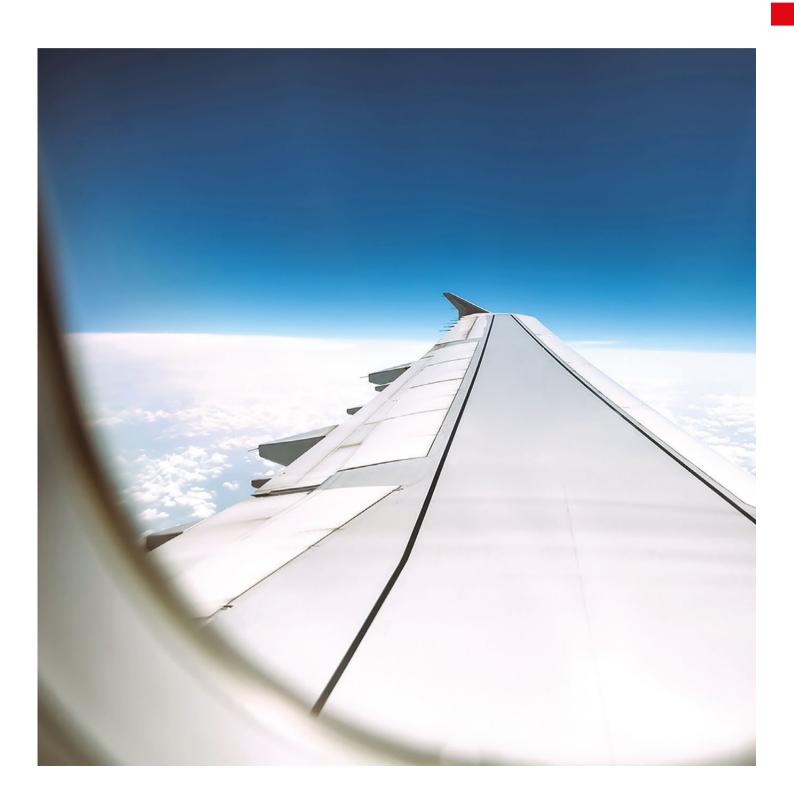


## **Aeronautics**





Civil aircraft



Military aircraft



Civil helicopters



Military helicopters



**Drones** 



Aircraft equipment manufacturers



Aircraft maintenance companies



# Partner of the aeronautics industry

Clemessy is the Eiffage Énergie Systèmes brand dedicated to the industrial market. It employs experts in aviation industries, ranging from equipment production to complete aircraft assembly. Their skills are delivered throughout the phases of the equipment/aircraft life.

We are aware of your challenges in terms of energy performance, automation-supervision, facility reliability or new process design. Our expert teams will support you throughout your project. From R&D to maintenance, through validation and production, our experts offer you innovative, comprehensive, and efficient turnkey solutions, integrating artificial intelligence and data science to better meet your feature and performance challenges.



Optimise your processes and utilities, and improve your energy efficiency with innovative solutions

Rethink your competitiveness with an optimised, zero-carbon model, increase your performance by refocusing your resources on your core business activities and engage your future talents. Our experts combine artificial intelligence and data science, implementing solutions that enable you to:



 Better plan and anticipate the maintenance of your facilities: prescriptive, predictive and corrective maintenance

- Maximise your production rates
- Improve your process efficiency
- Guarantee a high level of production quality
- Reduce time spent on repetitive administrative tasks



- Optimise your process energy consumption.
- Avoid energy losses: electrical network analysis, search for gas or liquid leaks (ultrasound, etc.), energy metering and building insulation inspection by infra-red thermography
- **Diversify energy production sources:** design, installation, operation and maintenance of photovoltaic and anaerobic digestion production
- Receive support in the search for grants
- Study on obtaining subsidies (EEC/EPC energy saving/performance certificates)

