



Annual Report **2015**



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## ■ RESET

We stand at a crossroads.

All industries are being affected by the fourth industrial revolution - powered by new computer technology. The energy industry has in addition been affected by a radical restructuring driven by fundamental changes in the market environment.

Compounding, a technological revolution is now underway. For the industry, however, new technological solutions are not only a threat. New solutions are fuelling the restructuring process and making it possible for the players to reposition themselves and in some cases, even reinvent themselves.

The changes are hitting the energy industry hard. It is no coincidence that “disruption” was named the “business word of the year” in Germany in 2015, or that the disruption

theme is setting agendas both nationally and internationally. In my mind we are not just facing an industrial revolution, but just as much a cultural revolution. Rapid innovation in a number of new knowledge areas, decentralised solutions, and more knowledge than capital-driven value creation also require new organisational structures. Value chains are being fragmented and barriers to entry are collapsing. New technology is radically changing the way companies are interacting, both internally and externally. New business models are spurring new ways of planning, decision-making and, consequently, organisational setup.

Energy companies are in a period during which existential choices must be made: Either to surrender or a radically change.





## DRIVERS OF CHANGE

There are several interdependent factors at play beyond the technological revolution itself. Essentially, there are two groups of trends driving today's market changes.

- Technology and new entrants
- Stakeholders: Politicians, regulators and customers

Until now, the energy sector has been a stable industry characterized by long-term horizons and reasonable returns. This was not only due to framework conditions, but also huge barriers to entry related to capital, systems and knowledge. These barriers have now more or less eroded.

Policies and regulations also have tremendous power. Several development trends in technology are fully or partly driven by political decisions and agreements, regulations, as well as by new players and, not at least, customers. These have a major impact on energy prices, system charges and taxes.

There is also an interdependence between these factors. The solar industry is an example of this. Where would the PV-industry be today without the huge German government funded initiatives? There are now 1.5 million solar power installations with a total capacity of 40,000 MW in Germany. PV investment cost has been reduced by 80% since 2006 and PV has reached grid parity in many markets. 10 years ago the incumbents in Europe did not take solar power, wind power and batteries seriously. Many thought solar and wind investors would only factor in sun and wind hours. That proved to be wrong. In 2014, 80% of all new capacity in Europe was renewable and growth globally is accelerating rapidly. Moreover there is a new wave coming. New players from other industries are entering the arena using new technology. Google's product, Nest, is an example.



## WHY DO ORGANISATIONS EXIST?

It may be appropriate to reflect on this question. In 1991, Ronald Coase, won the Nobel Prize in Economic Sciences for his work to answer this. He identified transaction costs as a contributor to the formation of organisations. Put another way: without transaction costs there is no need for organisations, as it would then be cheaper to find the products we need directly in the market without intermediaries. What is new technology doing to transaction costs in the energy industry? They are being dramatically reduced. Traditional structures become too costly and incumbents will have to disrupt their business models and organisations in order to stay competitive. In addition commodity prices are going down, and there is little reason to believe that this cycle is comparable to what we have previously seen. This will not simply

pass on its own given time. A market disruption requires fundamental changes: Surgery, not cosmetics.

Today, there is a completely different dynamic and volatility in the market. It is challenging, but it is also opening up new business opportunities. It is going to be a tough race for the entire industry. There is no doubt that changes are coming. The question is when it will affect you and your organisation with full force. Personally, I do not think it will take long.

*That is why the energy industry needs a "Reset" now.*

**Jørgen Kildahl,  
Board Member,  
eSmart Systems.**

## ■ CEO COMMENTS

### A FANTASTIC YEAR FOR ESMART

Before eSmart Systems' founding, we envisioned a revolution in the energy industry. A revolution triggered by the rapid and simultaneous introduction of numerous disruptive IT innovations - innovations that include mobile and cloud technologies, Big Data, predictive analytics, EVs and others. We went all in and bet big when we established eSmart in 2012. We bet that these innovations would disrupt century-old business models, overwhelm decades-old IT systems with a deluge of data requiring completely new solutions, and open new doors to everything from energy and investment savings, to new customer relationships and completely new revenue streams.

