

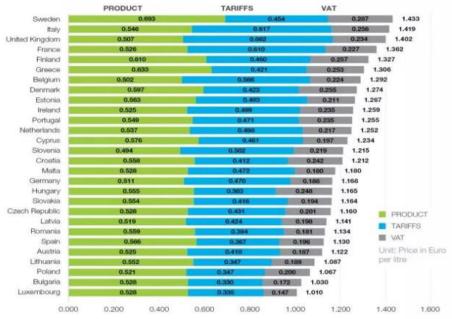
The Solution for Solar Energy in Transportations

Run you fleet greener

Reduce fleet operating costs with high ROI



Challenge: Transportation Costs



Breakdown diesel price in € in 2018 [source: fuelseurope.eu – European commission]

- 1 Diesel price fluctuating with risk of increase
- The alternator or any auxiliary system consumes from 0.4 to 0.8L of diesel every hour/kW of electrical systems installed (refrigeration, air conditioning, internal electronics, etc)
- 3 Cost in diesel engine and battery maintenance
- 4 Low range of electric vehicles



Diesel price in € from 2016 to 2018 [source: Markets Insider]



Solution: GO SOLAR

- 1 Extra energy when you need it the most (during the day and in hot weather)
- 2 Return of investment can be 2 to 5 years (depending on location and application)
- 3 Lower maintenance costs (significantly increase battery life, lower use of diesel auxiliary systems)





Why FLISOM?



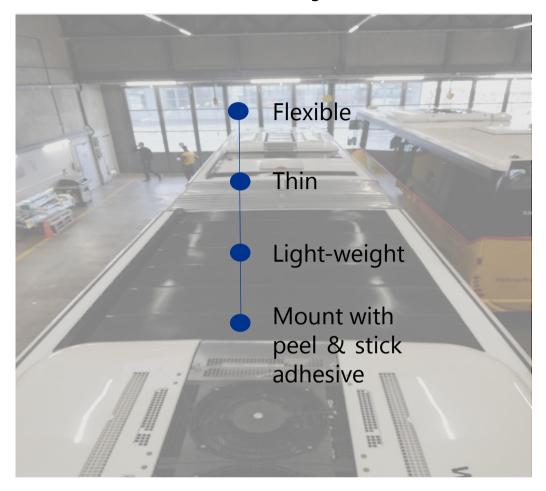
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	Flisom	Others	
Durability on the road	Resistant to vibrations, cracks and impact	Vibrations and impacts can cause micro cracks on the solar cells and on the glass	
Power warranty	20 years 80% for transportation industry Less than 10 years if use transportation		
Weight (kg/m2)	2.6	10-20	
Thickness (mm)	2.2	>40	
Mounting system	Peel and stick with adhesive included	Requires extra mechanical support	
Aesthetics	Uniform Full Black	Black/blue with visible cells	
Safety	High	Questionable (in case of mounting system failure)	



eFlex for Mobility



The eFlex is a flexible and lightweight solar panel designed for integration into structures with limited load bearing capacity and/or mobility applications on trailers and busses. Made with CIGS technology, provides all-black, uniformed look. Resistant to vibrations, cracks and impacts. Simple peel and stick adhesive solution for a quick installation and high wind resistance.



Case Study

Dimension and typ	e of truck	6m refrigerated (0°) van	9m refrigerated (0°) truck	13m refrigerated (0°) truck	Diesel bus
Fuel consumption (I/h)*	1.5	2.5	3.0	0.9
Electrical power used (KW)		3.0	6.0	7.5	1.3
Hourly consumption per unit of power (I/kW)		0.5	0.4	0.4	0.7
Daily consumption (KWh)**		36.0	72.0	90.0	15.6
PV power installed (KWp)		1.26	1.89	2.34	1.44
Av. Daily PV energy produced (KWh)	Europe (central)	3.3	4.9	7.3	3.7
	Europe (south)	4.1	6.2	9.2	4.7
Yearly cost saving (€)***	Europe (central)	846	1′058	1′499	1′339
	Europe (south)	1′058	1′323	1′874	1′674
ROI (years)***	Europe (central)	2.4	2.8	3.0	1.7
	Europe (south)	1.9	2.3	2.4	1.4

^{*} Considered for refrigeration / air conditioning only from pilot installation monitoring and scientific publications



^{**} Considered 10 working hours per day and 5 working days per week with 20% of time PV shaded

^{***} Includes cost of Flisom panels, DC/DC controller, estimation of installation costs per kWp installed, diesel cost of 1.4 €/I

^{****} Data obtained from Globar Solar Atlas / Solargis database, including weather conditions



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