## Process engineering and construction

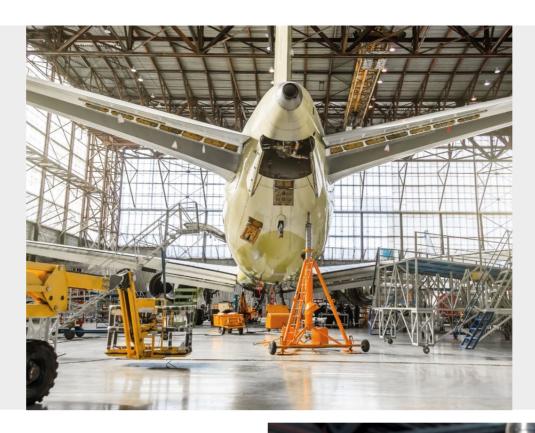
Thanks to our specialised design offices, we guarantee a tailor-made solution whatever the complexity of your project.

#### **OUR EXPERTISE**

- Engineering & design
- Development
- Installation
- Commissioning
- Maintenance

## **Our applications**

- Instrumentation & control systems (SCADA)
- Electrical and mechanical test benches
- Factory 4.0
- Energy production, distribution and management
- Energy security (generators, etc.)
- Site security (video, drones, etc.)
- Data processing (Big data, AI, etc.)
- Operational safety, cybersecurity



## Maintenance of your facilities

Our experts are skilled in predictive, preventive and corrective maintenance of all your processes and utilities. They are able to respond to failure alerts, run defect and breakage analysis, optimise your maintenance periodicity, reinforce your staff on shutdown work, and deliver expertise on a wide range of equipment.

### Maintenance engineering

- Production of maintenance plans and procedures
- ILS and operational safety analysis
- Machine monitoring, failure investigation by vibratory, electrical and thermographic analysis
- Switchboard inspections (delivery of Q19 certificate)
- Leak detection
- Implementation of CMMS
- Dashboards

## **Specialised maintenance**

- Process equipment
- End of line/packaging equipment
- Multi-technical infrastructure
- PCB repairs

## Construction of your process and utilities facilities

#### **PROCESS**

## Needs for R&D, Qualification, Production & MRO

- Monitoring & control
- Automation of multi-technical test benches
- Functional integration bench
- Data acquisition & processing
- Development of critical software
- Dataloading
- Wiring & integration
- Hardware In the Loop test benches (HIL)
- Test means manufacturing FAL tools
- Analysis & control system (leakage and dimensional)
- RF/EMC test laboratories, Telemetry / telecommand

### Aircrafts & equipments

- Ironbird / Helicopter 0 / UAV
- Landing gear
- Rudder, THSA, TRAS, Flaps and slats
- Engine, fuel pump, actuators
- Flight test
- Embedded computers
- Blade, rotor, MGB

#### **Production**

- 4.0 industry solutions
- Transfer of machines, lines and
- workshops
- Process automation / Plant floor engineering
- Carbon capture & energy saving tools
- Lean Manufacturing

- Mechanization, handling & monitoring (MGSE)
- Assembly integration test & simulation (EGSE)
- Manufacturing Execution Systems (MES) solutions
- Traceability

#### UTILITIES

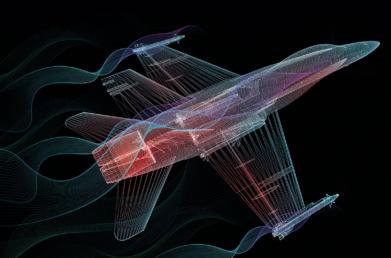
- Electricity distribution
- Security and communication
- Industrial computing
- Piping
- HVAC





## **Programs**

A220	A400M	EUROFIGHTER	KC390	SIRTAP
A320	ATR 42/72	F35	LEAP	TIGER
A320 Neo	BELUGA XL	F10X	M345/346	TORNADO
A321 XLR	C27J	F6X	MA700	_
A330 Neo	C919	FALCO XPLORER	MS21	
A350	CFM 56	FALCON 2000	NH90	
A380	EURODRONE	H160	RAFALE	



## Eiffage Énergie Systèmes

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**=** EIFFAGE

**ÉNERGIE SYSTÈMES**