In 2015, the energy industry experienced a dramatic acceleration in disruptive momentum as companies suffered the challenges and recognised the opportunities these new technologies are unleashing. In 2015, energy companies endured higher pricing pressures, expanded their search for new products and demanded more flexible systems capable of analysing, estimating and validating large data volumes in real time. In 2015, eSmart saw its early bets pay off big.

### PROFITABLE, MASSIVE GROWTH

We launched the year with ambitious targets and during the year we surpassed them all. eSmart tripled both its sales and its results as we simultaneously developed products, partnerships and our talented team of people. In doing so, we demonstrated our ability to deliver value-creating solutions to our customers and our ability to achieve profitable growth at the same time. Looking back on a year like this, we should be proud.

### GIANT LEAPS IN PRODUCT, PARTNERSHIPS AND PEOPLE

In 2015, we made giant leaps on all fronts but especially product delivery, demonstrating our well-tuned ability to scale, to efficiently and rapidly develop new functionality, to follow-up existing customers and to deliver new functionality based on weekly market changes.

eSmart strengthened and dramatically developed its cooperation with Microsoft in 2015. We began working closely with Microsoft's key IT resources and development teams including their machine learning group in Boston, Microsoft's IoT team in London and their Azure team in Redmond, Washington.



We also became a Microsoft Gold Certified Partner. In 2015, we proudly welcomed two of the world's most prominent IT and energy sector names to our board: Microsoft's CVP of the Data Group, Joseph Sirosh, and Jørgen Kildahl, former Member of Board Management E.ON SE. Their addition to our Board, our partnership with Microsoft and the establishment of new offices were all significant steps towards eSmart becoming an international player.

We were nominated for and won numerous prestigious awards both domestically and internationally last year. All of which earned eSmart a lot of media attention in 2015. We successfully doubled our team of world-leading developers, analysts and data scientists. Most importantly, our talented team delivered unique product development at the same time as they produced fantastic sales growth equally matched by profit improvement.

As we now look forward to a new and no less ambitious year, we know that great success often has small beginnings. Take electric vehicles, for example. The tripling of near zero sales is still a small number but if that tripling trend continues, it quickly translates into explosive growth.

As the energy industry continues its scheduled technology rollout and as energy industry players continue to awaken to their imminent disruptive realities, eSmart is already rigged to respond and perfectly positioned to capture the pending exponential growth.

*Halden, March 2016*  
*Knut Johansen, CEO*

A handwritten signature in black ink, reading "Knut M.H. Johansen".

## ■ 2015 IN REVIEW

eSmart Systems finished the year well ahead of our business plan and budget. We succeeded at establishing a versatile, full-functionality, big data analytics platform ready to handle rapid market changes and fully prepared to exploit future market expansion. 2015 was a year of furious activity for eSmart with a long list of exciting and strategic advances.

### GIANT LEAPS IN PRODUCT, PARTNERSHIPS AND PEOPLE

eSmart Systems became the world's first to deploy Microsoft Azure in the power and utilities markets. At the start of 2015, eSmart had but a single product in the market: meter management, as part of our Connected Grid solution. During 2015 we dramatically strengthened Connected Grid by developing new grid operation and optimization modules. We also added Connected Home and Connected Trading to our list of products ready to market with short implementation times. Connected Building and Vehicle were still under development at year's end but with significant progress made on these during the year.

In 2015, we successfully deployed the world's first operations centre based on Azure Big Data and analytics technologies for Fredrikstad Energi. This operational centre, which went live in September, can now handle huge data inflows from all sources including smart meters and sensors, home gateways, EV chargers, social media data etc.

Although not even on our development schedule for 2015, during the year we also developed and launched an App-based customer analytics solution called SMARTliv for Ringeriks-Kraft. SMARTliv represents a complete and competitive service toolkit which will revolutionize the business for energy retailers – something only made possible by the technological revolution of the industry. It creates the market's first true ESCO, capable of securing a greater share of the value chain. With this launch, it's now possible for eSmart to continue strengthening our retail offering.

SMARTliv is a large four-year deal in which Ringeriks-Kraft has invested 5 MNOK. Just three months after SMARTliv went live in May, approximately 3000 customers had downloaded the app. With its launch, Ringeriks-Kraft successfully reversed customer churn resulting in a significant net win of customers. Each new customer represents 1 500 NOK in turnover. SMARTliv shows not only that eSmart helps customers save money but earn new money. Moreover, SMARTliv has unique international potential well beyond the utility space and will open much larger economies of scale for eSmart.







