Clean Energies

Your Mission: You are energy innovators working for the Future Grid Taskforce. Your mission: explore how the world produces energy today, and design ideas for a cleaner, fairer, and more sustainable tomorrow

Pre-Visit Activity

Hook	15 mins	**Interactive Map/Website**: *Our World in Data – Share of Electricity from Renewables* **Quick Think-Pair-Share**: • Which countries are leading in renewables? • Which are lagging? Why might that be?
Our World in Data	10 mins	**Interactive Map / Website:** *Electricity production by source* **Questions:** • Which energy sources dominate today? • Which energy sources are growing? • Which are declining? • What patterns surprise you and why?
Data Dive Challenge	15 mins	Students work in pairs to select 2–3 countries. Create a short infographic (Canva, Google Slides, or hand-drawn) comparing their energy mix (solar, wind, hydro, fossil, nuclear). **Prompt**: What factors (geography, policy, technology, economics) explain the differences?
Future Brainstorm	30 mins	**Scenario**: "It's 2035 and your city must run on 80% clean energy." In groups, sketch a mini-plan: What mix of solar, wind, hydro, batteries, or new tech would you propose?
Share and reflect	10 mins	In teams, you have 60-seconds to share your mini-plan with the class.

Post-Visit Activity

Your Mission: You are now clean energy advisors pitching solutions to schools, businesses, or governments. Your task is to use what you learned to inspire action and create future-ready energy solutions.

Hook	10 mins	Example: "How Australia could run on 100% renewables" (short explainer, e.g. TED-Ed or ABC Catalyst clip). **Question**: What's one surprising insight that challenges what you thought about energy?

Student Challenge	45 mins	**Option A – Mini TikTok/Video**
		• In groups, create a 1-minute explainer answering:
		  ○ "How does clean energy affect everyday life?"
		  ○ "What's one myth about renewables we can bust?"
		Option B – Data Analysts
		• Analyse exported workshop results (or teacher-provided sample data).
		• Create bar graphs, averages, and short conclusions about renewable efficiency or preferences.
		• Prompt: "Is the data reliable? How could we improve it?"
		Option C – Futures Pitch
		• Teams role-play as *Energy Startups*.
		• 2-minute pitch to class: "Our innovation will help Australia reach 100% renewables by 2050."

Reflection and Ethics	10 mins	**Discussion**: • Should every country commit to phasing out fossil fuels, even if it slows their economy? • Who should pay more for the clean energy transition — wealthy nations, corporations, or individuals? • What new careers will exist in a clean energy future?