Assignment name: Renewable energy concept for Easter Island	Approx. value of the contract (in current US\$): 15'000 US\$
Country: Easter Island	<b>Duration</b> of assignment (months): 5 months Start date (month/year): 01.2018 Completion date (month/year): 05.2018
Name of Client: Race for Water foundation	Name of associated Consultants, if any: Swiss Hydrogen AG
Total No. of staff-months of the assignment:	Name of PLANAIR staff members involved in the project: François Bauer, Lionel Perret, Florent Jacqmin, Marine Cauz,

## **Description of Project:**

The aim of the project is to define a concept to provide 100% renewable energy on Easter Island. Various solutions have been combined such as

- Photovoltaics + short term storage (batteries),
- Pyrolysis based on plastic wastes,
- Small wind farms, regarding landscape preservation,
- Fuel cell and plastic to hydrogen (long term storage).

## Description of actual services provided by your staff within the assignment:

- Defining means and targets,
- Comparative energy mix study and sizing,
- Pro/cons of solutions,
- Identification of the most economical solutions,
- Communication and meetings.

A scientific paper has also been written based on the modelling and simulation results of this study. This publication highlights the benefits of a diversified energy mix and aims to share this finding with the scientific community.

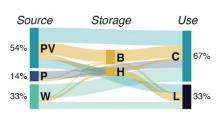


Figure 1: Energy flows between the different sources of production, storage, consumption and the losses

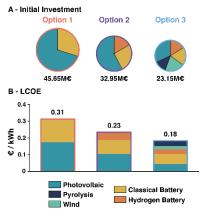


Figure 2: Comparative economic analysis of different energy mixes