## AWARDS, NOMINATIONS AND MEDIA ATTENTION

In 2015, we were chosen to participate and share centre stage with Microsoft at their prestigious annual Build Developer Conference. The Conference hosted more than 6000 attendees and 1 million viewers via online streaming. We also outcompeted 700 nominees to win Microsoft's annual Independent Software Vendor of the Year award. eSmart was also the only Norwegian company to be named among the 100 most promising Microsoft solution providers by CIO Review in 2015. In addition, eSmart was one of six companies nominated for the Norwegian Technology Award.

We were proud to be profiled at The Confederation of Norwegian Enterprise's annual Conference as a driver of Norway's economic restructuring. We were further honored to be chosen by our Prime Minister, Erna Solberg, as an example of Norway's ability to globalize new technology. The many awards and nominations combined with customer trust and market recognition as a thought leader in Big Data and analytics earned eSmart tremendous media coverage in 2015. We are now attracting attention and talent from the US to Singapore.

## INTERNAL GROWTH AND INTERNATIONAL EXPANSION

eSmart Systems established its first international offices in 2015 as we geared up for international sales in 2016. We opened offices in Singapore to target the Asian market and Palo Alto, the heart of Silicon Valley, from which to expand in the US.

Our prior experience at establishing and growing international IT businesses, however, has taught us a lot. It's taught us that competence is king. Finding, attracting and retaining the right people are critical success factors and value drivers for further profitable growth. Our ambitions, our market position, our good working environment, working with cutting edge technology, pioneering future solutions and growing market recognition all enabled us to attract the market's best developers, analysts and data scientists in 2015.

Early in 2015 we recruited a sales director who quickly helped us identify which markets are opening and closing, which is enabling eSmart to enter new markets ahead of our business plan. We hired a project and operational controller to strengthen administration and financial functions. We experienced that optimising the distribution side of the system in real time to cut load peaks was more complex and required more resources than we anticipated so we added more skilled resources. We also dramatically strengthened our big data, analysis and machine learning teams.

eSmart expanded its Board of Directors during the year with the addition of heavyweights Joseph Sirosh, CVP of the Data Group at Microsoft and Jørgen Kildahl, former Member of Board Management E.ON SE. Sirosh and Kildahl helped us refine our identity and begin penetration of the retail and smart city spaces.

We created a new operational structure in 2015 with three distinct business areas: Utility, Retail and Cities. Each encompasses an offering, business development, sales, product development and delivery making eSmart's portfolio value much more visible to our customers.

By the end of 2015, eSmart successfully doubled the organization. As we did this, our focus was on achieving an optimal mix of experienced and developing talent, which paid off tremendously.

We demonstrated our ability to develop products with market-leading rapidity and fully transition from a technology development to a sales driven organization. As our talented team delivered exceptional product development during the year, it simultaneously tripled sales growth and profit performance. eSmart is well tuned to further attract and retain the right mix of talent and can now scale its system for further growth.





## 2015 LEARNINGS

Despite outperforming our own ambitions for 2015, 2015 was a year of learning for us at eSmart. Of the 2.8 million utility meters awarded in the Norwegian market, eSmart won less than 400 000. The Norwegian market is very risk averse and looking back we recognize we should have been bolder in our strategic thinking and our alliances to better position ourselves as “safe”.

The establishment of three business areas is result of three years of research and development. We expected more difficulty hitting the market in 2015 given a traditionally slow uptake process in Norway. We now see clearly and understand the market’s willingness to pay, which gives us a great foundation for international expansion and success. We are constantly winning more traction and trust with each successful delivery demonstrating clear performance and concrete savings. eSmart has a strong value proposition.

## SUMMARY

2015 proved that we envisioned the energy future correctly. It proved that the market is opening and that it is willing pay for the new solutions it must have. 2015 gave us enough proofs of concept to demonstrate that eSmart’s solutions have the real-time analytic capability to turn data into actionable insights with monetizable value. Our master plan until now has been to lay a foundation for massive growth – a foundation we finalized in 2015.



