

SUSTAINABILITY IN METERING – WE MUST VS. WE WANT

Planet Earth, or, more accurately, humankind is faced with three main issues that are jeopardising our future existence.

Global warming caused by increased production of CO₂, material scarcity driven by decades of linear ‘produce – throw away – produce’ economy, and unethical labour standards, which are far too common in the 21st century and show a clear lack of respect for humanity, future generations and the environment.

Whose responsibility is it?

Ethics should be our number one concern when it comes to safeguarding the future for our children. We have only one planet that supports life and its ecosystem is limited, yet we currently consume 2.5 Earths’ worth of resources. Failing to adapt our consumption is becoming a risk for all of us, manifested through material scarcity. Climate change is exacerbating droughts, floods, hurricanes, and extreme summer temperatures. We are dealing with these issues on a daily basis in 2018 and we will continue to do so in the future.

Our economy is currently in the midst of the fourth industrial revolution, the revolution of knowledge. It is marked by emerging technology breakthroughs in various fields. Metering and the advances in the electronics industry such as digitalisation, IoT and E-mobility are an important part of it. The sheer size and the dynamics of these developments have a big effect on our environment and society.

What does smart metering have to do with that, one might ask? The smart meter’s primary function is to measure energy consumption and optimise meter data management processes. The smart meter enables energy savings and integration of renewable energy resources and is a component on its own. It is a robust smart electronic device that contains up to 250 different materials, including some scarce and conflict materials. If we, as a community, decide and act, the smart meter can become

a sustainable, circular product that can help to build an integral and sustainable solution for the end consumer and the utility. A fair smart meter is also the basis for upholding and following the demands set by the *EU 2030 Agenda for Sustainable Development* to which we are all committed by means of the *Paris Agreement*.

Embedding sustainability into your business

1. Understand

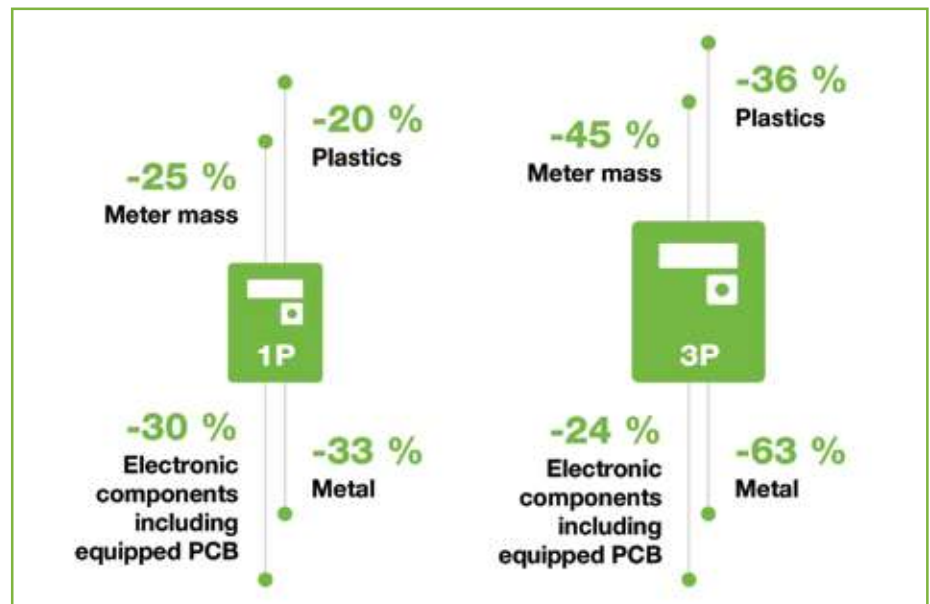
Most of us don’t even realise that many materials are becoming scarce. In 2017, the European Commission added new materials to the list that now contains 27 scarce materials that are of great importance to humanity. Some of these materials are essential for electronics and metering. We must understand the consequences of our needs for “conflict materials”, and the urgent necessity to implement a transparent supply chain. The same goes for unfair labour conditions (global

A company’s future is based on longterm smart decisions

supply chain), rising E-waste and extensive energy consumption. Understanding is the first step towards change.

2. Respect and develop the value

This is the point where decisions have to be made. When you realize what the challenges are, you only have two options: to stay part of the problem or be part of the solution! Sustainability will be a benchmark value of the future. Innovation must be sustainable, and smart metering must be sustainable metering.



Smart meters vs fair meters

3. Spread knowledge

If it all starts with understanding and gaining knowledge, spreading it among employees, partners, customers, suppliers and the industry at large is essential for taking sustainability and circularity to the next level. Communicating, coaching, lecturing, demanding, enforcing, convincing – all with the purpose of creating room for change.

