tibber

Impact report 2023

Innovating to enable real change

Impact report 2023

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Introduction

Welcome to Tibber's yearly impact report. With this report, we aim to highlight our main focus for the past year, and explore our four biggest movements to make that happen, as well as detail our climate footprint and the social impact of our business.

Real change is possible

The energy market is undergoing radical changes. We are moving away from passive consumption and centralized production; away from the status quo that is fueling the never-ending cycle of cheap and dirty energy, towards a greener, more sustainable energy system. In fact IEA predicts that by 2028, renewable energy sources will account for over 42% of global electricity production. According to the European Union, Europe needs to invest a whopping €584 billion this decade alone to upgrade its power grids and enable the transition to a more sustainable energy system.

At Tibber, we firmly believe that the key to achieving a sustainable and fossil-free energy system is less about production, and more to do with enabling a change in consumer behavior. However, changing habits can be challenging, which is why we rely on technology to get people over the hump.

Through the use of innovative technologies, such as smart charging and virtual power plants, consumers can optimize their energy consumption in ways that benefit both themselves and the entire energy system.

In the future we envision, personal energy independence – with real flexibility for households – is a reality. This is not the "solve all" solution. But it can be part of it. In the short-term, it will ease the strain on the entire grid, which will be crucial to maintain a functioning energy system as we build out the infrastructure for electrification. In the long-term, we see flexibility as an essential part of the energy system of the future. We might as well start now!

Edgeir Aksnes
Daniel Lindén

02

Making our mission a reality

No change comes without its challenges. Going for greener energy means supply might be more volatile, putting more strain on our energy grid. As a result, the price of electricity will go up and down.

Traditionally, discussions about sustainable energy have centered on production and grid development. While these are undoubtedly crucial aspects, we can no longer afford to overlook the pivotal role that consumers play in the equation.

It is time we recognize that consumers are not just passive recipients of energy – they can be active participants who drive meaningful change.

Our mission is less power, more independence. Here are four technologies that we have invested heavily in during the year, to make real change towards completing that mission.

02.1 VPP

One of our biggest focus areas of 2023 was doubling down on building Europe's largest residential Virtual Power Plant, or VPP.

A VPP aggregates residential devices, allowing them to function as one large entity and participate in energy markets to support the power grid, much like a traditional power plant or a large battery.

Jacob Dalton, Head of Trading, Tibber

To further explain this concept, we decided to ask Tibber's Head of Trading, Jacob Dalton, a couple of questions.

Why is Tibber investing in this technology?

— Traditionally, only large energy companies have had access to these energy markets. By enabling households to take part in these markets, we are democratizing the energy transition.

How does this help?

— Large-scale implementation of virtual power plants means we use the grid in a more effective way, reducing the need to expand it and invest in new expensive infrastructure. In addition, it means we make use of the renewable energy we have, by shifting load to when the sun is shining and the wind is blowing, avoiding the need for fossil fuel production like gas power plants. Win-win!

