

# MEGA

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# Pedelec Adventures Iceland Challenge

## Facing the Elements on Electric Bikes

By Susanne Brüsich

In Midsummer 2013, the Pedelec Adventures team went on their third pioneer trip to show what's possible on electric bikes. For this year's journey, the outdoor-fans chose Iceland – a country that has been shaped by fire and ice, wind and water, endless days in summer and endless nights in winter. Traveling between glaciers and hot springs, the adventurers faced the Nordic elements on speed-pedelecs provided by the tour's main sponsor eflow. Susanne Brüsich, head of Pedelec Adventures and renowned e-bike journalist reports about the highlights of this unique journey and the challenges that the team faced while riding through Iceland's stunningly beautiful landscapes.



▼ Geysir watching



▲ Before departure Farewell at RedsDeli in Berlin

After having crossed Morocco and Mongolia on electric bikes in 2011 and 2012, Iceland Challenge was our third adventure. Again, we took speed-pedelecs to their limits while riding up to 45 km/h in surroundings where you don't normally see electric bikes.

In Morocco the challenge was to cross the Atlas mountains and Sahara desert on a new brand of pedelec mountain bikes and to cover distances of up to 175 km per day while pulling solar trailers that generated most of the energy we needed to recharge the batteries.

In Mongolia we crossed wide steppe and mountainous areas in a completely self-sufficient way, creating new challenges such as logistics and finding a light-weight solar charging infrastructure that would be rigid enough to master cross-country riding.

In Iceland we really faced the elements while crossing several hundred kilometers of vast lava desert, jagged glaciers, wild rivers, lovely green valleys and populated surroundings. While wind and rain hit our faces in chilly temperatures we challenged the all-round talent of our eflow bikes. In urban Reykjavík, on remote gravel

roads in the West Fjords and in the rough terrain of the highlands we put the rear hub motor and the latest Lithium-ion battery pack from co-sponsor HiTech Energy using high performance battery cells from Samsung SDI to a hardness test.

After spectacular four weeks in Iceland with 4,000 kilometers covered by four team members on four bikes, we returned to Germany in late July, bringing home the most amazing memories, pictures and videos which we shared at film screenings and live presentations at the fall trade shows of the bicycle world.

In doing so, we want to draw attention to this new bicycle species, show what's possible with extra watts on your pedals and hope to inspire people to experience the pedelec feel themselves. This way we hope to help forming the the path that leads the world towards more sustainable mobility.

### From Iceberg Lagoon to Lava Desert

On June 17, 2013 we started our journey from Berlin driving our 4x4 support truck to north Denmark from where the ferry departed towards Iceland the next day. Our truck was loaded to the roof with 4 eflow bikes, plenty of spare parts, a simple but fully equipped kitchen, camping equipment, cycling and outdoor gear, 4 laptops, 9 cameras (photo and film), 4 smartphones, 4 telephones, 12 bike batteries and chargers.



◀ Camp at Börgafjörður in the East Fjords





Crossing the ocean from Denmark to Iceland took two days and two nights and gave us the chance to change moods from the hectic rush of the last weeks before departure to what would come next. Snow-covered mountains, clouds and muddy roads! Welcome to the beauty of the North! Hat, rain jacket and ski underwear would soon become our best friends on this fascinating islands. As did the puffins, colorful birds that live in the cliffs of Iceland – one of them became the mascot of our journey.

Besides the puffin, we were four people on this adventure: Pedelec Adventures co-founder Ondra Veltrusky and myself were the designated pedelec riders. Ondra was also responsible for trip planning and management and social media documentation of the tour. With a 15 year background in light electric vehicle PR, testing, journalism and photography I focus on trip concept development, finding the right partners and sponsors, getting our stories out to the international media and present the tour at trade shows and other events. Uwe Schlemender, head of ecom21, has specialized in electric bike technical service and made sure that the bikes and the support truck worked well at all times. Andreas Gutmann, owner of Alles-

gutmann Media Design escorted us with film and photo cameras and was also responsible for the post-production of our tour film.

From the harbor of Seydisfjörður at Iceland's east coast, we headed south and followed the ring road towards the country's capital city Reykjavík. The road passes one of the major scenic spots of Iceland – the surreal scene of Jökulsárlón where luminous-blue icebergs calve from the immense Vatnajökull glacier and float through the glacier lagoon before they drift towards the Atlantic Ocean.

We arrived at the lagoon around midnight of the year's longest day, June 21st. After a short period of twilight, the sun came up at around 3 o'clock in the morning. Riding around this stunning landscape made us almost forget that the temperature was only barely above 0 degrees Celsius.

