



European  
Regional  
Development  
Fund



**International Olympiad “5R – Green Technolympics”  
8-9<sup>th</sup> JANUARY, 2020, Klaipeda, Lithuania**

Participant name, surname:

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## COMPANY QUESTION

### Short company description:

The Company POPA LT is developing electric catamarans design to be used in inland waters: lakes, rivers, channels in order to reduce pollution and CO<sub>2</sub> emissions. The average consumption of a Popa boat is EUR 71.52 per month (30 days). To make Popa boat catamarans even more sustainable vehicles, we're decorating the roofs of catamarans with solar panels. Solar panels on the roof of a Popa boat produce an average of 1.5 kWh of energy per working day.

Solar panel dimensions of Popa boat: 1,1 m x 2 m.

POPA LT wants to rent electric catamarans and is looking to build a rental point infrastructure.

### Questions:

1) What should be the cover area of the same solar panels at the rental point to cover the electricity costs of the 3 catamarans with solar power, if:

The solar panel dimensions of the boat are 1,1 m x 2 m.

Electricity price in Lithuania - 0,149 Eur.

2) What amount of CO<sub>2</sub> (kg) does 1 Popa boat avoid every month when choosing an electric motor instead of a petrol engine, if:

1 l gasoline - 2,3 Kg (CO<sub>2</sub>)

1 l gasoline - 8.8 kwh (attention: it loses 75% of its effect when converting).

Bonus Question :)

3) Which European city is targeted by the Popa boat because of its political and geographical location?

### Please provide answer here:

1. (answer considers 40% of final evaluation) –

2. (40% of final evaluation) -

3. (20% of final evaluation) -