PURE FLIGHT

phoenix air

GREEN FLYWAY

International test arena for future aviation

18.2.2020, Sveg ESND, 08:05 local time (07:05 UTC)

Our winter electric international flight begins in Sveg ESND. We started with nice weather prediction – only light headwind and CAVOK. Flight team – SuperCup (Stephan), U-15 Phoenix (Tom and Peter) and U-15E electric Phinix (me - Martin). Ground team – VW Multivan with trailer (Zdenek). After takeoff I slowly reached safe altitude over 3 000 ft and in 30 minutes we arrived to Hedlanda. Headwind around 20 km/h.

It was not necessary to land for recharge (I used only 22% of battery capacity) but we wanted to test landings on a different surfaces and in different “nordic” conditions. Hedlanda prepared long RWY, but when I was overhead RWY 24 I received info from Tom that RWY width is only 20 meters with 1-1,5 m high snow/ice walls on each side. I have wingspan 15 m so reserve was… acceptable, but not so large. Fortunately was no crosswind so I landed and practically immediately we started re-charging.

Charging time was about 25 minutes and I noticed 97% capacity in battery before takeoff. Next stop – Funesdalen. Funesdalen is not an airport, but local people prepared for us 1 000 meters RWY on frozen lake. Few turbulences during second half of this flight leg and headwind 10-20 km/h. Snow RWY width was 20 meters – that would be perfect, but on right side of RWY were approx.. 1,8 m long red sticks – signs of snowmobile raceway. During landing I noticed light crosswind.

After landing I did long taxiing to re-charge point. When I switched system off was battery capacity 73% (2-3% has been used during taxiing in a bit soft taxiway when I had to use higher power). We connected our charger to supplied cable and charger has been destroyed. Supplied cable had by mistake phase connected “blue zero” pin. No comment.

After short briefing we decided to continue with remaining 73% capacity over mountains to Roros ENRO. Distance 81 km with takeoff from snow RWY. During flight I reached max. altitude of the day - 4 486 ft. Headwind 20-40 km/h. Border between Sweden and Norway has been crossed at 10:57 UTC (altitude 3 629 ft and 40 km/h headwind).

Before landing in Roros I did two low left circuits of RWY 31 for media (filming from drone). I noticed gusty crosswind and turbulences on final. After landing I had still capacity of 30%. So I did one more presentation flight – one narrow circuit RWY 31 just before snow shower arrived. I stopped flying with full stop landing and 22% reserve in batteries.

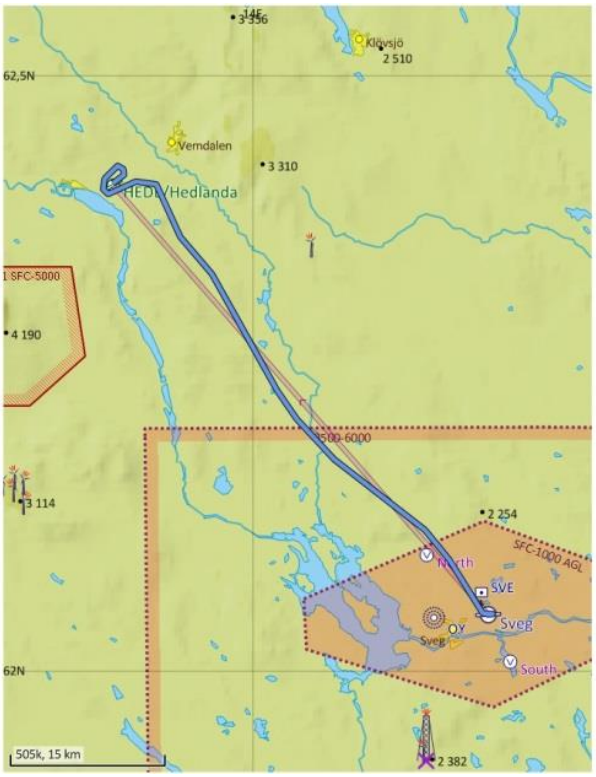
Short technical review of flight Sveg (Sweden) – Roros (Norway)…

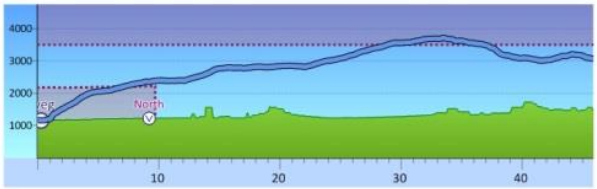
3x takeoffs (1x from asphalt, 1x from ice, 1x from snow). 219 km total flown distance. Max. altitude 4 486 ft. Used capacity 89% (approx. 31 kWh). Energy cost approx. 5,00 EUR (I counted with 1,731 SEK / kWh = 0,16 EUR / 1 kWh). Emissions – **zero.**

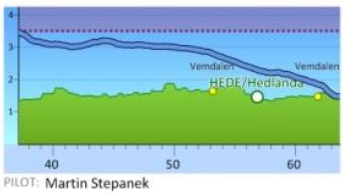
Not bad :-) I believe that this experience electric aviation really needs.

