

## **Frisian Solar Challenge 2010, start and finish in Leeuwarden, the Netherlands, From 4 to 10 July 2010**

### **1. Aim and purpose of the 2010 Frisian Solar Challenge**

- 1.1. The aim of the 2010 Frisian Solar Challenge is to organise a TOP Solar Boat Event in the province of Fryslân in order to;
  - promote durable technology amongst youths and students at technical universities and professional training colleges.;
  - stimulate the promotion and development of durable constructions, in particular with respect to the application of Solar energy in the ship-building industry.

### **2. Organizing authority/race organisation**

- 2.1. The organizing authority of the Frisian Solar Challenge is the Stichting Sinneboatrace Fryslân.
- 2.2. On behalf of the organizing authority the 2010 Frisian Solar Challenge is carried out under the management of the project director.  
The race organization can be contacted throughout the year as follows:

Frisian Solar Challenge, p/a Grote Kerkstraat 20a, 8911 EC Leeuwarden  
Postal address: Postbus 2567, 8901 AB, Leeuwarden.  
Tel. +31 58 213 78 88 Fax +31 58 213 17 23  
E-mail: [info@frisiansolarchallenge.nl](mailto:info@frisiansolarchallenge.nl)

- 2.3. The office is open from Monday – Friday from 08.30 – 17.00 hours (Dutch time!).
- 2.4. During the race (4 up to and including 10 July 2010) and the test days preceding the race (from 20 June and on 1-3 July 2010) a mobile race office will be set up. The telephone and fax numbers of the mobile office will be announced to the competitors in due time.

### **3. Rules**

- 3.1. The race will be conducted subject to the provisions of this Notice of Race (NR), the 2010 Frisian Solar Challenge Technical Regulations (TR), the 2010 Frisian Solar Challenge Competition Rules (CR) and the Inland Navigation Police Regulations (BPR = Binnenvaart Politie Reglement). Collectively, these documents form the Rules, with possible subsequent additions and/or amendments to be implemented by the race organization.
- 3.2. The organisation reserves the right to amend the rules (as incorporated in the NR, TR and CR) at any time. This will be done by means of publications on the organization's website or in the form of notices during the race itself.
- 3.3. All competitors in the race are expected to know and accept the Rules. The jury may penalize competitors who ignore or break the Rules. Penalties may vary from a reprimand to disqualification and exclusion from further participation.

- 3.4. All questions related to the interpretation of the Rules shall be submitted to the organization in writing. Any explanation of the rules will be published on the website and be binding for all competitors.
- 3.5. In the case of a discrepancy between the Dutch and the English text, the English text shall prevail.

#### **4. Definitions (see Annex A)**

#### **5. Race schedule and events**



##### **5.1. Route**

The race is organised by the Province of Fryslân. Wherever possible, the route is identical to the route of the Frisian Eleven Cities Ice-skating Race, as determined by the *Vereniging de Friesche Elf Steden*. The precise route description is available on the website.

##### **5.2. Stages**

The race consists of five stages. One stage is completed on each day. In the stage from Franeker to Dokkum there are currently 2 'kluunplaatsen' [where the boat must be lifted from the water], viz. at Wier and Oude Leije. The time needed to complete each stage is added up to calculate the overall results. The winner of any given class is the team that completes the overall distance in the shortest time.

5.3. 2010 FSC racing schedule:

The race schedule is as follows:

Saturday	19 June:	Technical inspections*
Saturday	26 June:	Technical inspections*
Wednesday	30 June:	15.00 hrs Camp site open
Thursday	1 July:	Registration and technical inspection*
Friday	2 July:	Technical inspection*
Saturday	3 July:	Technical inspections* Swimming test
Sunday	4 July:	Prologue: 10 km speed trial through and around Leeuwarden and 70 m sprint test in the Prinsentuin (Noorderstadsgracht)

The 2010 Frisian Solar Challenge stages are as follows:

Monday	5 July:	Leeuwarden – Sloten (44 km)
Tuesday	6 July:	Sloten – Bolsward (58 km)
Wednesday	7 July:	rest day with activities in Bolsward
Thursday	8 July:	Bolsward – Franeker (with restart in Harlingen) (37 km)
Friday	9 July:	Franeker – Dokkum (with restart in Bartlehiem) (45 km)
Saturday	10 July:	Dokkum – Leeuwarden (restart at de Grote Wielen) (25 km) and awards ceremony

\* The organization will announce in due course the dates and times on which the competitors shall submit their vessels for inspection.