# MARKET OUTLOOK AND STRATEGY

eSmart's outlook is as fantastic as 2015 proved to be. A new energy step-change is happening again. The market is opening as it transforms from a consumer to a prosumer market in which big value will stem not from production but from the consumerization of the market. Consumerization requires totally new systems and solutions for which Norway has been a great market to build and test for global application. In addition, distributed energy resources need to be optimized. The sharing economy is infiltrating the energy industry as consumption and production can now be tracked in real time making it vitally possible to avoid massive capital expenditures. There are three factors that need to be better balanced and controlled: load, storage and production. Without these, a future sustainable energy system will never be realized. Increasingly, energy and utility companies recognize that they need big data and analytics solutions, opening more of the market and creating more opportunities.

Our strategic road ahead has three essential routes. First, although we closed 2015 well ahead of our own ambitions, order intake at the start 2016 was already very good and we have an excellent starting point for future growth, we recognize the need for even greater international market activity. As a result, we will accelerate our pace and plan for market

development in 2016. An important goal for next year will be to secure a few major, international step-change utilities with multi-million metering clients. We will naturally branch out to Sweden and Denmark first followed by Spain, Poland and the UK due to EDF. eSmart will also target four strategic markets in the US: New York, California, Texas, and the Pacific North West with both Microsoft and Innovation Norway helping to open new doors. In Asia we will service the market from our newly opened office in Singapore.

Second, developing channel partners who can act as software and license resellers to service larger clients, which require bigger integration, local presence, hardware and infrastructure will be a critical activity in 2016 as well. We also see huge potential in commercial and industrial building energy management, an area we haven't yet tapped. eSmart has already partnered with Schneider Electric to help move us into this space in 2016.

In addition, continuing to recruit the right people with the right competence and the right values to strengthen our machine learning and analysis groups, and our ability to serve international markets will be key to ensuring our ability to develop and deliver on an international scale.



Oslo

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## RESEARCH & DEVELOPMENT

During 2015, eSmart Systems further strengthened its R&D activities. Execution of projects continued, new project proposals won funding, and our staff was strengthened with another dedicated research scientist.

### CHARGEFLEX

The aim of ChargeFlex is to develop methods that increase network capacity for electric vehicle charging through the smart management of flexibility. The project, which started in 2015, will run for three years. During the first year we collected meter data from a new charging site "Ladetorget" in Moss. The data will be used for the visualization and prediction of charging demand. Methods for scheduling charging at capacity-limited charging sites have been developed and the results have been presented at two international conferences. Knut Gustavsen and Tina Skagen participated in the program "Innovation Management in a Global Business Perspective", organized by the Research Council of Norway (RCN) and the Norwegian Business School (BI). Their aim is to develop the business case for Connected Vehicle.

### EMPOWER

The EMPOWER-project, funded through Horizon 2020, has the following target: "Develop and verify a local marketplace and innovative business and operational methods to encourage micro-generation and the active participation of prosumers to exploit the flexibility created to the benefit of everyone connected to a local grid". The project commenced at the beginning of 2015 with eSmart Systems as the work package leader for Local Smart Grids Control Cloud, as well as being involved in several other work packages. The first version of the Cloud based control system for SESP (Smart Energy Service Provider) was delivered at the end of 2015, including Platform and Metering Cloud Integration. The project is receiving much attention and has been presented at several conferences.



## IoTSec

The IoTSec - Security in IoT for Smart Grids initiative was established in 2015 to promote the development of a safe and secure Internet-of-Things (IoT) enabled smart power grid infrastructure. The research project received funding from RCN to contribute to a safe information society. eSmart will, for example, participate in the work package Operational security for IoT-based critical infrastructure. A new project-related industrial PhD-candidate is also planned for eSmart.

## NEW ESMART RESEARCH SCIENTIST

To further strengthen eSmart Systems' competence and activities in the field of Big Data Analytics and Machine Learning, Davide Roverso joined eSmart as Chief Analytics Officer in 2015. Davide comes from the Institute for Energy Technology (IFE) and has a PhD in machine learning from the University of Aberdeen. He has an impressive 25 years' experience in artificial intelligence and machine learning.