4. Take action

Embedding sustainability and circular economy principles in metering should start at the beginning – the supply chain. A transparent supply chain gives information that enables the integration of the ‘one planet design’ concept and mitigates many risks. Sustainability needs to be embedded at all levels – at the level of components, products and processes.

5. Partner up

With new business models arising, metering is facing a major transformation. Changes will affect us all. Forging partnerships and alliances with customers, partners and other stakeholders provides us with the leverage to change the existing policies and establish new ones.

Why must we?

It has been proven multiple times already that sustainability activities save resources and money and decrease business risk. At the same time, sustainable practices help to establish a competent, modern and proactive business environment. A company’s future is based on long-term smart decisions that do not exploit environmental and human resources.

Why must we act? There are many EU regulations, directives and guidelines that address this issue and the wording is becoming stricter each year. In the last one and a half years, new and stricter regulations have been adopted, including the *Conflict Minerals Regulation*, the *ISO 14001* standard with extended responsibility of supply chains, and more. This proves that all global policies incorporate sustainable development, circular economy and energy efficiency aspects.

Why do we want a fair meter?

All actions taken within the *Fair Meter project*, initiated in 2015, have been aligned and have integrated higher ethical standards, circular economy and sustainability principles. Dutch utilities Alliander and Stedin have played a major role in the project, in particular with regard to co-developing the main goals. These include:

Improved product footprint integrated in the design phase:

- Modular design
- Replacing hazardous chemicals with less dangerous ones

- Design for extended life span: 20 years
- Lower self-consumption of energy
- Fewer conflict materials
- Increased material efficiency

Improved product footprint in the manufacturing phase (including sourcing, packaging, logistics)

- Resource traceability, 85% transparent supply chain
- Higher demands for suppliers concerning environmental and labour standards
- Material and energy efficiency optimisation
- Lean production, continuous improvement over the last three years
- Reduction in CO₂ emissions of 35% or more over the last three years
- Local sourcing of approximately 70% of the product mass (mechanical BoM) – a substantial decrease in CO₂ emissions
- Innovative packaging solution – no use of plastics, 50% less cardboard material, and a potential 25% increase in individual shipment load
- Logistics: using environmentally-friendlier transport options

Improved product footprint in the use phase:

- Increased durability
- Adaptability
- Interoperability
- Upgradeability

- Reversed flows – information/improved relationships with buyers

Improved footprint in the end-of-life phase:

- Easy and faster disassembly
- Recyclability – the meter is fully recyclable
- Reversed flows – recycled materials.

All the above results lead to product decarbonisation and improved company and customer footprints. The Introduction of smart metering/smart grids is one of the vital elements of the EU’s 20-20-20 goals. These ambitious European targets are setting the ground for change – not only for the change in our energy infrastructure but, more importantly, for a change in consumer behaviour. As a society, we will not be able to meet environmental and energy challenges of the 21st century without changing our decision-making processes and adding sustainability figures to other commercial variables.

Businesses of tomorrow acknowledge the environment and society as its stakeholders and are smart, responsible, sustainable and innovative.

Iskraemeco is continuing its efforts and is committed to offering additional advances in 2019. [SEI](#)



Alliander has been integrating sustainability in its core business for many years now and isn’t afraid to co-create with its suppliers on CO₂ and circularity, however complex it is at times. We practise what we preach. It is the only way forward to sustain ourselves, and our planet. The Fair Meter initiative is a beautiful example of a close collaboration; we are eager to transform the Fair Meter principles into a standard for all electronic products.

Dominique Hermans, CSR Advisor – CO₂ and circularity at Alliander



Based on Stedin’s ‘OnePlanet’ sustainability strategy, we are focused on keeping our main impacts – greenhouse gas and particulate matter emissions, use of raw materials and social return – within planetary boundaries. We cannot do this alone; our supply chains constitute a large portion of our impacts. We are very pleased with the ongoing process and the results within the Fair Meter project. We encourage companies within the sector and beyond to initiate similar initiatives and are happy to share lessons learned wherever and whenever needed.

Dirk Bijl de Vroe, sustainability advisor at Stedin

ABOUT ISKRAEMECO

Iskraemeco is a leading smart metering solution providers on a global scale. Since 1945, Iskraemeco employees have been transforming valuable experience, innovation and a sound understanding of our customers’ needs into comprehensive energy management solutions. Iskraemeco has an established network of partners, subsidiaries and production facilities that offer reliable and efficient support services to the entire client base.



Visit Iskraemeco at exhibition booth A.c70 at European Utility Week