- 5.4. Competitors have access to an overview of the obstacles in the route through the interactive route map that can be found on the web site. All movable bridges open at the standard times and for the normal rates, unless specified otherwise. Timely passage under the bridges forms one of the strategy components to be developed by each competing team.

## **6. Vessel categories**

- 6.1. The race is open to three categories of vessels:  
Challenge A-class: Vessels with standard solar panels and a single crew member  
Challenge B-class: Vessels with standard Solar panels and two crew members  
Topclass: Vessels in the open class, where the type of solar panels to be used is not prescribed, but where the maximum capacity that may be installed is limited.
- 6.2. In the two-person vessels, both crew members shall be on board while racing.

## **7. Racing numbers and publicity**

- 7.1. Competitors shall affix the racing number provided by the organization as specified in the TR.

- 7.2. Both the race organization and the competitors may be sponsored provided this is not in conflict with the moral standards and interests of the organization, at the discretion of the organizers.
- 7.3. By participating in the race, competitors authorize the organizers to use their names and photographs in any publications issued by the organizers and the sponsors.
- 7.4. Violation of the conditions stipulated in 7.1 through 7.3 may be penalized by the race jury in any way it deems appropriate.

## **8. Participation and registration**

- 8.1. The 2010 Frisian Solar Challenge is open to anyone with a solar-powered vessel that complies with the provisions of the Rules, provided that they have paid the entry fee, and that the skipper is not younger than 16 years of age.
- 8.2. Teams of the A-class and the Top-class may not consist of more than 6 persons. Teams of the B-class may not consist of more than 8 persons. All team members may act as crew members and/or support crews.
- 8.3. Team members may only be replaced during the race where this is deemed justifiable by the race jury. The number of team members may not be changed.
- 8.4. Entry fees:  
 Challenge A class: € 1.000  
 Challenge B class: € 1.500  
 Topclass: € 2.500  
 (All amounts are excl. VAT)  
 Entry fees are payable within two months after the entry form has been submitted and on 1 January 2010 at the latest.
- 8.5. To qualify for participation in the race, each team must have completed steps 1 up to and including 8. After entry (step 1) all further steps are assessed by independent experts in the organization. The Technical Committee assesses steps 2 to 6, while the Race Committee assesses steps 7 and 8. Each step requires approval. Teams cannot qualify for the next step until approval for the current step has been acquired.

Step 1:	Registration and payment with the organizers	Deadline 1 March 2010
Step 2:	Conceptual design, specifying at least the hull shape, the propulsion system and the attachment of the solar panels; all shown in the form of design sketches	Deadline 15 February 2010
Step 3:	Modification of the concept and detailing of the technical construction. The design must at least show clearly the attachment location and system of the battery container, the seat(s), the solar panels and the engine. All of the aforementioned must be supported by structural calculations. The TOP class must also include a precise drawing of the layout of the solar panel and a calculation of maximum power output.	Deadline 15 March 2010

Step 4:	Design of the electrical system, from solar panel to the engine. This includes both an electrical circuit diagram and the physical design. Those teams that are planning to use a non-PV solar panels must show a design of the power system.	Deadline 15 May 2010
Step 5:	Feedback and approval of the total integral design. Final moment of major modifications. Progress reports on building process. The hull, the supporting construction of the panels and the propulsion system must be complete, as demonstrated by a photograph of the specified components.	Deadline 1 June 2010
Step 6:	Approval of the vessel. Approval will be based on a physical inspection of the vessel and safety devices. The inspection will be conducted under the supervision of the Technical Committee. The participants will be assigned an inspection schedule that will start a few weeks prior to the start of the race. Non-Dutch participants will be given an inspection slot shortly before the start of the race, if they so wish, but not later than 1 July. Starting from 19 June 2010	From 19 June 2010
Step 7:	Swimming test for all potential skippers, and for other Challenge B class crew members.	3 July 2010
Step 8:	Prologue: Speed trial (approximately 10 km) and sprint. The sprint result only determines the starting order of the first stage. The times of the sprint and the prologue do not count for the overall classification.	4 July 2010

- 8.6 Prospective competitors may enter the race by completing and returning a signed entry form, by post or by fax, to the Frisian Solar Challenge.  
By post: P.O. Box 2567, 8901 AB Leeuwarden, The Netherlands.  
By fax: (+)31 58 2131723.

