

Energy Formation



OUR TRAINING
PACKAGE

GREEN GAS SUSTAINABLE MOBILITY AND HYDROGEN



Green your future!

For all organizations operating in the emerging green gas sector, we offer a wide choice of training courses delivered by experts in these renewable energy sources (biomethane, NGV and hydrogen).

Gérard Colling

Head of Sustainable Mobility Training,

François Cabon

Head of Biomethane Training

What role does training play in the green gas industry?

The ambitious objectives* of the French Multiannual Environmental Plan (PPE) are generating strong growth in the green gas and sustainable mobility sector. For all organizations involved (industrial enterprises, local authorities, operators, etc.), training in the prevention of risks associated with these new gases has become a real priority.

What is the added value of the training solutions offered by Energy Formation?

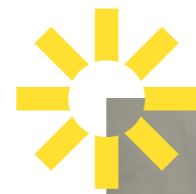
We leverage our 60 years of experience in gas technology,

our dedicated infrastructure and training facilities, and our expert trainers to serve the industry. Our training offer is tailored to the needs of our customers: NGV (fuelling stations, vehicles, supply chain), hydrogen (fundamentals and associated risks), biomethane (gas risk prevention).

Training in the prevention of risks associated with new gases has become a real priority. //



Energy Formation is Qualiopi certified. Moreover, upon completion of our training courses, participants are awarded a certificate of achievement.



NGV vehicle diagnostic simulator

GREEN GAS_ SUSTAINABLE MOBILITY AND HYDROGEN



Energy Formation focuses on the following areas:

- NGV fuelling stations (project management, operation and maintenance)
- NGV vehicles (understanding maintenance of heavy and light vehicles)
- Local organization to develop the NGV sector
- Understanding the fundamentals of hydrogen and associated risks
- Prevention of gas risks at biomethane plants



* Objectives of the PPE: 10% green gas injected into the grid, 54,000 NGV vehicles and 845 NGV stations by 2030.



GREEN GAS, SUSTAINABLE MOBILITY AND HYDROGEN

▶ B842 **The third gas revolution** p.03

▶ NGV

STATION OPERATORS, UTILITY COMPANIES	Z827	Level 1 operation and maintenance of NGV fuelling stations	p.05
PRIVATE ORGANIZATIONS, PUBLIC SECTOR CLIENTS	Z829	The fundamentals of an NGV fuelling station project	p.06
SALES REPRESENTATIVES AND PROJECT COORDINATORS	Z8001	Developing the NGV sector in your region	p.06
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▶ Hydrogen

GENERAL PUBLIC	Z8002	Fundamentals of hydrogen and associated risks	p.09
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▶ Biomethane

STUDENTS FROM TRAINING CENTRES	Z844	Operating activities included in special training courses for Agricultural Biogas Plant Managers (RUMA)	p.13
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DISTRIBUTION NETWORK OPERATOR AND GAS TECHNICIAN

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SPECIALISED GAS MAINTENANCE TECHNICIANS

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INTERVENTION AGENCY AND/OR SPECIALISED GAS MAINTENANCE TECHNICIANS

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PROJECT DECISION OWNER AND DESIGN OFFICE EMPLOYEES

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INTERVENTION AGENCY TECHNICIANS (SAFETY INTERVENTION, OPERATIONS MANAGER ASSISTANT, BACK-UP TEAM TECHNICIAN)

B4651	Takeover by a local Intervention Agency of a Biogas Plant within the scope of its intervention - Theoretical phase	p.19
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PROJECT EXECUTION OWNER COORDINATOR

B495	Manage the installation and connection of a Green Gas injection station	p.20
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PROJECT DECISION OWNER AND DESIGN OFFICE EMPLOYEES

B494	Design and engineer a gas distribution network incorporating the specific features of green gases	p.21
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DISTRIBUTION NETWORK OPERATOR AND GAS TECHNICIAN

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BIOGAS PLANT OPERATORS

Z847	Operate a biogas plant safely	p.22
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- NGV vehicles (understanding maintenance of heavy and light vehicles)
- Identify a local organization to develop the NGV sector
- Understand the fundamentals of hydrogen and associated risks
- Identify and prevent gas risks at biomethane plants



Green future

For all organizations operating in the green gas sector, we offer courses delivered by experienced energy sources (biomethane...)

Gérard Colling

Head of Sustainable Mobility Training,

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What role does training play in the green gas industry?

