and Laurent Segalen - Discusses the evolution of energy markets, technologies, and investments, including episodes on offshore wind and EVs.

- Video: "[Critical Materials in the Energy Supply Chain](#)" seminar with Helena Khazdozian - Examines vulnerabilities in the supply chain of critical materials needed for clean energy technologies.

The Big Picture | Additional resources:

- Podcast: [ETT Episode 14](#)
- Video: "[Energy 101: Energy Density](#)" by Texas Public Policy Foundation on YouTube - Explains the concept of energy density, compares different energy sources, and discusses why it's a key factor in the energy transition.
- Publication: "[A Novel Analysis of Energy Density Considerations and Its Impacts on the Cost of Electrical Energy Storage \(EES\) Plants](#)" in the journal Energies - Analyzes the impact of energy density on the cost of energy storage systems.
- Podcast: "[Critical Materials in the Energy Supply Chain](#)" with Helena Khazdozian from the Center for Strategic and International Studies - Examines vulnerabilities in the supply chain of critical materials needed for clean energy technologies.
- Website: "[Critical minerals basics](#)" by the American Geosciences Institute - Provides an overview of what critical minerals are, why they matter, and the role of geoscience in the critical minerals supply chain.
- Publication: "[Shedding light on energy in Europe](#)" by Eurostat - Provides statistics on energy production, consumption, and efficiency in the EU, distinguishing between primary, secondary, and final energy.

Energy Poverty and the Realities of Developing World Economies and Sustainable Development Goals | Additional resources:

- Podcast: [ETT Episode 8B](#)
- Website: Sustainable Development Goal 7 (SDG7) by the United Nations Provides an overview of SDG7 which aims to ensure access to affordable, reliable, sustainable, and modern energy for all. Includes specific targets and indicators. URL: <https://sdgs.un.org/goals/goal7>
- Publication: Energy Poverty - SEforALL report for the G20 Energy Transition Working Group. Examines the intersection of SDG7, development, and resilience. Provides a conceptual framework for understanding energy poverty in both developing and developed countries. PDF: <https://www.seforall.org/system/files?file=2021-06%2FG20-SEforALL-Energy-poverty-executive-note.pdf>
- Video: Ending Energy Poverty by the World Bank. A 3-minute video highlighting the challenges of energy poverty globally and the World Bank's efforts to help countries overcome them. URL: <https://www.worldbank.org/en/news/video/2014/10/14/ending-energy-poverty>
- Podcast: Combating Energy Poverty in the U.S. from Resources Radio Explores the role of policy in overcoming energy poverty, focusing on the U.S. where one-third of

households struggle to afford basic energy needs. URL:

<https://podcasts.apple.com/ar/podcast/combating-energy-poverty-in-the-u-s/id119168116?i=1000517854576>

- Publication: Energy poverty in developing countries: A review of the concept and its measurements. Academic article providing an overview of how energy poverty is defined and measured in the developing world context. Reviews single indicators, dashboards, and composite indices. URL:
<https://www.sciencedirect.com/science/article/abs/pii/S2214629622000676>
- Website: Solving energy poverty: power beyond the grid by SDG Action. Discusses the potential of decentralized renewable energy solutions like mini-grids and off-grid solar to address energy poverty, especially in remote areas. Provides examples from Nigeria. URL: <https://sdg-action.org/solving-energy-poverty-power-beyond-the-grid/>

Sustainability and Bettering Human Lives | Additional resources:

- Podcast: [ETT Episode 2](#)
- Website: Sustainable Lifestyles Education Hub. Provides practical tips, lessons, policy guidance, teaching materials, and case studies on how to change lifestyles to improve environmental impact and live more sustainably. URL:
<https://sustainablelifestyleseducation.org>
- Video: What is Sustainability? by Mocomi Kids. An informative animated video explaining the concept of sustainability, its various dimensions (ecological, economic, political, cultural), and ways individuals can contribute through lifestyle changes, fixing and reusing items, recycling, etc. URL: <https://www.youtube.com/watch?v=gTamnlXbqqc>
- Podcast: Sustainability Defined. Explain and dissect a different sustainability topic each week with expert guests. Aims to eradicate ambiguity around sustainability concepts. Episodes cover a wide range of social and environmental issues. URL:
<https://sustainabilitydefined.com/>
- Publication: Improving the quality of life for sustainable development (Yadav, 2020). Academic article discussing how improving quality of life and appreciating the potential of every individual is key to sustainable development. Argues an integrated approach is needed. URL:
https://www.researchgate.net/publication/345327750_Improving_the_quality_of_life_for_sustainable_development
- Website: Teachers' Resources by Green Choices. Provides a variety of freely downloadable activities and resources for teachers on sustainability and green living topics. Includes lesson plans and materials across subjects like English, math, science, geography, etc. URL:
<https://www.greenchoices.org/going-green/schools/teachers-resources>