



Central and Eastern Europe Roadshow



HYDROGEN ROADSHOW IN BULGARIA

June 16-26, 2024

The Roadshow

Hydrogen power is the power of future. We will welcome and experience it in Bulgaria in June 2024. The arrival of a Toyota Caetano hydrogen powered bus marks the start of the Roadshow in Sofia (June 17-20), Pazardzhik (June 21), and Stara Zagora (June 24-26). The event is organized by the Bulgarian Hydrogen, Fuel Cell and Energy Storage Association (BGH2A), with financial support from the Clean Hydrogen Partnership and the JIVE 1 and 2 projects. The goal of the projects is to introduce 300 new zero-emission fuel cell buses and build the necessary refueling infrastructure in six EU member states.

Hydrogen electric buses operate with fuel cells, which, through an electrochemical reaction (similar to batteries), convert the energy stored in the onboard hydrogen tank into electricity, which powers their electric motor. So far within the project, the buses have covered a total of 250,000 km. They refuel with hydrogen at a rate of 3 kg/min at 350 bars and consume of average 9 kg/100 km. A bus takes less than 10 minutes to refuel daily and consumes about 4500 kg of hydrogen annually.

The Roadshow aims to stimulate the introduction of hydrogen transportation in Central and Eastern European countries and to raise public awareness of its advantages as clean, efficient, and accessible transport. Similar events are also being organized in Romania and Greece as part of the overall European campaign to promote hydrogen electromobility in Southeastern Europe.

In Bulgaria, the Toyota Caetano bus will be charged by the first mobile hydrogen charging station in the Region, developed by the Centre of Competence HITMOBIL Project, coordinated by the Institute of Electrochemistry and Energy Systems "Acad. Evgeni Budevski" - Bulgarian Academy of Sciences (IEES).¹

In addition to the Toyota Caetano bus, a hydrogen-powered Hyundai NEXO SUV will also be demonstrated, along with various accompanying technologies and scientific experiments related to the production and implementation of hydrogen technologies in transportation and industry.

1. Project № BG05M20P001-1.002-0014 is funded by the Operational Programme "Science and Education for Smart Growth" (OP SESG) 2014-2020, co-financed by the EU through the European Regional Development Fund (ERDF).

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Opening [Sofia]

The Roadshow will commence on June 17, 11:30 a.m., at Prince Alexander I Square, with an opening ceremony officiated by the Mayor of Sofia Mr. Vassil Terziev, and the Minister of Transport and Communications, Mr. Georgi Gvozdeykov.

Round Table [Sofia]

On June 18 in Sofia, a Roundtable to discuss the opportunities and challenges of implementing hydrogen technologies in transportation will be held in Sofia under the patronage of the Ministry of Transport and Communications, with the support of the Ministry of Energy, the Ministry of Innovation and Growth, and other stakeholders, including the Bulgarian Energy Holding, National Energy Operator, and industry organizations.

Hydrogen Forum [Stara Zagora]

On June 25 in Stara Zagora, a National Forum will bring together representatives from the European Commission, the Clean Hydrogen Partnership, international partners, as well as stakeholders from business, academia, and civil society.

For additional details and registration, visit the Bulgarian Hydrogen, Fuel Cell, and Energy Storage Association website after June 1 at www.bgh2a.bg/roadshow

The Hydrogen Bus in Action

The Toyota Caetano hydrogen bus will offer free rides to all passengers: June 18 - 20 in Sofia along trolleybus line 9, June 26 in Stara Zagora along bus line 20.

National Coordinators

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PROGRAM

HYDROGEN ROADSHOW IN BULGARIA

Sofia, June 17-20, 2024

June 17

11:30 - 12:00

Hydrogen Info Day | Prince Alexander I Square |

INTRODUCTORY REMARKS

Prof. Daria Vladikova | Bulgarian Hydrogen, Fuel Cell and Energy Storage Association

OPENING

Vassil Terziev | Mayor of Sofia*

Yordanka Chobanova | Head of the European Commission Representation in Bulgaria*

Georgi Gvozdeykov | Minister of Transport and Communications*

Acad. Julian Revalski | President of the Bulgarian Academy of Sciences* *TBC

PRESS CONFERENCE

12:00 - 15:00

HYDROGEN ELECTRIC BUS DEMONSTRATION

Rides around the Sofia City Center on the TOYOTA CAETANO bus

HYDROGEN ELECTRIC CAR DEMONSTRATION

Test drives of the HYUNDAI NEXO - the first hydrogen car in Bulgaria*

*Require on-site registration and a valid driver's license.

"HYDROGEN SCHOOL" FOR EVERYONE

Introduction to the world of hydrogen technologies: demonstrations with scale models of hydrogen cars, informative videos, along with various other presentations and experiments

June 18

12:00-20:00

Roadshow Day 2

THE HYDROGEN BUS IN ACTION

Free rides to all passengers on the TOYOTA CAETANO hydrogen bus along trolleybus line 9

14:00 – 17:00

ROUND TABLE

Opportunities and Conditions for Introducing Hydrogen Electromobility in Bulgaria
| Minister Hall, Ministry of Transport and Communications |

Opening | Minister of Transport and Communications* *TBC

TOPICS

Bulgarian projects on hydrogen electromobility - prospects for implementation; hydrogen electromobility in the regulatory framework; incentives for investments in the sector; utilization of the National Hydrogen Roadmap for synchronized action; next steps for accelerating the implementation of hydrogen in transport - 150 hydrogen electric vehicles by 2025 in Bulgaria; hydrogen charging infrastructure, and other topics.