The ambitious objectives* of the French Multiannual Environmental Plan (PPE) are generating strong growth in the green gas and sustainable mobility sector. For all organizations involved (industrial enterprises, local authorities operators, etc.), training in the prevention of risks associated with these new gases has become a real priority.

What is the added value of training solutions offered by Energy Formation?

We leverage our 60 years of experience in gas technology

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B842

UNDERSTANDING THE THIRD GAS REVOLUTION

DURATION: 52.40 hours - 2 x 4.5 days

TARGET AUDIENCE:

Newcomers to the gas industry who need to make or implement strategic decisions, such as managers, engineers, executives, or anyone wishing to enhance their gas culture.

Objectives of the training course

- Operate your organization in compliance with the technical & financial laws governing the gas industry.

Skills developed

- Explain the gas supply chain from production to consumption,
- Support using gas in the energy mix,
- Support the biomethane sector,
- Anticipate the challenges and impacts of green gas in France.

Technical and instructional methods

- Training includes micro-learning, expert presentations, workshops and educational tours of gas sites.



WEEK 1

Nantes Montluc

- Markets & geopolitics
- Exploration & production
- Liquefied Natural Gas (LNG)
- LNG terminal tour
- Gas transport + tour of a System Monitoring Centre
- Storage
- Distribution
- Natural Gas for Vehicles (NGV)
- Safety & other important issues

WEEK 2

Gennevilliers

- Gas in the energy mix
- Biomethane
- Eco-neighbourhood
- Gas & innovation: sustainable networks, green gas and new uses
- Tour of the CRIGEN and RICE R&D centres
- European gas outlook



TRAINING COURSES

NGV

Z827

Level 1 operation and maintenance of NGV fuelling stations

IN-PERSON LEARNING

21 hours - 3 days

Z829

The fundamentals of an NGV fuelling station project

IN-PERSON LEARNING

16 hours - 2 days

Z8001

Develop the NGV sector in your region

IN-PERSON LEARNING

14 hours - 2 days

Z8011

Work safely on all major low-pressure (level 1) and high-pressure (level 2) NGV vehicle fuel system components

IN-PERSON LEARNING

14 hours - 2 days

Z8012

Work safely on the entire NGV system, right up to the sectionalizing valve (level 3)

IN-PERSON LEARNING

7 hours - 1 day

Technical and instructional methods

Practical and theoretical training using classrooms, state-of-the-art equipment and training facilities dedicated to the ecological transition (a full-scale NGV station, two biomethane injection stations, etc.).

+ Energy Formation extras

After the trainees have completed the in-person learning portion of the course, an instructor assesses the progress made by the group in each exercise via KPIs. The trainees assess the quality of the training course by writing a short report and filling out an evaluation questionnaire at the end of the session.

Energy Formation focuses on the following areas:

- NGV fuelling stations (project management, operation and maintenance)
- NGV vehicles (understanding maintenance of heavy and light vehicles)
- Support in local organization to develop the NGV sector
- Understand the fundamentals of hydrogen and associated risks
- Prevent gas risks at biomethane plants



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Z827

LEVEL 1 OPERATION AND MAINTENANCE OF NGV FUELLING STATIONS

DURATION: 21 hours - 3 days

TARGET AUDIENCE:
Technicians.

Objectives of the training course

- Organize and implement routine NGV station operations.

Skills developed

- Name the main characteristics of natural gas,
- List the risks associated with gas operations, and how to prevent them,
- Understand the principle of volume conversion,
- List the components of a delivery station (regulator station and gas line),
- Explain the operating principle of a pressure regulator and a meter,
- Identify the different components of an NGV station,
- Describe the operation of an NGV station, from the inlet valve to vehicle filling,
- List the main regulatory requirements applicable to station operators (ISO 16923),
- Restart and/or shut down an NGV station following an incident.



Z829

THE FUNDAMENTALS OF AN NGV FUELLING STATION PROJECT

DURATION: 16 hours - 2 days

TARGET AUDIENCE:

Public-sector clients:
Local authorities, Sustainable Mobility Organizing Authorities (AOMD), Utility companies.

Private organizations: Road hauliers, Fleet managers, Fuel suppliers, Public procurement agents.

Objectives of the training course

- Identify and seize opportunities to set up an NGV fuelling station at your organization (site expansion, new vehicle fleet),
- Understand the entire process of designing and building a station, taking into account administrative and environmental requirements, and comply with industrial safety regulations.

Skills developed

- Explain the key economic advantages and technical requirements of NGV,
- Differentiate between the key stages in the design, construction and operation of an NGV station,
- Understand the key stakeholders and the regulatory context of the NGV ecosystem,
- Identify the key criteria of a specification to assess the technical requirements and evaluate the financial viability.

