The real challenge – win the eTrophy 2020!

This year the second edition of our eTrophy will take place in which the longest non-stop flight with electric power will be honored.

During the award ceremony on Saturday evening the winner of the challenge will get the eTrophy for the longest electric non-stop flight.

The prices are:

<table>
<thead>
<tr>
<th>Place</th>
<th>Prize</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>3000 CHF and eTrophy</td>
</tr>
<tr>
<td>2nd</td>
<td>2000 CHF</td>
</tr>
<tr>
<td>3rd</td>
<td>1000 CHF</td>
</tr>
</tbody>
</table>

To win the eTrophy you are just three steps away:

1. Register
2. Fly-in
3. Proof your flight

The eTrophy sponsor WATERjet ltd. Aarwangen and the Electrifly-in team wish you good luck and safe eflight!

Rules and Regulations

The aim is to keep the rules as simple as possible. We as organization of the competition ask you as a participant for fair-play in every respect. Safety is as well at top priority and the flight execution is in full responsibility of every team and every pilot.

Basic Competition Rule

The basic rule is simple:

Longest non-stop flight to Grenchen (LSZG) with electric propulsion system
**Time Frame**

Plan your electric flight as follows:

<table>
<thead>
<tr>
<th>earliest landing</th>
<th>latest landing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Friday, 11 September 2020</strong></td>
<td><strong>Saturday, 12 September 2020</strong></td>
</tr>
<tr>
<td>1700 LT or 1500 UTC</td>
<td>1600 LT or 1400 UTC</td>
</tr>
</tbody>
</table>

For every minute before or after the above times, the distance will be reduced by 1 NM.

**Distance**

\[
etrophy\ distance = \frac{\text{direct flight distance} + \text{flight route distance}}{2}\]

**direct flight distance**

The distance from airfield reference point of departure (or center of runway in absence of a ARP) to the ARP of Grenchen LSZG (N47°10.88' / E7°24.98').

**flight route distance** (true flight distance)

The distance of the true flight route flown and tracked by GPS.

**Example:**

*Flight from LSGT to LSZG*

- direct flight distance = 70.4 km
- flight route distance = 73.2 km

\[
etrophy\ distance = \frac{70.4\ km + 73.2\ km}{2} = 71.8\ km\]

**Proof of Distance**

The participant/team has to prove the flown distance by two means:

- Logged flight data

**Logged Flight Data**

The flight has to be logged as .IGC-file (or .GPX) which has to be handed over latest two hours after landing at Grenchen LSZG.

In case you are not able to track your flight and get a departure confirmation please contact the organization committee in advance.
**Aircraft and Categories**

Every aircraft which has the following qualities

- electric propulsion system as a main on board propulsion system for the aircraft, and
- at least one pilot on board (no UAV)

There is no distinction between fully powered electric aircraft and electric power-glider.

**Hybrid-electric Aircraft**

please contact etrophy@electrifly-in.ch for details

For electric powered aircraft which have a subsystem to store or produce energy the hybrid system counts as follows:

$$\text{equivalent electric distance} = \text{DIST} \times \frac{\text{electric energy used}}{\text{energy for non-electric portion}}$$

<table>
<thead>
<tr>
<th>DIST</th>
<th>distance measured from DEP airfield to LSZG</th>
<th>NM</th>
</tr>
</thead>
<tbody>
<tr>
<td>electric energy</td>
<td>SOC at DEP airfield – SOC after landing LSZG</td>
<td>kWh</td>
</tr>
<tr>
<td>non-electric portion</td>
<td>equivalent of energy used by hybrid system (gasoline, Diesel etc)</td>
<td>kWh</td>
</tr>
</tbody>
</table>

**Specific Energy Density for**

| Gasoline Benzin | 31 | MJ/Liter | 8.61 | kWh |
| Diesel | 35 | MJ/Liter | 9.72 | kWh |
| conversion | 1 MJ = 0,2778 kWh |

**Example:**

DIST: 226 NM

non-electric portion: gasoline 24 liter equals 206.7 kWh

electric energy consumption out of battery: 36 kWh

$$226 \times 36 / 206.7 = 39.4 \text{ NM}$$

**Safety Considerations**

Flight safety has the top priority in all actions around this electric flight contest.

**Fair-Mindness/Honesty**

The intention of the organization committee is to keep the rules as simple as possible and the proof for the flight as easy as possible to comply with.

Therefore, we ask every team and participant of this challenge to be honest with the achieved flight data.

**Judging Panel**

The judging panel consists of organization committee members of Electrifly-In.
Legal Considerations

- participation to this challenge is voluntary
- the aviation rules and regulations applicable to the respective aircraft and flight crew have to be complied with and lie in the full responsibility of the teams/participant
- the decision of the judging panel cannot be disputed