PARTICIPANTS

Sofia Municipality, Sofia Public Electrical Transport Company, Ministry of Transport and Communications, Ministry of Innovation and Growth, Bulgarian Development Bank, FMFIB, Ministry of Energy, National Energy Operator, Electricity System Operator, Ministry of Environment and Water, Ministry of Regional Development and Public Works, National Association of the Municipalities, Bulgarian Industrial Association, Bulgarian Chamber of Commerce and Industry, Bulgarian Industrial Capital Association, Shell Bulgaria, Toyota Bulgaria, Assarel-Investment, OMV Bulgaria, German-Bulgarian Chamber of Industry and Commerce, Bulgarian



Academy of Sciences, Sofia University, Bulgarian Wind Energy Association, Bulgarian Photovoltaic Association, and others

June 19 - 20

12:00-20:00

The Hydrogen Bus in Action

Free rides to all passengers on the TOYOTA CAETANO hydrogen bus along trolleybus line 9

PROGRAM

HYDROGEN ROADSHOW IN BULGARIA

Pazardzhik, June 21, 2024

June 21

12:30 - 16:00

Hydrogen Electric Bus Demonstration

The TOYOTA CAETANO bus in action

PROGRAM

HYDROGEN ROADSHOW IN BULGARIA

Stara Zagora, June 24-26, 2024

June 24

12:00 – 13:30

Educational Hydrogen Day at Trakia University

Free rides on the TOYOTA CAETANO hydrogen electric bus to Trakia University on bus line 20 (Samara 3 - Trakia University)

13:30 – 14:00

REGISTRATION

Hydrogen Electromobility course participants

14:00 – 14:10

OPENING

Nadezhda Chakarova | Stara Zagora Deputy Mayor in Charge of Education, Health Care and Social Services **TBC*

14:10 – 15:40

"INTRODUCTION TO HYDROGEN ELECTROMOBILITY" COURSE

The course is intended for students, pupils, and teachers interested in innovative hydrogen technologies and their role in efforts to decarbonize transportation
| Conference Hall – Rectorate |

15:40 – 18:00

HYDROGEN ELECTRIC BUS DEMONSTRATION

Rides around the Stara Zagora on the TOYOTA CAETANO bus

HYDROGEN ELECTRIC CAR DEMONSTRATION

Test drives of the HYUNDAI NEXO - the first hydrogen car in Bulgaria*

*Require on-site registration and a valid driver's license.

"HYDROGEN SCHOOL" FOR EVERYONE

Introduction to the world of hydrogen technologies: demonstrations with scale models of hydrogen cars, informative videos, along with various other presentations and experiments

June 25

9:00 – 10:00

"Hydrogen Electromobility in Bulgaria" National Forum

| Stara Zagora Cultural Center |

Participant Registration

10:00 – 10:05

OPENING

Prof. Daria Vladikova | Bulgarian Hydrogen, Fuel Cell and Energy Storage Association



10:05 – 10:30	WELCOME SPEECHES Iva Petrova Deputy Minister of Energy* Dimitar Nedyalkov Deputy Minister of Transport and Communications* Prof. Georgi Angelov Deputy Minister of Innovation and Growth* Prof. Dobri Yarkov Rector of Trakia University* *TBC
10:30 – 12:00	SESSION 1: THIRD CENTRAL AND EASTERN EUROPEAN ROADSHOW: ORGANIZATION, OBJECTIVES, RESULTS
10:30 – 10:50	Introduction of the Clean Hydrogen Partnership
10:50 – 11:10	Introduction of the JIVE 1 & 2 Projects - Flavio Grazian UITP
11:10 – 11:20	Presentation of CAETANO
11:20 – 11:30	Presentation of MESSER - Tim Evison Senior Vice President
11:30 – 11:40	Presentation of Hydrogen Europe
11:40 – 11:50	Presentation of Toyota - Andy Fuchs General Manager Europe & Africa
11:50 – 12:00	Presentation of the Centre of Competence HITMOBIL Project – the first mobile hydrogen charging station in Bulgaria - Blagoy Burdin IEES - BAS
12:00 – 12:30	Discussion: Bulgaria and the prospects for production, use, and export of green hydrogen, with the participation of Ministry of Transport and Communications, Ministry of Energy, and Ministry of Innovation and Growth
12:30 – 14:00	LUNCH BREAK & HYDROGEN RIDES Short rides on the TOYOTA CAETANO bus HYUNDAI NEXO test drives
14:00 – 15:30	SESSION 2: INDUSTRIAL APPLICATIONS FOR HYDROGEN TECHNOLOGIES – OPPORTUNITIES, INNOVATIONS, TECHNOLOGIES Moderator: Karina Angelieva Bulgarian Hydrogen, Fuel Cell and Energy Storage Association Participants: Ballard, Worthington, Toyota, EDC-Anlagentechnik GmbH, Hydrogenera, Logan Energy, and others
15:30 – 16:00	Coffee break
16:00 – 17:30	SESSION 3: PANEL DISCUSSION - OPPORTUNITIES FOR ACCELERATED DEVELOPMENT OF HYDROGEN TECHNOLOGIES Participants: European Investment Bank, Ministry of Innovation and Growth, Ministry of Energy, Bulgarian Development Bank, Clean Hydrogen Partnership, Hydrogen Europe (Aivars Starikovs), Messer (Anton Petek), New Energy Coalition (Patric Cnubben)
17:30	FORUM CONCLUSION
17:30 – 19:30	Cocktail hour: informal discussions over a glass of Bulgarian wine
June 26	The Hydrogen Bus in Action Free rides to all passengers on the hydrogen bus along bus line 20