Z8001

DEVELOP THE NGV SECTOR IN YOUR REGION

DURATION: 14 hours - 2 days

TARGET AUDIENCE:

Sales representatives or project coordinators in charge of NGV development.

PREREQUISITES:

Experience in the gas industry is a plus.

Objectives of the training course

In work situations, the employee must:

- Explain the key economic advantages and technical requirements of NGV,
- Understand the key stakeholders and the regulatory context of the NGV ecosystem,
- Understand how a CNG fuelling station works,
- Understand the architecture and operation of CNG vehicles.

Skills developed

- Identify the characteristics of different gases as fuels (NGV, CNG, BioCNG, LNG, LPG),
- Differentiate between CNG and LNG stations and describe how they operate,
- Distinguish between the different components of a CNG vehicle and an LNG vehicle,
- Compare the various safety features of a CNG vehicle with those of an LNG vehicle,
- Describe the characteristics and operating principles of NGV engines versus diesel engines,
- Name the key regulatory requirements applicable to CNG/LNG vehicles and fuelling stations,
- Distinguish between the different types of CNG and LNG tanks and the associated local laws,
- Indicate the simple maintenance procedures for a station and vehicles based on local laws and manufacturer instructions,
- Explain the technical and financial aspects of an NGV station, as well as the Total Cost of Ownership of an NGV versus Diesel vehicle.



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Z8011

WORK SAFELY ON ALL MAJOR LOW-PRESSURE (LEVEL 1) AND HIGH-PRESSURE (LEVEL 2) NGV VEHICLE FUEL SYSTEM COMPONENTS

DURATION: 14 hours - 2 days

TARGET AUDIENCE:

- Mechanics
- Workshop technicians

PREREQUISITES:

Diploma or significant experience (minimum 3 years) as a mechanic or workshop technician in NGV vehicle maintenance

Objectives of the training course

- Know the local laws applicable to all NGV vehicles
- Acquire the level 1 and 2 skills needed to maintain low- and high-pressure systems on compressed natural gas vehicles.

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Identify the characteristics of different gases as fuels (NGV, CNG, BioCNG, LNG, LPG).
- Differentiate between CNG and LNG stations and describe how they operate.
- Identify the various safety systems on a CNG vehicle.
- Describe the characteristics and operating principles of NGV engines versus petrol and diesel engines
- Name the key regulatory requirements applicable to CNG vehicles.
- Distinguish between the different types of CNG tanks and the associated local laws.
- Indicate the simple vehicle maintenance procedures based on local laws and manufacturer instructions.

Technical and instructional methods

2 days of in-person learning:

- Training facilities: vehicle maintenance workshop, NGV vehicles (Iveco Daily NGV, C3 NGV, diagnostic tool),



Z8012

WORK SAFELY ON THE ENTIRE NGV SYSTEM, RIGHT UP TO THE SECTIONALIZING VALVE

DURATION: 7 hours - 1 day

TARGET AUDIENCE:

Maintenance technicians working on NGV vehicles in workshops.

PREREQUISITES:

Diploma or significant experience (minimum 3 years) as a mechanic or workshop technician in NGV vehicle maintenance. Completion of Level 1 and Level 2 training courses.

Objectives of the training course

- Learn the Level 3 skills required to carry out troubleshooting diagnostics on an NGV vehicle tank, including intervention on the CNG tank(s) and valve replacement, while ensuring safety.

Skills developed

Safety

- Review of the hazards involved in working safely on a CNG tank
- Review of how to detect leaks and what to do if a leak occurs
- Zoning and marking of an ATEX zone for a vehicle CNG tank flaring procedure

Identify the corrective maintenance operations on a CNG tank

- Review of safety valve operation with the different types of tank valves
- How to repair a faulty safety valve
- Be able to perform the procedure for flaring a vehicle's CNG tank
- Inerting and vacuum checking of the tank after a flaring procedure
- Servicing the electrical part of the safety valve
- Changing a valve on a tank in accordance with the manufacturer's recommendations
- Procedure for checking CNG tank leak-tightness at 200 bar after servicing

Energy Formation focuses on the following areas:

- NGV fuelling stations (project management, operation and maintenance)
- NGV vehicles (understanding maintenance of heavy and light vehicles)
- Training in local organizations to develop the NGV sector
- Understanding the fundamentals of hydrogen and associated risks
- Preventing gas risks at methane plants





TRAINING COURSES

Hydrogen

Z8002

Fundamentals of hydrogen and associated risks

IN-PERSON LEARNING

14 hours - 2 days



Watch a video to learn more about the course

Technical and instructional methods

Practical and theoretical training using classrooms, state-of-the-art equipment and training facilities dedicated to the ecological transition (a full-scale NGV station, two biomethane injection stations, etc.).

