

The economic spin-offs of DONG Energy Frisian Solar Challenge

(Westergo Symposium, a comprehensive Report)

Leeuwarden, Monday, 5 July 2010

Chairman: Andries van Weperen, Project Director DFSC

Introduction:

Special welcome:

- The representatives of JRES, Dr. Ghazi Khdaïri, Jamal abu Ebaid (Eng.) and Mohammed Al Ta'ani (Eng.),
- Mr. Paul Scheffer, Mayor of Harlingen
- Mrs. Isabella Diks, Alderman of Leeuwarden

Special thanks:

- The Westergozone project for making this meeting possible and for their financial aid. (Westergozone is a project of the Frisian provincial government and four local governments in the Leeuwarden to Harlingen regions).

- SNN, the interprovincial alliance that does a great deal of work and provides a lot of financial aid to projects such as Frisian Solar Challenge, projects that strengthen the Innovation and Economic Development of the Northern Netherlands

DFSC has two main goals:

1. To promote sustainable and solar technology amongst young people
2. To create spin-offs for the Northern Economy, especially in yacht construction, electric boating and solar technology.

Speakers:

Mr. Geert Boesjes, head of the project office of Westergozone presented various projects that are carried out in this region where the local government, entrepreneurs and research and educational institutes work together to stimulate the economy. Sustainability, innovation and knowledge are the focus points of these developments:

- Innovative greenhouses: Fine wire heat exchange / Climate optimization / Wood fired CHP installations / Geothermal heating and cooling systems
- LED lighting in stores and offices
- Aquaculture: experiments in closed-circle food and fish production
- Sustainable business areas

The function of the Westergozone Project Office is to bring entrepreneurship, research and financing together in order to incentivize innovative sustainable new business.

Prof. Wubbo Ockels, ASSET chair of Delft University, ambassador and advisor of DFSC demonstrated that (quote) **'It's not space that is special, it's the earth'**.

And the question is not whether the doubling of CO2 emissions causes a problem, but do we have evidence to believe that it is not?

Furthermore, there is a major debate going on between the Solar Group and the Fossil Group, whereby a lot of wrong questions lead to the wrong answers.

It is of utmost importance that the right questions be put forward in order to be able to create a swift transition to a different world.

We need our youth to provide the answers we need in projects such as Frisian Solar Challenge, Power Kites, Superbus and the sustainable Highway on the Afsluitdijk.

Dr. Yoram Krozer, University Twente CSTM/Sustainable Innovation Academy
Demonstrates that there are different types of Solar Boats: Party Ships, Tour Boats, Speed Boats and DIY Boats.

Research on Solar Boats by Olga Fadeeva, PhD candidate in life cycle costing, Tim Gorter, PhD candidate on the PV applications on solar boats and Han Brezet and Yoram Krozer on sustainable aspects.

Important developments in DFSC:

More participants: from 27 ('06) to 39 ('08) to 44 ('10), more events in different countries, more media coverage, awards and new business start-ups, directly, as in the case of Czeers Solarboats and MG Electronics and, indirectly, in the region, such as Novolectriq.

Experiences:

- High performance is a balance of speed, autonomy and stability in bad weather
- Main problems: low engine efficiency manoeuvrability, propulsion damage
- Boat cost range € 60 – 350,000 (top 5) and € 1,000 – 50,000 (DIY)
- In DFSC 2010: For every 21 participants, there are 31 commercial firms involved and 16 research and education institutes / possibly three new businesses emerge / TV coverage at regional and national level.

DFSC 2010 (based on 21 responses)

	<u>Problems</u>	<u>Solutions</u>	<u>Inventions</u>
Propulsion	8	5	4
Design system	7	3	
Electric	5	6	3
Light materials	3	3	2
Attachments	3	2	
Hull	2	2	1

Conclusion:

- Participants become advanced professional teams
- Teams become more focused and competitive
- Several businesses and many inventions emerge
- Exposure enlarges on international scale
- Opportunities for Fryslân, will it act?

In the discussion, Prof. Ockels proposed the organisation of **Solar Summer Camps** for youngsters in order to help them in, teach them, and make them enthusiastic about further sustainable solar technologies.

Leeuwarden, 7 July 2010
Andries van Weperen, DFSC Project Director