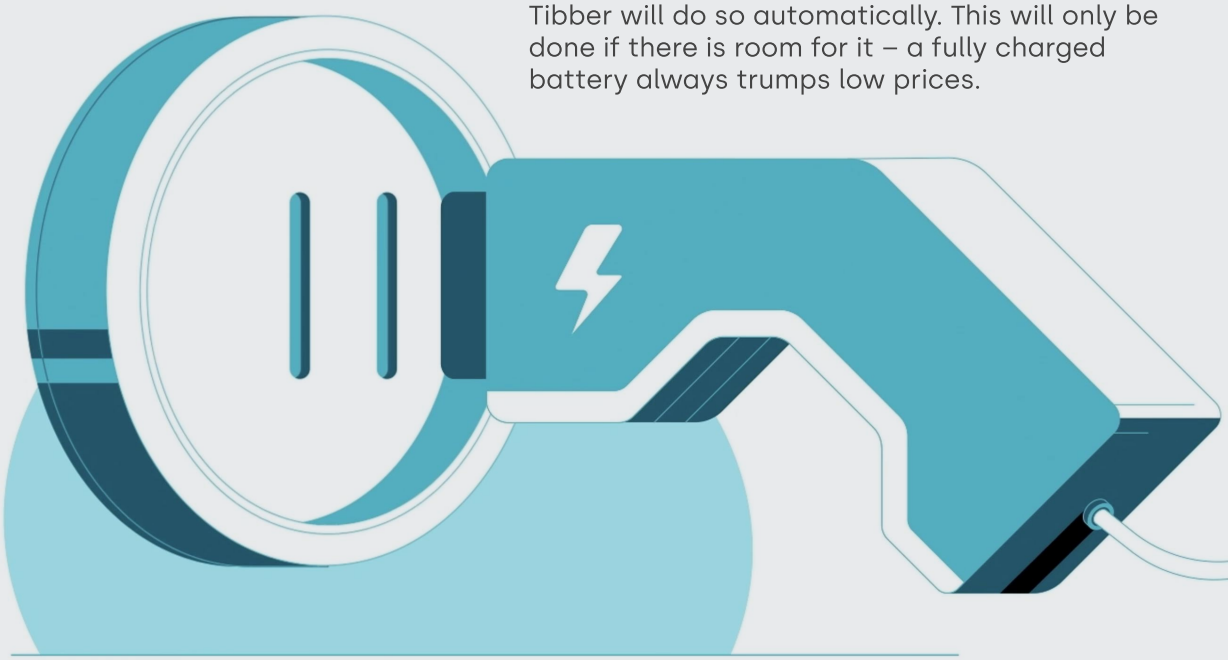
A part of the VPP

Another focus area during 2023 was smart charging.
This technology is a part of the VPP, and we believe it is essential in creating the energy system of the future.

Smart charging allows you to shift your EV charging to the cheapest hours of the day automatically – all you need is an integrated EV and/or charger. This allows the Tibber app to calculate when we need to charge your EV to have it ready for you as cheaply as possible for your next trip. As an extra bonus, you're helping stabilize and ease the strain on the energy grid, by shifting hundreds of megawatts away from peak hours. If more EV owners switched to smart charging, it would be a huge step towards a sustainable energy system.

How it works

We fetch data about your EVs' battery size and status, your next set departure time, charging effect. This data is then used to calculate the time needed to charge your EV and matched against the price of electricity over the next several hours and the time remaining to your next set departure time. If there is room to move all or parts of the charging session to cheaper hours, Tibber will do so automatically. This will only be done if there is room for it – a fully charged battery always trumps low prices.



02.3 Energy storage

2023 was a big year for us, in more ways than one. In June, we launched Homevolt – a consumer battery that is designed to understand your home. A self-sufficient home requires energy storage; with Homevolt it has never been easier to get started.

Homevolt communicates directly with the user, and is fully integrated with the Tibber app. It allows households to lower their energy costs, become more energy independent, and provide flexibility to the entire grid.

The first Homevolt units will be in our customers' homes by June of 2024.

Energy demand is increasing fast.

This makes phasing out fossil fuels and replacing them with renewable energy even more challenging. Better energy efficiency could go a long way, which is why we made this area one of our priorities during 2023.

Electricity consumption in private households makes up 29 percent of electricity use in Europe, according to Enerdata. Helping our customers to reduce their energy consumption, even by a few percent, is a vital step towards a sustainable energy system.

The Tibber app – the center of our ecosystem

We give our customers power over their power. The Tibber app provides our customers real-time visibility into pricing as well as analytics and an overview of the electricity consumption at home that help them to use energy more efficiently.

Features

Overview of electricity consumption, with live data	Electricity spot price curve
Smart charging	Grid rewards
Smart heating	Integration of smart products in the home

