



Off-Grid Power for Security Applications



100 % reliability



Long periods of autonomy
Maintenance-free



Quiet and emission-free
Non detectable



Railway surveillance and CCTV at construction sites are only two of many application scenarios, where energy solutions based on EFOY Pro fuel cells are successfully being used to reliably supply power to secure critical infrastructure. Security applications - whether stationary or mobile surveillance in vehicles - frequently require off-grid, reliable and non-detectable power. Semi-stationary and stationary CCTV systems often have to be installed in remote areas, without access to the mains grid.

Governmental vehicles often require power for many days and weeks to supply on-board electronic devices in idle-free mode.

Turning on the engine to charge on-board batteries should be avoided in order to increase flexibility of command vehicles and to avoid being detected on a covert investigation.

For both application scenarios, the power source should be small and compact and produce little to no signature.

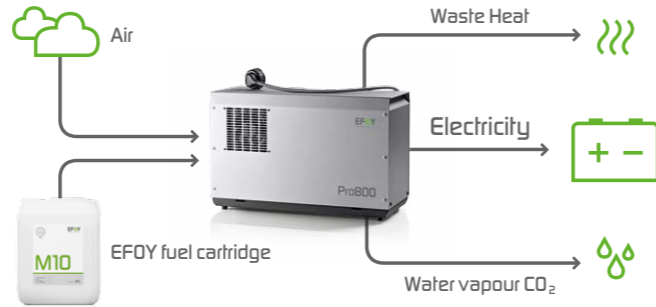
EFOY Pro fuel cells are the power source of choice that fulfill these requirements for mobile and stationary security applications. They provide reliable power for weeks on end, without requiring maintenance or having to turn on the engine - quietly, emission-free and can be installed covered and vandalism-proof on demand.

EFOY Pro Fuel Cell - Technology

All SFC's fuel cells are based on DMFC (Direct-Methanol-Fuel-Cell) technology. They use an eco-friendly catalytic process to convert methanol (ethyl alcohol) into electricity using a direct and efficient process without intermediate steps. This makes this technology one of the cleanest ways of generating electricity.

DMFC fuel cells are the ideal energy solution for off-grid and mobile applications.

SFC fuel cells are smart energy producers that can be used to continuously and fully automatically recharge batteries. To do this, the fuel cell is connected directly to the battery that supplies consumers and monitors its charge level. Depending on the demand, the fuel cell recharges the battery fully automatically and then switches to stand-by - without any need for maintenance or intervention on the behalf of the user.



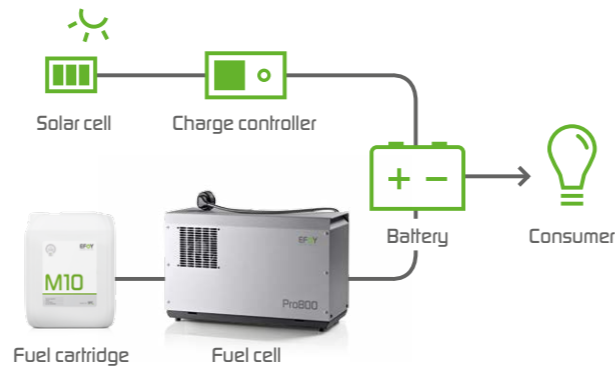
EFOY Pro Fuel Cells compared to other technologies

- More power than solar and weather independent
- Longer autonomy than batteries
- More eco-friendly than conventional generators



Supplement your standalone solar power system with an EFOY Pro fuel cell

The perfect solution for ensuring 100% availability with minimum fuel consumption is the use of an EFOY Pro fuel cell as a hybrid system. When the solar system is unable to deliver enough power, the fuel cell automatically switches on and compensates the shortfall in energy. Therefore, complex designs for large solar power systems can be avoided and the reliability of the system can be increased significantly.



