
**Off-Grid**
economical. silent. simple.

Flexible power supply

# for construction and traffic surveillance.

## The challenge

The requirements for modern surveillance systems are manifold. For example, camera systems and measuring sensors are used for traffic monitoring or for the protection of construction sites. Especially in the case of temporary or mobile systems, a reliable power supply often poses a considerable challenge to operators. Although low-voltage power grids are often available in the immediate proximity, in most cases there are no suitable access points in the area. In many cases, the creation of a grid connection is not economically or technically feasible.

## Previous solution

Solar battery systems or conventional generators are often used to supply power. Operators are thus confronted with a fundamental challenge: Using a mere photovoltaic solution, security of supply can hardly be guaranteed due to changing weather conditions, even with significantly oversized systems. The space required for solar systems is substantial and the installation must be planned and approved in detail for each individual case. Although generators can be used flexibly, they operate inefficiently and uneconomically at low power outputs. In addition, considerable emissions of noise and exhaust gases are released.

## Power consumption

**Sample calculation to determine the daily energy demand of surveilling a construction site via camera.**

| | Power [W] | Runtime [h/day] |
|---|---|---|
| Camera system | 75 | 24 |
| Consumption per day (kWh) | | 1.8 |

replacing
diesel generators.
with SIQENS
fuel cells.

## The SIQENS solution

The SIQENS Ecoport 800 is based on our patented fuel cell technology. As a fully automatic battery charger it can be easily integrated into off-grid energy systems. Supply gaps from photovoltaic and wind systems can thus be covered reliably and batteries can be considerably reduced in size.

The hydrogen required for energy generation is obtained from liquid methanol: an energy carrier that is globally available at low cost – regardless of the expansion of the hydrogen infrastructure. You and your customers benefit from an economical, silent, and simple system – while making a decisive contribution to reducing global carbon emissions. In short: a sustainable and economical solution that meets the challenges of the 21st century.

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**economical.**
Reduces fuel consumption and maintenance

**silent.**
Protects employees, residents and nature

**simple.**
Easy operation and continuous service

## SIQENS Ecoport 800 for traffic surveillance

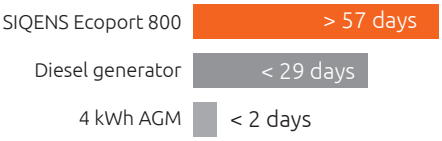
**Daily power consumption of 1.8 kWh**

| Energy source | 3 kW Generator | SIQENS Ecoport 800 |
|---|---|---|
| Battery | 4 kWh AGM | 4 kWh AGM |
| **Operating data** | | |
| Fuel | Diesel | Methanol |
| Runtime [per day] | 2.9 h | 4.5 h |
| Consumption [per day] | 2.6 l | 1.3 l |
| Autonomy* | < 29 days | > 57 days |
| **Emissions** | | |
| $CO_2$ [per day] | 12.89 kg | 1.39 kg |
| Particulates [per day] | 0.01 kg | 0.00 kg |
| Nitrogen oxides [per day] | 0.11 kg | 0.00 kg |

*Time of autonomy with a 75 l fuel reservoir

**>50%**
reduced fuel consumption doubles the time of autonomy

**>89%**
reduced carbon emissions while eliminating noise, particulates, and $NO_x$






For mobile or stationary speed measurements, sensors for distance control or as a clean generator for the surveillance of construction sites: the SIQENS Ecoport 800 ensures the longest times of autonomy. Via remote monitoring you can always keep your power supply in view.

economical.
silent.
simple.

siqens.de/en/