+ Energy Formation extras

After the trainees have completed the in-person learning portion of the course, an instructor assesses the progress made by the group in each exercise via KPIs. The trainees assess the quality of the training course by writing a short report and filling out an evaluation questionnaire at the end of the session.

Z8002

FUNDAMENTALS OF HYDROGEN AND ASSOCIATED RISKS

DURATION: 14 hours - 2 days

TARGET AUDIENCE:

All employees wishing to learn about the fundamentals of hydrogen and associated risks.

PREREQUISITES:

No prerequisites.

Objectives of the training course

The trainee must acquire knowledge of hydrogen and its inherent risks in order to ensure its safe handling:

- Learn about the key aspects of hydrogen,
- Learn general knowledge of H₂ versus CH₄ and C₃H₈,
- Understand its origins and potential uses,
- Describe the specific hazards of this type of energy and the associated safety measures,
- Define the regulatory framework for this energy.

Skills developed

Practical training in a laboratory and at the training facilities:

> In the laboratory:

- Understand the characteristics of hydrogen
- List the hazards associated with the use of hydrogen
- Identify the means of prevention and protection
- Compare hydrogen with other gases (natural gas, LPG).

Practical training at a fire training facility:

> Extinguishing fires:

- Visualize an H₂ flame with a thermal camera
- Demonstrate the different types of combustion, H₂ versus other gases
- Flammability range, explosive mixtures exercise



Detecting hydrogen ignition by thermal camera

Energy Formation focuses on the following areas:

- NGV fuelling stations (project management, operation and maintenance)
- NGV vehicles (understanding maintenance of heavy and light vehicles)
- Involvement in a local organization to develop the NGV sector
- Understanding the fundamentals of hydrogen and associated risks
- Identifying and preventing gas risks at biomethane plants



Green future

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Biomethane



COURSE

Z844
Operating activities included in special training courses for Agricultural Biogas Plant Managers
 IN-PERSON LEARNING
 21 hours - 3 days

Z8009
Basic technical concepts of injection stations for local distribution companies
 IN-PERSON LEARNING
 28 hours - 4 days

<p>B4661 Basic technical concepts of biomethane injection stations IN-PERSON LEARNING 30 hours - 4.25 days</p>	▶	<p>Z4841 Initial Training in Electricity, Instrumentation and Industrial Computing IN-PERSON LEARNING 35 hours - 5 days</p>
<p>Z4662 Preventive maintenance on biomethane injection stations IN-PERSON LEARNING 60 hours - 8.5 days</p>	▶	<p>Z4663 Corrective maintenance on biomethane injection stations IN-PERSON LEARNING 29 hours - 4.15 days</p>

COURSE

B499V2
Remote interventions on biomethane injection stations
 BLENDED*
 29 hours - 5 days

B495
Manage the installation and connection of a Green Gas injection station
 BLENDED*
 31.75 hours - 4 days

<p>B4651 Takeover by a local Intervention Agency of a Biogas Plant within the scope of its intervention - Theoretical phase BLENDED* 8 hours - 1 day</p>	▶	<p>B4652 Takeover by a local Intervention Agency of a Biogas Plant within the scope of its intervention - Practical phase BLENDED* 4.5 hours - ½ day</p>
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B494
Design and engineer a gas distribution network incorporating the specific features of green gases
 BLENDED
 25.5 hours - 4.5 days

Z999V1
Develop a relationship of trust with a green gas producer
 IN-PERSON LEARNING
 14 hours - 2 days

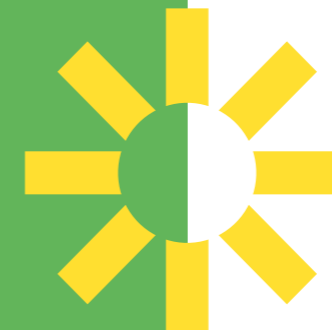
COURSE

M4008
Chemical hazards associated with work on biomethane injection stations
 IN-PERSON LEARNING
 7 hours - 1 day

▼

Z492V2
Biomethane spot samples
 IN-PERSON LEARNING
 7 hours - 1 day

Z847
Operate a biogas plant safely
 IN-PERSON LEARNING
 7 hours - 1 day



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- Understanding the fundamentals of hydrogen and associated risks
- Prevent gas risks at biomethane plants



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Z844

OPERATING ACTIVITIES INCLUDED IN SPECIAL TRAINING COURSES FOR AGRICULTURAL BIOGAS PLANT MANAGERS (RUMA)

DURATION: 21 hours - 3 days

TARGET AUDIENCE:

Students from training centres:

- Courses for Agricultural Biogas Plant Managers,
- Other training courses for biomethane producers.