EFOY Pro	800	800 Duo	2400	2400 Duo	12000 Duo
Max. nominal power*	45 W		110 W		500 W
Min. nominal power*	25 W		80 W		400 W
Nominal voltage	12 V / 24 V		12 V / 24 V		24 V / 48 V
Weight	8.0 kg (17.6 lbs)	8.3 kg (18.3 lbs)	9.0 kg (19.8 lbs)	9.3 kg (20.5 lbs)	32 kg (72 lbs)
Connectable fuel cartridges (with DCS 1)	1 (2)	2 (4)	1 (2)	2 (4)	2 (4)
Operating temperature	-20 °C to 50 °C [-4 °F to +122 °F] other temperature ranges can be met with special EFOY enclosures				
Nominal consumption	0.9 l / kWh (0.24 gallons / kWh)				
Dimensions L x W x H	422 x 188 x 278 mm (17 x 8 x 11 in)			640 x 441 x 310 mm (25.2 x 17.3 x 12.2 in)	

*Nominal power decreases with the operation hours. Specification valid within warranty period.

EFOY Pro Energy Solutions and Higher Power

EFOY ProEnergyBox for extreme weather conditions

The EFOY ProEnergyBox has been developed especially for use in extreme weather conditions. The box contains an EFOY Pro 800 or 2400 fuel cell generator, up to three batteries and EFOY fuel cartridges. Thanks to effective temperature regulation, the EFOY ProEnergyBox runs reliably in sub-zero temperatures as well as in high ambient temperature environments.

- Extended temperature range from -40 to +50 °C (-40 °F to +122 °F)
- Long autonomy
- Solar hybrid compatible



EFOY ProCube Mobile Energy Solution

The EFOY ProCube is a complete mobile, maintenance-free solution for off-grid power supplies - ready for use anytime and anywhere. The EFOY ProCube is an outdoor box containing the EFOY Pro 800 or 2400 fuel cell generator, fuel cartridge and battery.

- Solar hybrid compatible
- Mobile plug & play solution
- suitable for outdoor applications

EFOY Pro 12000 Duo for a higher power

The EFOY Pro Duo 12000, our 500 W fuel cell, provides 100% reliable off-grid and backup power. Its compact design makes it ideal for mounting in a 19 inch cabinet. Clustering multiple modules enables even higher output power. By increasing the output power to 500 W, applications with higher power requirements can be easily covered with the EFOY Pro 12000 Duo. Typical applications are backup power supply for wind and telecommunication systems, off-grid power supply for surveillance, traffic management and environmental sensors and the on board use in control vehicles.



Proven Track Record 34,000 EFOY Fuel Cells on the Market



Reliable on-board power in law enforcement vehicles

Since 2009 over 400 vehicles of the German Federal Office for Goods and Transportation have been equipped with EFOY Pro fuel cells.

EFOY Pro fuel cells ensure reliable on-board power supply and therefore increase the flexibility of the fleet.

Numerous federal and law enforcement authorities in Europe and the US use EFOY Pro fuel cells as mobile on-board power supply for mobile office equipment and covert surveillance.

Sample calculation:

Power requirement: 50 – 100 W

Energy requirement: 1200 Wh – 2400 Wh | Day

An EFOY Pro 2400 is integrated into the vehicle and connected to the on-board or secondary battery. A 10-liter fuel cartridge will give up to 10 days of autonomy.

EFOY Pro Advantages

- 24/7/365 power supply
- Maintenance-free and remotely controllable
- Non-detectable



Power for securing infrastructure

Railway surveillance and CCTV at construction sites are only two of many application scenarios, where energy solutions based on EFOY Pro fuel cells are successfully being used to reliably supply power to secure critical infrastructure.

EFOY Pro Advantages:

- Easy installation
- No data loss
- Long autonomy, no maintenance
- Silent and emission-free

Sample Calculation:

Power requirement continuously: 10 – 20 W

Energy requirement: 300 – 400 Wh | Day

An EFOY ProCabinet energy solution including an EFOY Pro 800 Duo with four connected M28 fuel cartridges, two DuoCartSwitches and accumulators for high currents. With this energy solution in use, autonomy of up to a year can be achieved without any costly servicing. Solar panels can be connected as an option.

SFC Energy and its products are certified



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