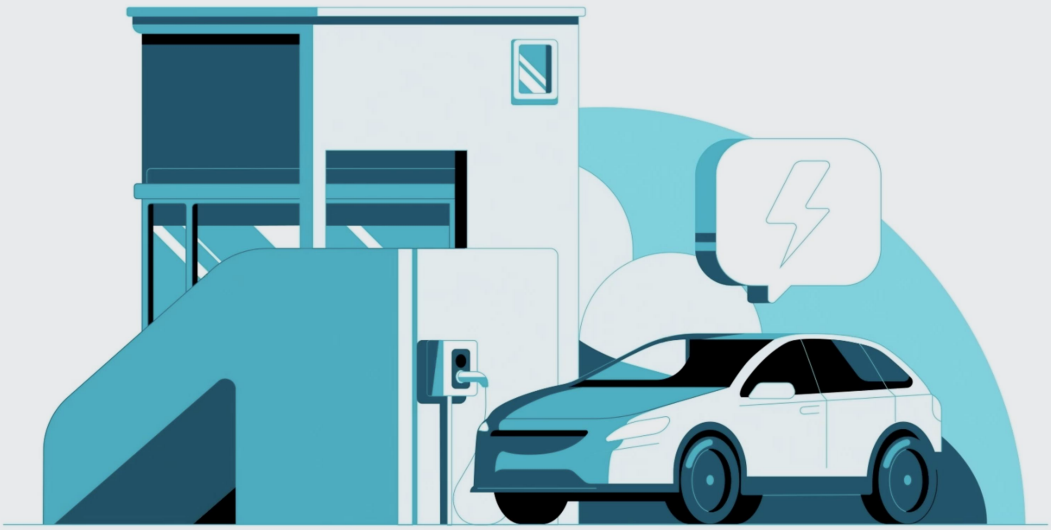
All we do – and you do

The Tibber approach is to help people reduce energy consumption at home, without compromising on comfort. Because the greenest energy is the one you don't use.

Many of our customers already use smart charging. Many also use smart heating, which helps them reduce the indoor temperature during the night, when they are at work, or when they are away on holiday – and then automatically bring the temperature back up right before they start their day or get back home. In addition, 10 percent of our customers were producing energy through solar panels during 2023. Together, they contributed 265 276 MWh to the grid, about the equivalent of the average yearly production from 44 wind turbines.

> **As it turns out, our most active app users are also the biggest energy-savers. We recently surveyed our user-data in Norway and saw that the households who were the most active in the Tibber app had energy usage 8,3 percent lower than others with a house of a similar size.**

That is the equivalent of over 1500 kWh of energy saved per year, or about one month's energy usage for a Norwegian row house. In Sweden, the most active app users came in at a 5,5 percent lower energy usage than others in similar homes, equivalent to over 700 kWh of yearly energy savings.



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Our footprint

Sustainability is at the core of our business model, meaning the most important thing we can do is expand our business to help more and more customers reduce their electricity consumption and provide them with renewable energy.

However, all companies will inevitably have a climate footprint. So too does Tibber. In 2023, our company expanded rapidly, especially in markets where there is a lot of fossil-fuel energy production. As a result, our emissions increased. There's no other way to put it – and there's currently no way around it, as 99 percent of Tibber's emissions are connected to energy production.

We are continuously working to reduce our climate footprint, in several different ways. One is to improve our data quality to better measure and monitor our impact, for example by partnering with Terravera to create a data model to measure the climate effect of moving energy consumption to cheaper hours. Other initiatives are expanding the scope of our carbon accounts to include scope 3 emissions, involving more suppliers along our value chain in the risk assessment, and including our code of conduct in all contracts.

In addition, we also examined the footprint from our day-to-day internal activities. During 2023, we cut down on our business travels, made sure we scheduled as many video meetings as possible and only traveled when absolutely necessary. This change resulted in lower emissions and was received well by the organization, encouraging us to keep it going.

We measure carbon emissions from our operations, and apply the Greenhouse Gas Protocol, GHG. The protocol includes three "scopes":

Scope 1:
Direct emissions from buildings and vehicles we own.

Scope 2:
Indirect emissions from electricity purchased and used by Tibber, mainly in our offices and warehouses.

Scope 3:
Indirect emissions from other activities, including selling electricity to customers and production of our own hardware devices.

We fully measure our emissions across scope 1 and 2, as well as part of scope 3. However, third-party electronics sold in the Tibber Store are not yet included. Tibber's goal is to disclose full scope 3 emissions by 2025.

Total emissions, tCO2e

2022	2023
75 782	165 250

Location-based emissions, tCO2e

2022	2023	
393	556	Production of Tibber Pulse
94	338	Transportation of products
94,2	72	Offices
184	121	Business travels
24,4	161	Servers

Tibber works to only supply electricity from fossil-free sources, including wind and hydro power.

Our main climate action is to empower as many customers as possible to use energy in a smart and sustainable way. However, in the markets where we are able to also include guarantees of origin in our customers' power deals, we are very happy to do so.

Share of renewable energy in each market, how many customers who have guarantees of origins as part of their power deal:

SE

100 %

nuclear, hydro

DE

100 %

wind

GE

100 %

wind

NO

2 %

hydro*

*Due to increased prices of guarantees of origin in Norway, these were removed from the main contract and refitted as a voluntary add-on that customers may choose.