Objectives of the training course

- Understand gas hazards and implement preventive measures in the operation and maintenance of a biomethane production site.

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Organize and manage maintenance activities for "gas" equipment: understand gas hazards, comply with all regulations, etc.,
- Ensure that ATEX regulations are applied and enforced on site (particularly during your own operations). Zones are defined, instructions are written and followed, and the whole process is recorded in an Explosion Control Procedures File (DRPCE),
- Formalize an integrated approach to gas hazard prevention in preliminary joint inspections (ICP) & prevention plans in a logical manner: hazard identification, risk assessment, choice and implementation of preventive measures),
- During maintenance operations, implement operating procedures that take into account gas hazards and ensure that personnel involved carry out the following 3 phases: lockout/tagout, work, and unlock/tag removal.

Technical and instructional methods

3 days of in-person learning:

- 1 day at the Energy Formation campus (gas hazard workshop, injection stations),
- 1 day at an agricultural college for Agricultural Biogas Plant Managers,
- 1 day at a partner biogas plant.



Z8009

BASIC TECHNICAL CONCEPTS OF INJECTION STATIONS FOR LOCAL DISTRIBUTION COMPANIES

DURATION: 28 hours - 4 days of in-person learning

TARGET AUDIENCE:

Biomethane maintenance technicians

Objectives of the training course

Performing operating procedures and maintenance tasks at a biomethane injection station to ensure availability and safety

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Understand the global operation of a biomethane production unit, to foster dialogue with the operator while performing maintenance.
- Describe the functions of injection stations and associated equipment, using Piping and Instrumentation Diagrams (P&IDs), electrical plans and manufacturer documentation.
- Perform the operating procedures at a biomethane injection station.
- Carry out corrective maintenance following malfunctions at the biomethane injection station.

Technical and instructional methods

4 days of in-person learning:

- Training facilities: Biomethane injection station.

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- NGV fuelling stations (project management, operation and maintenance)
- NGV vehicles (understanding maintenance of heavy and light vehicles)
- Support of local organizations to develop the NGV sector
- Understanding the fundamentals of hydrogen and associated risks
- Prevention of gas risks at biomethane plants



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B4661

BASIC TECHNICAL CONCEPTS - BIOMETHANE INJECTION STATIONS

DURATION: 30 hours - 4.25 days

TARGET AUDIENCE:

Gas distributors, injection station maintenance technicians.

Objectives of the training course

- Work on an injection station in accordance with EXPL2210 and MAINT1310 skill C1.

Skills developed

- Understand the global requirements and operation of a biomethane production unit, to foster dialogue with the operator while performing maintenance,
- Describe the functions of injection stations and associated equipment, using Piping and Instrumentation Diagrams (P&IDs), electrical plans and 360 views),
- Perform the operating procedures at an injection station (in accordance with EXPL2210 and specific instructions),
- Perform maintenance tasks at a biomethane injection station at skill level C1 (according to MAINT1310).

Z4841

INITIAL TRAINING IN ELECTRICITY, INSTRUMENTATION AND INDUSTRIAL COMPUTING

DURATION: 35 hours - 5 days

TARGET AUDIENCE:

Injection station maintenance technicians.

Objectives of the training course

Acquire basic knowledge and skills in the following areas:

- Electricity,
- Instrumentation,
- Automation systems (PLC, I/O boards, etc.),
- Control,
- Industrial computing and telecom networks,

in order to use these skills in the biomethane station maintenance training courses provided by Energy Formation.

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Apply the rules and best practices of electricians when carrying out electrical work on an industrial facility (such as a container-mounted biomethane station),
- Perform diagnostics, adjustments, and replacements of devices on an automated measurement acquisition system,
- Identify and locate a fault on a PLC,
- Test and verify an industrial IT communication network.

Z4662

PREVENTIVE MAINTENANCE - BIOMETHANE INJECTION STATIONS

DURATION: 60 hours - 8.5 days

TARGET AUDIENCE:

Gas distributors, injection station maintenance technicians.

PREREQUISITES:

Have passed the B4661 assessment and completed the B4841 training course.

