B2 Business English Speaking Class

If It Can Power a Car, Why Not a Data Center?

Second-Life EV Batteries and the Circular Economy

Based on: Nora Lowe, *The Atlantic*, “If It Can Power a Car, Why Not a Data Center?”
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Duration: 45 minutes
Level: B2
Primary skills: Speaking, vocabulary development, critical thinking, sustainability, business strategy

Lesson Objectives

By the end of the class, students will be able to:

- explain why an EV battery can become unsuitable for a car while remaining useful for stationary energy storage;
- use ten high-value business-English words and collocations;
- discuss real examples of second-life battery applications;
- evaluate commercial opportunities alongside safety, regulatory, and environmental risks;
- recommend a responsible strategy for scaling battery reuse.

Article Overview

The article explains that large lithium-ion batteries in electric vehicles gradually lose capacity. Once a battery can provide only around 70–80% of its original charge, it may no longer provide a sufficiently long driving range. However, the remaining energy can still be valuable in a building or industrial setting.

The article describes several second-life applications:

- used Renault batteries installed in U.K. homes with solar panels;
- retired Audi batteries used in forklifts at a German factory;
- new and used Nissan batteries supporting backup power at Amsterdam’s Johan Cruijff Arena;
- a similar Nissan battery-storage project in Melilla, Spain;
- Moment Energy systems for clients such as hospitals and airports;

- a Moment Energy installation using retired EV batteries to fast-charge vehicles at Vancouver International Airport;
- Redwood Materials' plans to deploy used Rivian batteries and develop storage for data centres;
- a Nevada microgrid designed to power data centres.

The article argues that conditions for reuse are becoming more favourable. EV fleets are aging, solar-panel ownership is increasing, new battery materials can be expensive, weather-related outages are creating demand for backup power, and AI data centres require enormous amounts of electricity.

However, the market also faces serious barriers. Batteries may be difficult to remove from vehicles, lithium-ion systems can catch fire, used batteries need careful testing, and some forecasts about market growth may be optimistic. The article also contrasts Europe and the United States: European Union rules requiring automakers to trace, repossess, and dispose of old batteries may encourage reuse, while U.S. policies are developing unevenly.

> ***Central business question:*** *Can second-life batteries become a safe, reliable, and profitable bridge between electric transport, renewable energy, and the growing demand from data centres?*

Top 10 B2 Business-English Words and Phrases

Word or phrase	Meaning	Business-English example
1. Repurpose	To use something for a new or different purpose	"The company plans to repurpose retired vehicle batteries for commercial energy storage."
2. Capacity	The amount that something can store, produce, or contain	"The battery has lost some capacity, but it can still support a building during an outage."
3. Second life	A later period of useful service after a product is no longer suitable for its original purpose	"The company is developing a second-life market for batteries that can no longer power cars."
4. Backup	A replacement or additional system used when the main system fails	"The arena uses battery storage as a backup during power interruptions."
5. Microgrid	A small, local electricity network that can operate with or separately from the main grid	"The company built a microgrid to supply several data centres."

Word or phrase	Meaning	Business-English example
6. Outage	A temporary interruption of electricity or another service	“The battery system can keep essential equipment operating during an outage.”
7. Scale	To expand an activity or business successfully and efficiently	“The pilot worked well, but the company still needs to prove that it can scale.”
8. Liability	Legal responsibility for damage, injury, or loss	“Battery manufacturers may design products to be difficult to dismantle because of liability concerns.”
9. Viability	The likelihood that an idea or business can work successfully	“The commercial viability of second-life batteries depends on safety, testing, and cost.”
10. Producer responsibility	The principle that manufacturers remain responsible for a product after it is sold, including its collection, reuse, or disposal	“Producer-responsibility laws can encourage companies to design batteries for reuse and recycling.”

Useful Collocations

- **repurpose retired batteries**
- **remaining battery capacity**
- **give a product a second life**
- **provide emergency backup**
- **build a local microgrid**
- **experience a power outage**
- **scale a pilot project**
- **face legal liability**
- **assess commercial viability**
- **introduce producer-responsibility rules**

Additional Topic Language

- **stationary storage** — energy storage that remains in one place rather than moving with a vehicle;
- **energy-intensive** — requiring a large amount of energy;
- **peak demand** — the period when electricity use is at its highest;
- **solar array** — a group of solar panels installed together;
- **retired battery** — a battery no longer used for its original application;
- **battery management system** — hardware and software that monitors and controls a battery;

- **supply chain** — the network involved in producing, transporting, using, and recovering a product;
- **producer-responsibility law** — a regulation requiring manufacturers to manage a product’s later-life impact;
- **fire risk** — the possibility that a material or system may ignite and cause damage;
- **circular economy** — an economic model that reduces waste by reusing, repairing, remanufacturing, and recycling products.