**The entry form is attached to this Notice of Race as Annex B.**

- The entry form is also available for downloading from the website,
- 8.7 Competitors under the age of 18 are required to submit a letter of permission to participate from their parent(s) or guardian(s). This letter must be submitted to the organizers prior to the start of the race.
- 8.8 Skippers of the competing vessels that are capable of a speed of more than 20 km/h must have a "Klein Vaarbewijs 1" [Dutch powerboat licence].
- 8.9 Each team must have at least 2 skippers that have passed the swimming test.
- 8.10 All competitors are expected to participate in the race unless they decide to withdraw officially. Competitors who decide to withdraw from the race must notify the organizers in writing as soon as possible prior to the start of the race. If a competitor withdraws from the race prior to 1 January 2010 a maximum of 50% (Challenge classes) or 75% (TOP class) of the entry fee already paid will be refunded. After 1 January 2010 no entry fees will be refunded.
- 8.11 The Board and the race committee reserve the right to refuse the right to entry where this is deemed necessary for organizational reasons.

## **9. Liability and Insurance**

- 9.1. The Organizing Authority and any other party involved in the organization of the 2010 Frisian Solar Challenge will accept no liability whatsoever for any personal or material damage (including but not limited to death, injury, consequential damages, etc.) sustained prior to, during or after the race.
- 9.2. All owners must lodge a copy of a valid third-party liability insurance cover document for the vessel entered with a minimum cover of € 500,000 or the equivalent in the currency of the country of registration of the vessel, effective for the duration of the Frisian Solar Challenge, with their Entry Form.

## **10. Prizes**

- 10.1. The following prizes will be awarded to vessels in Challenge A class, Challenge B class and in the TOP class:
  - First prize (the team that completes the full distance in the shortest time)
  - Second prize
  - Third prize
- 10.2 In addition the following prizes will also be awarded:
  - The Innovation Prize for the most progressive design. This prize will be awarded based on a jury report evaluating the following aspects: durability, inventiveness and originality.
  - Incentive Prize for the team that deserves the most support for participation in the next edition of the race.
  - Bad Luck Prize for the team that was dogged by the worst luck during the race.
  - The Fair Play Prize for the team that has attracted the most attention with respect to "fair play".
- 10.3. The winners of each stage and the overall leaders of each class will be honoured at the end of each day.
- 10.4 All participants will receive a certificate of proof of participation.
- 10.5. The prize giving ceremony will take place on Saturday evening, 10 July 2010, i.e., the last day of the race.

## **11. Additional information**

- 11.1 Competitors are required to report to the organizers with their vessels on Thursday 1 July 2010. The Frisian Solar Challenge prologue and sprint will take place on Sunday 4 July 2010. The race itself starts in Leeuwarden on Monday 5 July 2010.
- 11.2 Foreign competitors must present their vessels for a technical inspection on Friday 2 July and Saturday 3 July 2010. Dutch competitors must have their vessels inspected on 19 or 26 June 2010 at one of the times and dates set by the organizers.  
All (potential) crew members will do a swimming test in Leeuwarden on Saturday 3 July 2010.

The organizers will announce all locations and times directly to the competitors at a later stage.

- 11.3 Each team is responsible for its own transport arrangements, as well as for the transport of its vessels and all auxiliary materials. The vessels and the auxiliary materials must be capable of being transported in a simple manner via the public road by the teams themselves. The organizers will provide locations where the teams will be able to pitch tents in the vicinity of the stage locations.

In addition meals will be provided for team members and officials from Thursday 1 July up to and including Sunday morning 11 July 2010. Further details about accommodation and meals will be communicated directly to competitors in due course.

- 11.4 Each team will be responsible for adequate communication with the organization. Each team will be required to appoint at least one contact person for the organisers to get in touch with. Competitors are free to choose the means of communication between this contact person and the sailing team members.

- 11.5 Prior to the start of the race communication takes place only through the race organisers. This also applies to any technical communications. The race organisers can be reached at [info@frisiansolarchallenge.nl](mailto:info@frisiansolarchallenge.nl). A number of Frequently Asked Questions (FAQ) can be found on the web site [www.frisiansolarchallenge.nl](http://www.frisiansolarchallenge.nl).