SkyDemon debriefing info

1st leg - Sveg to Hedlanda







PILOT: Martin Stepanek

LOG START: 18 2 2020 07:05 Z, LOG STOP: 18 2 2020 07:43 Z, LOGGED TIME: 38 min (0,6 hours)

Flight from Sveg to HEDE/Hedlanda

Takeoff from ESND Sveg at 18 2 2020 07:07 Z

Landing at ESNC HEDE/Hedlanda at 18 2 2020 07:42 Z

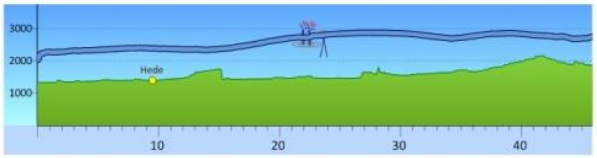
FLIGHT TIME: 35 min (0,6 hours)

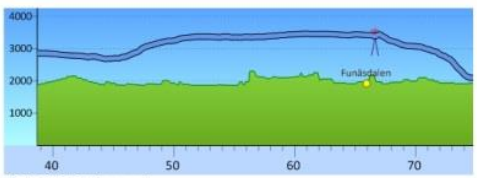
DISTANCE FLOWN: 63 km, MAXIMUM ALTITUDE: 3 715 ft, MAXIMUM SPEED: 133 kph, AVERAGE SPEED: 109 kph

	TrkT	Dist	Elapsed	Time
ESND Sveg ESNC HEDE/Hedlanda	319	53	35 min	07:42 Z

Events

2nd leg – Hedlanda to Funesdalen





PILOT: Martin Stepanek

Flight from HEDE/Hedlanda to Funäsdalen

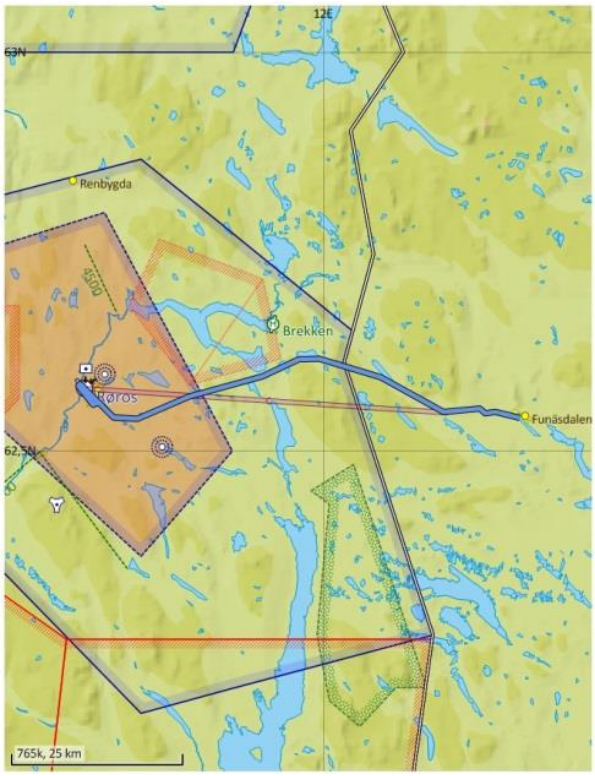
Takeoff from ESNC HEDE/Hedlanda at 18 2 2020 09:00 Z

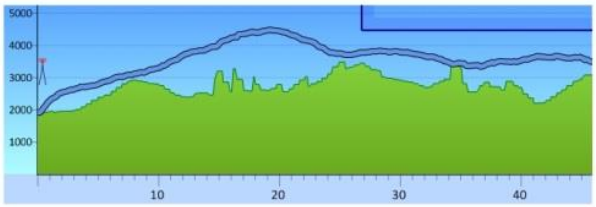
Landing at Funäsdalen at 18 2 2020 09:42 Z

FLIGHT TIME: 42 min (0,7 hours)

DISTANCE FLOWN: 75 km, MAXIMUM ALTITUDE: 3 459 ft, MAXIMUM SPEED: 167 kph, AVERAGE SPEED: 108 kph

3rd leg – Funesdalen to Roros (international border crossing between Sweden/Norway)





PILOT: Martin Stepanek

Flight from Funäsdalen to Røros

Takeoff from **Funäsdalen** at 18 2 2020 10:26 Z

Landing at **ENRO Røros** at 18 2 2020 11:14 Z

FLIGHT TIME: 48 min (0,8 hours)

DISTANCE FLOWN: 81 km, MAXIMUM ALTITUDE: 4 486 ft, MAXIMUM SPEED: 156 kph, AVERAGE SPEED: 101 kph

Events

Note that the events and maps in this document are created from current aeronautical data, which may not be the same as the aeronautical data in effect when the flight took place.

Entered Røros CTR	10:57 Z	48 km	3 629 ft	84 kph