45-Minute Lesson Structure

Time	Stage	Procedure
5 min	Warm-up	Ask: “When is a product no longer useful, and when can it be given a second life?” Students give examples from technology, clothing, packaging, or vehicles.
8 min	Article connection	Students explain why an EV battery may be unsuitable for a car but still useful for a home, factory, stadium, airport, or data centre. Review two examples from the article.
10 min	Vocabulary focus	Teach the ten target words. Students classify them as technical, commercial, legal, environmental, or operational language.
17 min	Speaking discussion	Students answer the ten questions below in pairs or small groups. Require reasons, examples, and follow-up questions.
5 min	Business strategy task	Groups design a second-life battery pilot and present its customer, use case, main risk, and success measure.

Ten B2 Speaking Questions

1. **Why can a battery that is no longer suitable for a car still be valuable for a home, factory, stadium, airport, or data centre?**
2. **Which of the article's examples seems most commercially promising: home solar storage, factory forklifts, stadium backup power, airport charging, or data-centre storage? Why?**
3. **What information would a company need before deciding whether to repurpose a retired EV battery?**
4. **How could second-life batteries help businesses reduce electricity costs or manage peak demand?**
5. **What are the main safety and liability risks of installing aging lithium-ion batteries in buildings?**
6. **Should manufacturers design EV batteries so that they are easier to remove and reuse, even if this makes the original vehicle more expensive?**
7. **Do producer-responsibility laws encourage innovation, or do they place too much responsibility on manufacturers?**
8. **Why might Europe have moved faster than the United States in developing second-life battery projects? Consider EV adoption, regulation, and market conditions.**
9. **The article mentions ambitious forecasts for the used-battery market. What evidence would investors need before believing that the market is commercially viable?**
10. **If you were launching a second-life battery company, which customer would you target first and what would your pilot project test?**

Follow-Up Prompts for Longer B2 Answers

Use these prompts to develop students' answers:

- **What would be the immediate benefit?**
- **Who would pay for the solution?**
- **What could go wrong?**
- **Who would be legally responsible?**
- **Would this work in every country?**
- **How could the company build customer trust?**
- **What would make the pilot successful?**
- **Could the solution create a different environmental problem?**

Functional Language for Sustainability and Business Strategy

Discussing commercial potential

- “The most promising application appears to be ___ because ___.”
- “The business case is attractive if the company can control ___.”
- “This model may be viable for large industrial customers but less suitable for individual homeowners.”
- “The strongest value proposition is reliable backup during ___.”

Discussing risks and uncertainty

- “The main risk is that ___.”
- “Before scaling the project, the company would need to verify ___.”
- “The forecast may be optimistic because it does not fully account for ___.”
- “There is a trade-off between lower cost and greater safety assurance.”

Proposing a pilot project

- “I would begin with a small pilot involving ___.”
- “The pilot should test safety, reliability, remaining capacity, and total cost.”
- “If the results are positive, the company could scale the model gradually.”
- “The first priority should be to establish consistent testing and maintenance standards.”

Discussing regulation and responsibility

- “Producer responsibility could encourage manufacturers to consider the full life cycle of the battery.”
- “Regulation can build customer trust, but excessive regulation may slow innovation.”
- “Liability should be clearly assigned before the system is installed.”
- “Manufacturers, reuse companies, regulators, and customers all have different responsibilities.”

Mini Case Study: Choosing the First Market

Situation

A start-up has access to retired EV batteries and wants to enter the second-life storage market. It is considering four customers:

- homeowners with solar panels;
- factories that need backup power;
- airports that need vehicle-charging infrastructure;
- data-centre operators with very high electricity demand.

The start-up has limited capital. It needs a first customer that can pay for a pilot, provide reliable performance data, and accept a higher level of technical supervision.

Student Task

In groups, choose one target market and prepare a short recommendation:

11. What customer problem does the battery system solve?
12. Why is this market better than the alternatives?
13. What technical and safety information is required?
14. What liability issues must be addressed?
15. What should the pilot measure?
16. What would make the business viable at scale?

Success Criteria

Students should:

- use at least five target vocabulary items;
- identify one commercial opportunity and two risks;
- include a testing and safety process;
- distinguish a pilot from full-scale expansion;
- explain how the company would build customer trust.

Final Reflection

Ask students to complete this sentence:

> ***"The most promising second-life use for EV batteries is _____ because _____, but the main barrier is _____."***

Possible example:

> *“The most promising second-life use for EV batteries is industrial backup power because factories can manage technical systems professionally, but the main barrier is proving that each battery is safe and reliable enough for long-term use.”*

Teacher Notes

- Treat the 70–80% capacity threshold and the mid-2030s forecast as claims presented in the article, not universal rules for every battery model.
- Emphasise the distinction between **energy capacity**, **power output**, **safety**, **reliability**, and **economic value**.
- Use the named examples from the article to make the lesson concrete: Renault home storage, Audi forklifts, the Johan Cruijff Arena, Melilla, Moment Energy, Redwood Materials, Vancouver International Airport, and the Nevada microgrid.
- Encourage students to distinguish a promising idea from a proven business model. The article itself notes that some market forecasts may be optimistic.
- Avoid presenting reuse as automatically sustainable. Students should consider testing, transport, installation, fire safety, electricity sources, eventual recycling, and producer responsibility.
- If the class is highly proficient, ask students to debate whether batteries should be designed from the start for easy removal, repair, reuse, and recycling.

Reference