## **Annex A. Definitions**

**Rules:** The provisions of the Notice of Race, the Technical Regulations of the 2010 Frisian Solar Challenge, the Rules of the 2010 Frisian Solar Challenge and the Inland Navigation Police Regulations (BPR for Binnenvaart Politie Reglement) together constitute the Rules, as well as any subsequent additions and / or amendments implemented by the race organizers.

**Organisatie:** The 2010 Frisian Solar Challenge takes place under responsibility of the organizing foundation: 'Stichting Sinneboatwedstrijd Fryslân'.

**Officials:** Members of the race committee, the technical committee, the race jury and the organizers, all personnel that can be recognized as such and whose instructions competitors shall promptly follow during the course of the race.

**Guests:** Persons who have been invited by the organizers to the locations specified as guest areas at specific times and locations, as indicated by the organizers.

**Team:** The group of persons registered with the organizers who as competitors enter the race with a vessel.

**Solar boat:** A vessel that is exclusively powered by solar energy derived from solar panels mounted on board the vessel.

**Solar panel:** Energy source for the propulsion of the solar boat. In Challenge Classes A and B these are panels given on loan by sponsor The Sun Factory. No specific prescriptions apply to the installed power of the solar panels in the TOP Class, but the maximum capacity to be installed is limited to 1750W. The technical specifications of the standard panels are available on the website of the Frisian Solar Challenge.

**Vessel:** A solar boat that complies with the rules and participates in the race.

**Fully loaded:** The condition of the vessel in which all systems have been mounted, all systems have been installed and all systems are operational, all the necessary ballast has been installed and the crew member(s) on board is/are equipped with the prescribed safety devices.

**Skipper:** The team member who has qualified in accordance with the rules to pilot the vessel during the race.

**Crew member:** A team member in Challenge B class who accompanies the skipper in the race.

**Steward's vessel:** A vessel that is marked as such by means of a flag and that is used for the race-technical and safety supervision of the 2010 Frisian Solar Challenge.

**Paddock:** An area allocated by the organisers where the vessels shall be kept during the 2010 Frisian Solar Challenge from the moment of the technical inspection and at the times when they are not actually competing in the qualifications and the race itself.

**“Kluunplaats” (lugging location):** Obstacle en route where the solar boat must be lifted from the water in accordance with the rules and relaunched to continue racing after passing the obstacle.

**Safety gate:** Deviation from the shortest possible route that may be introduced by the race organizers for safety reasons. The safety gate consists of round, red buoys that the vessels shall pass from the direction from which they have come.

**Outside help:** All assistance possible provided to any crew member or the vessel. Support by team members will not be considered outside help.

**Entry form Frisian Solar Challenge 2010**

Name of the educational institute/company/person: \_\_\_\_\_

Postal address: \_\_\_\_\_

Postal code: \_\_\_\_\_ City/town: \_\_\_\_\_

Country: \_\_\_\_\_

Name contact person: \_\_\_\_\_

Postal address: \_\_\_\_\_

Postal code: \_\_\_\_\_ City/ Town: \_\_\_\_\_

E-mail address: \_\_\_\_\_

Phone: \_\_\_\_\_ Mobile phone: \_\_\_\_\_

Entry in the following category:

Challenge A, for one-person vessels (entry fees € 1.000 excl. VAT)

Challenge B, for two-person vessels (entry fees € 1.500 excl. VAT)

Topclass, the open class (entry fees € 2.500 excl. VAT)

Our team competes in the race under the following name:

\_\_\_\_\_  
(= the name by which from now on the team will be known on the web site, on race forms and in publications)

To qualify for the 2010 race competing teams shall complete eight steps. Each of these steps is subject to a specific deadline. The website, [www.frisiansolarchallenge.com](http://www.frisiansolarchallenge.com) contains an overview of the eight steps and also specifies which deadlines are applicable to the eight steps. Step 1 is the completion of this entry form.

The entrant declares that he / she is familiar with and agrees with the Rules of the race and the entry and registration procedures of the Frisian Solar Challenge.

The entrant declares that he/she will transfer the appropriate entry fee within two months (on 1st March 2010 at the latest) after the day this form is signed to bank account no. 10.29.85.154, in the name of Stichting Sinneboatwedstrijd Fryslân in Leeuwarden.

Place: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_

Please send this entry for to Frisian Solar Challenge.

By post: P.O. Box 2567, 8901 AB Leeuwarden, The Netherlands.

By fax:(+)31582131723