Objectives of the training course

- Carry out preventive maintenance on biomethane injection stations (INSP, REV, MRO, as per MAINT1310).

Skills developed

On completion of the course, trainees will be able to perform the following actions on biomethane injection stations as per MAINT1310:

- Identify preventive maintenance actions and their frequency,
- Understand the technologies used,
- Perform preventive maintenance tasks,
- Comply with regulatory parameters,
- Communicate with all stakeholders involved in the operation of injection stations.



Z4663

CORRECTIVE MAINTENANCE - BIOMETHANE INJECTION STATIONS

DURATION: 29 hours - 4.15 days

TARGET AUDIENCE:

Gas distributors, Biomethane injection station maintenance technicians.

PREREQUISITES:

Have passed the E4662 assessment and all previous phases of the biomethane injection station maintenance course.

Objectives of the training course

- Perform maintenance tasks at a biomethane injection station (skill C2 of MAINT1310).

Skills developed

On completion of the training course, trainees will be able to perform the following actions if a fault occurs at a biomethane injection station, as per skill C2 of MAINT1310:

- Resolve a technical fault on an injection station in 5 steps, taking into account:
 - a. the injection station environment (producer site, distributor network),
 - b. the regulatory parameters,
 - c. the risk prevention policy,
 1. Detect fault(s),
 2. Perform diagnostics,
 3. Identify the root cause of the fault,
 4. Recommend a way to resolve the fault,
 5. Carry out the repair operation.
- Exercises using remote tools (IODA GRDF, Texbio, Ubiquity, Logmein).

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- Preventing gas risks at biomethane plants



Green future

For all organizations operating in the green gas sector, we offer courses delivered by experienced experts in the field of energy sources (biomethane, hydrogen, etc.).

Gérard Colling

Head of Sustainable Mobility Training,

François Cabon

Head of Biomethane Training

What role does training play in the green gas industry?

The ambitious objectives* of the French Multiannual Environmental Plan (PPE) are generating strong growth in the green gas and sustainable mobility sector. For all organizations involved (industrial enterprises, local authorities operators, etc.), training in the prevention of risks associated with these new gases has become a real priority.

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M4008

CHEMICAL HAZARDS ASSOCIATED WITH WORK ON BIOMETHANE INJECTION STATIONS

DURATION: 7 hours - 1 day

TARGET AUDIENCE:

Specialised Gas Maintenance Technicians

PREREQUISITES:

- Know how to communicate in French (read, write, speak).
- Proficiency with Internet communications and computer equipment connected to the Internet.
- Be familiar with general risk prevention as described in GRDF's General Risk Directives Handbook (CPP) for all employees.

Objectives of the training course

- Identify the hazards associated with chemical agents for the health and safety of workers
- Recognize the protection equipment and the basic rules of risk prevention

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Be aware of chemical hazards while working.
- Use the correct terminology.
- Apply preventive measures.

Z492V2

BIOMETHANE SPOT SAMPLES

DURATION: 7 hours - 1 day

TARGET AUDIENCE:

Intervention Agency and/or Specialised Gas Maintenance technicians

PREREQUISITES:

- Have completed the "Chemical hazards associated with work on biomethane injection stations" course EFM4008
- Have received the "General Risks" information as described in the "GRDF General Risks" Directives Handbook (CPP)

Objectives of the training course

Take a SPOT sample

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Prepare a spot sampling operation at a biomethane station.
- Take a sample using the pressurized cylinder sampling method.
- Take a sample using the bubbling method.
- Take a sample using the absorbent tube capture method
- Implement the protocol(s) of the analytical laboratory(ies), including receipt, storage, use and return of sample products and biomethane samples

B499V2

REMOTE INTERVENTIONS ON BIOMETHANE INJECTION STATIONS

DURATION: 29 hours - 5 days

TARGET AUDIENCE:

Biomethane injection station maintenance technicians.

PREREQUISITES:

Have completed:

- Training course EFZ4662 - Preventive maintenance on biomethane injection stations
- Training course EFZ4663 - Corrective maintenance on biomethane injection stations

Objectives of the training course

In work situations, Green Gas specialists must:

- Demonstrate and carry out Level 2 & Level 3 on-call duties according to EXPL2210 (GRDF)

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Perform remote corrective maintenance according to the rights assigned to a Level 2 technician with skill C2,
- Perform local corrective maintenance under the supervision of a Level 3 technician with skill C3,
- Perform C2-Level 2 corrective maintenance via remote guidance.