Thanks to 24 hours of daylight during this period of the year, it soon became our habit to travel at night time when the roads were empty and we had the most popular spots such as the Dettifoss waterfall, the Geysir or the birds cliff of Látrabjarg completely to ourselves. Staying awake at night time was also rewarded with the most beautiful light for photo shootings and filming. We kept this rhythm even in the remote highlands where we witnessed the most magnificent cloud spectacles in the sky while waiting for sunrise.

After watching the floating icebergs, another extraordinary experience was diving between the European and the American continental plates, in 1.5 degrees Celsius cold water wearing dry suits and then cycling back to the dive site on our eflow bikes - in full diver's gear. The water that has been filling the gap while the continental

plates have been slowly drifting apart from each other has been seeping through the lava stone for 30 years and is the clearest water we have ever seen or drunk.

In Mongolia, we had traded a pedelec ride for a horse ride. In Iceland, we traded eflow for a flight – not the bike just a ride! The pilot loved the ride just as much as we enjoyed the flight in a 4-person Yak aircraft made in Russia. We flew over the colorful mountains and volcanic landscapes of Landmannalaugar, passing Hekla, one of the active volcanos of Iceland that erupts about every 10 years. We also passed the same volcano Eyjafjallajökull that had paralyzed Europe's air traffic in 2010 with its eruption. During the flight we could see the glaciers from the top and immense rivers that run from underneath the glacier and shape much of the landscapes of Iceland. The day before we had cycled through this area in a wild change of sunshine and rain with rainbows rewarding the photographers' patience.

We enjoyed riding the eflow bikes through the lively streets of Reykjavík a lot but our most pleasant rides happened in the Westfjords. Lots of smooth gravel pists were great to ride and led to spectacular views behind every other fjord. Fields of purple flowers, sandy beaches, or the cliffs of Látrabjarg where over one million birds breed every year were highlights of this mysterious part of Iceland that only sees very few visitors.

After one of our typical night rides we enjoyed nothing more than cooking a nice dinner and jump into the hot springs afterwards. When the sun was bright up on a clear day at 6 or 7 o'clock in the morning, it was time to creep into the tents for a few hours of sleep.

What's most fascinating about Iceland is the variety of its landscapes. Leaving the Westfjords behind we passed the popular area of Myvatn with its lake and craters and stopped at the mud volcanos and hot steam fountains at Krafla in the North of Iceland. We then took another stop in Iceland's wale watching capital Húsavík, a small fishing town with a picturesque harbor where eleven different kinds of wales can be spotted.

After passing Dettifoss, Iceland's most impressive waterfall with the largest volume of any waterfall in Europe, we entered the bizarre lava landscape of the highlands and once again found ourselves in a completely different world. Standing in the cold, windy and desolate Askja crater with its crystal clear crater lake, you can't help the feeling that there is something magic about the highlands. Rock faces



and snow fields reflect themselves in the water and with a bit of creativity you see all kinds of phantasy figures. Now you know why the Icelandic culture is so full of fairy tales about elves and gnomes. The crystal clear, ice-cold crater lake and a warm turquoise-colored sulfurous lake next to it, in which you can even swim, seemed like a fairy tale by itself. In fact, it is hard to imagine the kind of forces that actually created the 50 square kilometer caldera. The cataclysm that formed the lake in the Askja caldera in 1875 was so strong that bits of debris landed in Continental Europe.

After eflow met the immense Vatnajökull glacier at its northern end in Kverkfjöll, our next destination took us from the rather scraggy lava desert into a lovely green valley. Thanks to a hot stream of 60 degrees Celsius that runs through the meadows and turns into a waterfall of pleasant 40 degrees Celsius this became one of our favorite spots. The hot nature pool with an ice-cold river next to it for cool-down, was a great place for a dinner with floating pots and dishes and a mudslinging for desert!

## Eflow Survived a 4,000 Kilometer Real-Life Bumping Test

Traveling Iceland and feeling wind, rain, sunshine and the clear fresh air in our faces while riding through the most amazing landscapes was a grand experience. With 4,000 Kilometers covered in Iceland alone in one month, we did actually reach the goal to see most parts of the island. The major challenge was to get ourselves and the logistics organized in a way that we could cover all this distance, get the shots we wanted, and ride the bikes and the propulsion technology to their limits while choosing tracks off the ring road whenever possible.

