MODULE 3

PODCAST:
HYDROGEN ON THE MOVE: FUEL CELLS REVOLUTIONIZING LOGISTICS

QUIZ

The quiz consists of 23 questions about fuel cells and their role in logistics. Each question has four answer options, one of which is correct.

Question 1: What are fuel cells?
A. Devices that convert solar energy into electricity
B. Devices that convert the chemical energy of a fuel (e.g., hydrogen) directly into electricity
C. Traditional batteries used in electric vehicles
D. Generators based on burning fossil fuels

Question 2: Why are fuel cells considered beneficial for logistics?
A. They are cheaper to operate than diesel engines.
B. They allow for a longer range of vehicles without the need for frequent refueling.
C. They are less efficient but more ecological.
D. They do not require modern technologies.

Question 3: How do fuel cells contribute to sustainability in logistics?
A. They reduce harmful exhaust emissions
B. They increase the efficiency of road transport
C. They reduce the costs of long-distance transport
D. All of the above answers are correct

Co-funded by the European Union
DIALOG of Transformation
FERI
ECRN European Chemical Regions Network
zielona chemia
KRAJOWY KLASTER KLUCZOWY

Question 4: Which of the following fuel cell applications in logistics were mentioned in the podcast?

A. Air transport
B. Space transport
C. Construction (mobile generators)
D. All of the above

Question 5: What are the challenges facing the widespread use of fuel cells in logistics?

A. Lack of adequate hydrogen refueling infrastructure
B. High price of fuel cell vehicles
C. Limited availability of hydrogen as a fuel
D. All of the above answers are correct

Question 6: Which companies, according to the podcast, are investing in hydrogen technologies in logistics?

A. Tesla
B. Amazon
C. Nikola i DHL
D. Shell i BP

Question 7: What is the main byproduct of a hydrogen-oxygen fuel cell reaction?

A. Carbon dioxide
B. Ozone
C. Water vapor
D. Oxygen

Question 8: What is the biggest challenge associated with initial investments in fuel cell systems?

A. Low production cost
B. Quick installation
C. High initial costs
D. Lack of available materials

Question 9: What is the main purpose of using fuel cells in logistics?
A. Reducing operating costs
B. Improving vehicle efficiency
C. Reducing harmful gas emissions
D. Increasing vehicle speed

Question 10: Which of the following is an environmental benefit of using fuel cells?
A. Noise generation
B. High CO2 emissions
C. No harmful gas emissions
D. High water consumption

Question 11: Which sectors (besides trucking) were mentioned in the podcast as benefiting from the implementation of fuel cells?
A. Agriculture
B. Warehousing (forklifts)
C. Telecommunications
D. Mining

Question 12: What is the main challenge in introducing fuel cells in logistics?
A. Ease of production
B. Low production cost
C. Limited hydrogen refueling infrastructure [Correct answer]
D. Fast vehicle charging

Question 13: What is the key advantage that fuel cells provide to vehicles in storage compared to batteries?
A. Shorter charging time
B. Longer life
C. Constant power throughout the entire runtime
D. Lower price

Question 14: How can fuel cells help reduce the carbon footprint in logistics?
A. By increasing CO2 emissions
B. By burning fossil fuels
C. By eliminating the need for diesel engines
D. By increasing energy consumption

Question 15: What, mentioned in the podcast, is not an advantage of fuel cells over batteries in electric vehicles?
A. Shorter refueling time
B. Longer range
C. Constant power throughout the run time
D. Lower initial price

Question 16: What currently limits the mass adoption of fuel cell vehicles in logistics?
A. High efficiency of combustion engines
B. Lack of market interest
C. Initial costs and infrastructure
D. Availability of qualified technicians

Question 17: Which technology supports the development of fuel cells by increasing the availability of hydrogen through local production from renewable energy?
A. CO2 capture and storage technologies
B. Development of photovoltaics
C. Development of water electrolysis
D. Development of wind energy

Question 18: What do fuel cells mean for the future of sustainability in logistics?
A. Minimal
B. Temporary
C. Critical
D. Insignificant

Question 19: Which of the following types of maritime transport could benefit from the implementation of fuel cells, according to the podcast?

A. Cruise ships
B. Ships using them for propulsion or as an auxiliary source of energy
C. Cargo ships only
D. Small motor boats only

Question 20: What actions can accelerate the adoption of fuel cells in logistics?

A. Increasing fossil fuel production
B. Limiting research into alternative energy sources
C. Developing hydrogen refueling infrastructure
D. Increasing taxes on renewable energy

Question 21: What is the main advantage of using hydrogen in logistics compared to traditional fuels?

A. Higher price
B. Greater availability
C. Lower pollutant emissions
D. Greater system complexity

Question 22: What impact do fuel cells have on operational efficiency in logistics?

A. Decrease
B. No effect
C. Increase
D. Deterioration

Question 23: What is the main advantage of fuel cells in forklifts compared to batteries?

A. Longer charging time
B. Need for more frequent servicing
C. Quick refueling in a few minutes
D. Higher weight

ANSWER KEY

1.B / 2.B / 3.D / 4.D / 5.D / 6.C / 7.C / 8.C / 9.C / 10.C / 11.B / 12.C / 13.C / 14.C / 15.D / 16.C / 17.C / 18.C / 19.B / 20.C / 21.C / 22.C / 23.C /

Funded by the EU. The views and opinions expressed are solely those of the author(s) and do not necessarily reflect the views and opinions of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor the EACEA are responsible for them.