Skills Assessment

- Acquired skills are assessed via evaluation EFQB499 completed by the trainee remotely.



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Green future

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Head of Sustainable Mobility Training,

François Cabon

Head of Biomethane Training

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* Objectives of the PPE: 10% growth in green gas production, 54,000 NGV vehicles and 845,000 hydrogen vehicles by 2030.

B4651

TAKEOVER BY A LOCAL INTERVENTION AGENCY OF A BIOGAS PLANT WITHIN THE SCOPE OF ITS INTERVENTION - THEORETICAL PHASE

DURATION: 8 hours - 1 day

TARGET AUDIENCE:

Intervention Agency Technicians (Safety Intervention, Operations Manager Assistant, Back-up team technician)

PREREQUISITES:

Have received information on the customer-centric approach.

- Technicians working as safety coordinators must have completed training course EFZ398.
- Operations Manager Assistants must have completed training course EFZ437.
- Back-up team technicians must have completed training course Z427.

Objectives of the training course

Once the EFB4651 and EFB4652 courses have been completed:

Work within the scope of your Intervention Agency at a local biomethane injection station, while using appropriate risk prevention methods, to:

- Perform the level 1 biomethane emergency intervention
- Perform the simple operating procedures at a biomethane injection station.

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Identify the hazards that may be encountered by an Intervention Agency technician when working on a V3 biomethane injection station, including those of a biomethane production site.
- Describe the operation of a V3 biomethane injection station using a block diagram.
- Prepare interventions related to the tasks of an Intervention Agency technician (according to EXPL210 and MAINT 1310) on a V3 biomethane injection station.
- Incorporate into your actions an understanding of how the network sections operate (including adjustments to pressure control stations and transport stations, concepts of reverse flow and overflow) impacted by biomethane.

B4652

TAKEOVER BY A LOCAL INTERVENTION AGENCY OF A BIOGAS PLANT WITHIN THE SCOPE OF ITS INTERVENTION - PRACTICAL PHASE

DURATION: 4.5 hours - ½ day

TARGET AUDIENCE:

Intervention Agency Technicians (Safety Intervention, Operations Manager Assistant, Back-up team technician)

PREREQUISITES:

- Must have completed EFB4651 within the last 4 weeks.
- The EFB4651 prerequisites must also be met.

Objectives of the training course

Once the EFB4651 and EFB4652 courses have been completed:

Work within the scope of your Intervention Agency at a local biomethane injection station, while using appropriate risk prevention methods, to:

- Perform the level 1 biomethane emergency intervention
- Perform the simple operating procedures at a biomethane injection station.

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Situate the functional elements of the biomethane production site, along with the associated hazards,
- Visually identify the functional elements of the V3 biomethane injection station, including valves R1, R4 and R6, in order to perform a simple action (Skill C1 as defined in MAINT1310 and the EXPL2210 local action listing),
- Perform an inspection of a V3 biomethane injection station as part of a safety inspection until the station is made safe,
- Restart a V3 biomethane injection station in accordance with appendix 7 of EXPL2210 following a decision by the Operations Manager.



B495

MANAGE THE INSTALLATION AND CONNECTION OF A GREEN GAS INJECTION STATION

DURATION: 31.75 hours - 4 days

TARGET AUDIENCE:

Project Execution Owner Coordinator

PREREQUISITES:

G4+ certification or significant experience working on medium pressure C stations (MPC = between 4 bars and 25 bars). It is advisable to have already visited a biogas plant before starting the training course.

Objectives of the training course

Manage and support the installation and connection of Green Gas injection stations.

Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Explain the Green Gas industry from a technical, financial and project-based standpoint.
- Describe the key stages in building a Green Gas production site, from contracting to commissioning.
- Identify the roles and the concerns of the stakeholders in a project to install and connect a Green Gas injection station.
- Review and approve a typical project (investigations, retroplanning), pre-identify problematic phases (e.g. risk of insufficient odorization at startup).
- Oversee internal and external project management and action planning.
- Carry out the actions and validate the key stages leading to start-up of the injection station.
- Review and apply the regulatory framework (limits, current developments, etc.)
- Cultivate a "customer-centric" approach toward the producer.

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Green future

For all organizations operating in the green gas sector, we offer courses delivered by experienced energy sources (biomethane...)

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Head of Sustainable Mobility Training,

François Cabon
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The ambitious objectives* of the French Multiannual Environmental Plan (PPE) are generating strong growth in the green gas and sustainable mobility sector. For all organizations involved (industrial enterprises, local authority operators, etc.), training in the prevention of risks associated with these new gases has become a real priority.