## Bird watching in Látrabjarg at sunrise

## Midsummer night ride at the glacier lagoon of Jökulsárlón







## Isartjördur in the Westfjords

The eflow bikes performed extremely well on paved roads and smooth gravel roads. The maximum speed of our bikes that conform to the US regulations was 32 km/h – a very pleasant traveling speed. The torque was fully sufficient to climb up steep inclines of 14 to 17 percent even on bumpy surface.

Although the bikes are primarily designed for urban surroundings, they still withstood all the rough rides through the highlands including heavy rain and numerous water crossings. Several times, the hub motor in the rear wheel was completely under water and survived without damage. By production, the motor is protected against splash water. Before riding though deeper waters we applied an extra silicon protection to make it completely waterproof, which obviously worked out fine. On bumpy roads we sometimes missed a rear suspension.

Eflow can be both, a pedelec or a power-on-demand bike. You simply have to switch the modes on the board computer. We love the pedelec mode because it gives you the feeling you are riding at speeds over 30km/h thanks to your own strength. It's great to feel so well trained! For serious cross-country or off-road riding in pedelec mode, when you want to hold on tight to the handlebar, a throttle is not ideal. On this trip, however, we were lucky to have the pow-

er-on-demand function. The reason was an accident with a knee injury after which pedaling was impossible for several days. Riding with power-on-demand worked fine. In direct comparison with the pedelec riders, I could not always keep up at the same speed, especially on long incline rides but the bike did get me anywhere without pedaling and with approx. 60 percent of the range compared to pedelec mode.

Just like with all batteries we noticed a significant loss in battery capacity due to the low temperatures (mostly around 5 degrees Celcius), headwind and mountainous topography compared to riding condition in more or less flat paved roads and temperatures around 20 degrees C. In such conditions, eflow was tested to easily reach 50 km range. To our experience the battery capacity reduces by about 50 percent in surroundings like Iceland.

eflow's battery is especially designed to slide into an extended seat post tube with the connector at the bottom of the slide-in mechanism. The whole electronic setup including battery prototypes actually survived a 4,000 kilometer of real-life bumping test, partly while we were riding the bikes and partly while they were loaded on the truck for some distances. With this experience we could give valuable feedback to the manufacturer for serial production of the batteries.

## What kind of horse are you (Landmannalaugar) ▼



Charging the batteries remained a challenge throughout the whole trip. Due to extremely unstable weather, using solar panels to recharge the batteries was not efficient enough. The car's dynamo machine and an extra buffer battery supplied enough electricity to recharge the other technical devices that were needed most urgently. For charging the bike batteries we mostly relied on electricity outlets at camp sites which were no problem to find as long as we stayed close to the ring road. But in the more remote areas such as the West Fjords and the Highlands, we needed to make sure to have enough energy supply. That's why we carried 12 batteries and chargers. By the way, Iceland's electricity is 100 percent generated from renewable sources, mostly heat from the ground.

Rainy, windy and chilly weather is a challenge for any cyclist, of course. But with the right gear and weather protection it is much less of a problem than one might think at first. We were well equipped with Ortlieb waterproof back packs and cycling bags, bike wear from Triple2 and Giro, and superb rain clothes from 66°North, the Icelandic specialist in outdoor wear.

Like on all our trips before, the electric bikes caught a lot of attention among natives and visitors alike. Cycling in general is getting more and more popular in Iceland. Not only as a fashion or to serve practical needs, but also in the eyes of the government. The local authorities in Reykjavik have recently invested in cycling infrastructure such as cycling lanes. Elec-



tric bikes are still a novelty to most Icelanders. But the ones we have met were very positive and open towards this new way of cycling. The ones who took a test ride, came back with a big smile. We did not expect any different reaction! This is also the experience of the one and only specialized electric bike shop in Reykjavik called Rafhjól, which means electric bike in Icelandic.

## More about Iceland Challenge

Visit us and watch the trailer of our tour film which just had its premiere at the bicycle trade show Eurobike in Friedrichshafen, Germany.

@ Blog: [www.iceland-challenge.com](http://www.iceland-challenge.com)

@ Facebook: <https://www.facebook.com/PedelecAdventures>

@ Twitter: <https://twitter.com/#!/pedelecadv>

## About Pedelec Adventures

The Pedelec Adventures project was founded by Susanne Brusch and Ondra Veltrusky in 2011 and focuses towards developing travel concepts especially designed for electric bikes. The Germany-based team of now four people turns these concepts into reality by riding multi-week excursions to destinations worldwide. These tours serve as product field test as and a way to inspire the electric bike world with exciting reports, presentations, unique photos and films. **MEGA**