The Pulse power monitor is the only physical line of products that we produce ourselves.

We know that e-waste is a large and global challenge. We also know that Pulse might contribute to that. Therefore, we repair and resell all Pulse devices that are returned to us (except for a very small number that are broken beyond repair). In addition, our Pulse KM model is constructed from recycled polypropylene with plant fibers. This saves up to 80 percent of the CO2 emissions on the plastic during production. These are small steps towards circularity, but we have to start somewhere!

Life cycle assessment (LCA): Evaluating the environmental effects of a product or service, across its entire lifespan, from production to disposal.

Tibber's goal is to do life-cycle assessments of all in-house designed hardware. Currently, we have done so on 3 of our 5 Tibber Pulse models.

Results

Pulse HAN

6,55 **kg**
carbon dioxide equivalents, CO2-eq

Tibber Pulse P1:

5,43 **kg**
CO2-eq

Tibber Pulse IR:

10,03 **kg**
CO2-eq

04

Our people

Just like we enable our customers to be smart and sustainable, we want to create a culture that features those same values. Everyone at Tibber should feel safe, be able to show their true self and come to work with the ambition to have a positive impact on the world.

To ensure that diversity, equity and inclusion are a priority, we apply our core values to everything we do. By setting leadership principles for all our managers, we enable a unified and value-based environment for all our employees.

Tibber values

We act **boldly**

We **glow** together

We **trust**

The process

We employ the four-step method for diversity, equity and inclusion to comply with Activity and obligation reporting, ARP, within all parts of our organization: from gathering background information and performing a risk assessment, to detailing the measures to be taken, establishing a progress plan, and finally, evaluating the results.

In 2023 we took big steps in fostering DEI within our organization:

Successfully implemented our core values and leadership philosophy to keep nurturing a culture of fairness, equality and transparency.

Launched a performance management process, to further strengthen these principles and to encourage and promote an open feedback culture.

Expanded our diverse talent pool through targeted recruiting efforts.

Continued to prioritize work-life balance through our flexible approach.

Gained valuable insights from our comprehensive Employee Survey.

Gender equality

We strive to have equal representation of men and women across our company, all the way to upper management and the boardroom. We have not reached that goal yet, but we are committed to the work required to get there.

All of Tibber

Females	108	Males	178
37,7 %		62,3 %	

Non-managers

Females	88	Males	145
37,7 %		62,3 %	

Board

Females	1	Males	8
11 %		89 %	

Salaries

Group		Non-managers avarage salary in NOK		Ratio female vs. male	
Female	Male	Female	Male	Female	Male
88	145	49 695	58 595	88 %	145 %

Group		Managers avarage salary in NOK		Ratio female vs. male	
Female	Male	Female	Male	Female	Male
20	33	82 488	89 295	92 %	108 %

Gender balance		Temporary employees		Parental leave (avarage number of weeks)		Part-time		Involuntary part-time	
Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
145	224	8	4	10	6	7	7	0	0
Total	369	Total	12			Total	14	Total	0

During 2023, we started our work on responsible supply chains.

Who are Tibber suppliers?

Energy suppliers	**Hardware producers**	**Logistic companies**
Consultants	**Office equipment solutions**	**Travel solution providers**

We work closely with selected suppliers to make sure our efforts are directed to where they are most needed. Our selection criteria are suppliers who are delivering products to Tibber Store and where our yearly spend exceeds 1 million NOK. Over the coming years we will work to include more suppliers.

Risk assesment

In order to conduct a proper risk assessment of our suppliers, we are collaborating with a third party. This assessment includes a survey of questions aligned with the OECD guidelines, covering geographic risk, product risk and industry risk, and tailored to identify the risk of violations of human rights and good working conditions.

Results

Conducted risk assessment of 10 of our largest suppliers of electronics to Tibber Store.	9 suppliers are considered low risk, 1 supplier considered medium risk.	As per 31.12.2023, Tibber has not identified any concrete breaches of human rights in its supply chain.

A separate, full report will be published under "Åpenhetsloven" on tibber.no by June 30th.

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The future

We want to make personal energy independence a reality. We want to enable energy consumers to be active participants in a dynamic marketplace and households to be more resilient – even self-sufficient – while still enjoying all the comforts of modern living. Less power, more independence, that is our mission, and the future we are working towards; a future where energy is clean, abundant, and accessible to all.