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B494

DESIGN AND ENGINEER A GAS DISTRIBUTION NETWORK INCORPORATING THE SPECIFIC FEATURES OF GREEN GASES

DURATION: 25.5 hours - 4.5 days

TARGET AUDIENCE:

Project Decision Owner and Design Office employees

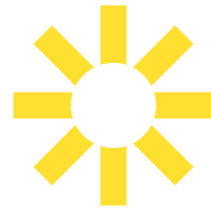
PREREQUISITES:

Be designated a "Green Gas" officer on the Project Decision Owner and Design Office teams. Have at least 6 months' experience in biomethane engineering.

Objectives of the training course

In work situations, Green Gas specialists must:

- Manage the development of Green Gas in compliance with the master plan, GRDF's strategic decisions and applicable rules (local laws, standards)
- Validate, on a case-by-case basis, Green Gas production site location studies and identify the need for reverse flow stations
- Implement the applicable rules to promote development of Green Gas,
- Carry out studies on connecting Green Gas production sites and technical solutions to promote injection capacity,
- Evaluate the impact of the installation of Green Gas facilities on networks
- Propose adaptations that promote the operation of networks with Green Gas injection sources



Skills developed

On completion of the course, trainees will be able to perform the following actions:

- Describe GRDF's policy and strategy in terms of the development of Green Gases and their impact on the design of gas networks
- Use correct terminology in a Green Gas facility study (injection, reverse flow, etc.)
- List the technically and financially viable solutions that must be implemented when connecting Green Gas production sites and related facilities while complying with:
 - Local laws
 - GRDF's policy
- Proficiency with IT tools tailored and/or developed specifically for "Green Gas" connection studies
- Carry out and justify connection studies for "Green Gas" facilities in cases identified as simple to complex (1)
- Identify the need for technical solutions that promote injection into GRDF networks (e.g. reverse flow systems) and study their implementation
- Validate connection studies for "Green Gas" facilities in compliance with GRDF's commitments and local laws
- Identify and locate a fault on a PLC,
- Test and verify an industrial IT communication network.

Z999V1

DEVELOP A RELATIONSHIP OF TRUST WITH A GREEN GAS PRODUCER

DURATION: 14 hours - 2 days

TARGET AUDIENCE:

Gas distributors, utility companies, local authorities.

Objectives of the training course

- Develop a relationship of trust with a Biomethane project developer or producer, based on the 4 key stages of customer relations.

Skills developed

Conduct structured meetings in 4 stages:

1. Prepare for the meeting, introduce yourself
2. Understand by asking the right questions
3. Summarize the key points productively and gain agreement
4. Conclude the meeting positively by expressing appreciation for the interaction.

Technical and instructional methods

- Communication techniques and methods,
- Preparing and leading appointments and meetings.
- Alternating lectures and role-playing exercises at different stages of the "biomethane producer" journey.

Z847

OPERATE A BIOGAS PLANT SAFELY

DURATION: 7 hours - 1 day

TARGET AUDIENCE:

Biomethane industry organizations involved in the design, installation and, above all, operation and maintenance phases of biogas plants.

PREREQUISITES:

No technical prerequisites

Objectives of the training course

In work situations, the employee must:

- Identify the hazards present at a biogas plant.
- Ensure that the procedures and regulatory documents required to operate a biogas plant are properly documented and compliant.
- Integrate gas hazards into processes, production equipment operation and maintenance operations.

Skills developed

- Identify the hazard-prone areas at a biogas plant.
- Assess and anticipate risks.
- Differentiate the gas hazards at a biogas plant.
- Tailor your response to the specific risks of each gas at a biogas plant
- Establish safety protocols for personnel working at a biogas plant.
- Apply and enforce procedures in response to a risk identified at a biogas plant.

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Energy Formation



OUR TRAINING PACKAGE

GREEN GAS SUSTAINABLE MOBILITY AND HYDROGEN



For further information visit:
energyformation.grdf.fr

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Supporting organizations in the transition to cleaner, more sustainable forms of energy



1
training facility
designed for the "Energy Transition"



Energy Formation focuses on 5 key areas:

- NGV fuelling stations (project management, operation and maintenance)
- NGV vehicles (understanding and maintenance of heavy and light vehicles)
- Train local organization to develop the NGV sector
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Energy Formation



OUR TRAINING
PACKAGE

GREEN GAS SUSTAINABLE MOBILITY AND HYDROGEN

ENERGY FORMATION

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and Gennevilliers

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