## NEW INITIATIVES

During 2015, eSmart Systems has been involved in new initiatives for project proposals. The most mentionable is the Centre for Energy Informatics application which was sent to the Centre for Environment-friendly Energy Research (FME) call. The application is an initiative of NCE Smart Energy Markets in Halden and the University of Stavanger, and involves a long list of academic and industrial partners.

# BIG DATA ANALYTICS IN OPERATION

Big data analytics based on advanced machine learning models sits at the core of eSmart Systems offerings.

Machine learning allows us to generate innovative business value for our customers from their underlying data assets. We combine state-of-the-art functionality available in Microsoft's Azure ML with the results of our own R&D to deliver sophisticated end-to-end solutions supporting novel business opportunities.

## SHORT TERM LOAD FORECASTING

Models for short term load forecasting for transformer sub-stations are automatically generated daily by our system. They are generated based on quality controlled historic data and a set of weather forecast scenarios. The models provide hourly load predictions for the next day, which are used to detect potential distribution bottlenecks and trigger the automatic generation of alternative demand response plans. The aim of these plans is the scheduling of controllable end-user loads capable of shaving predicted load peaks and ensuring stable power distribution.

This solution was originally developed in close cooperation with Microsoft's own machine learning and data analytics team in Cambridge, MA. The short-term load forecasting solution has now been extended and generalized to cover any "asset" in our system, from individual households to commercial, public, or industrial buildings and installations, and at any specified aggregation level (i.e. not limited to transformer sub-stations).

## CUSTOMER SEGMENTATION

Large numbers of end users are profiled automatically by our system and grouped into segments that share similar power consumption patterns. This provides our customers with a basis for designing pricing schemes, for marketing demand response and energy efficiency solutions, and for otherwise more closely engaging their customers.

## POWER DISAGGREGATION

Commercial buildings consume more than 40% of the world's electricity. Controlling this load is crucial for any aggregator or utility planning to have effective demand side management programs. It's also vital for enterprises looking to have control over energy usage. Together with Microsoft's machine learning and data analytics team in Cambridge, MA, we are developing power disaggregation solutions that allow commercial building energy managers to better understand the power used by each major consumer in a building by disaggregating whole-building power usage into their component device signals.



## FORECASTING LOAD AFTER OUTAGE

Restoring power after a wide-area outage can be difficult. Load surges are especially likely after prolonged outages in cold climate conditions. Predicting load after outage is critical to planning effective power restoration. eSmart is developing models to support this functionality.

## FORECASTING EV CHARGING

It is well documented that the large scale integration of electrical vehicles (EV) in the power grid may lead to challenges at different levels of the power system. The ability to predict future loads from EV charging and predict future levels of available flexibility are central to optimizing available local grid capacity utilization and reducing infrastructure investments. We have developed peak load prediction models that are now being extended to cover various forecasting horizons.

## FORECASTING PV PRODUCTION

Similar to EV charging, the increasing penetration of solar PV production can have significant effects on grid power flow. Long-term forecasting of PV production is relatively easy to achieve given established irradiation models. Short-term forecasting is a much bigger challenge due to local cloud cover variability. Big Data analytics, however, is allowing us to develop solutions that will support grid operators and meet the future challenges that widespread PV generation will cause.



## DATA-DRIVEN INTELLIGENCE WILL REVOLUTIONIZE **EVERY INDUSTRY**

Data is now the key strategic business asset. Every device, every customer, every activity — everything that's happening in the world around us — is producing incredibly rich data that can help us create new experiences, new efficiencies, new business models and even new inventions. Leveraging this data can be the differentiator for a business. For example, IDC estimates that companies that lead in using data assets to their advantage will capture \$1.6 trillion more in business value than those that lag behind.

## MACHINE LEARNING MEETS CLOUD COMPUTING

Maybe you haven't noticed, but machine learning — a way of using historical data, combined with a mathematical model, to successfully predict future behavior or trends — is touching your life every day. Search engines, online product recommendations, credit card fraud prevention systems, GPS traffic directions, and personal assistants like Cortana, Apple's Siri and Amazon's Echo all use machine learning to improve your experience with technology. But we've barely scratched the surface of its potential to change the world, to drastically reduce wait times in emergency rooms, predict disease outbreaks, and even optimize operations in manufacturing and energy. To realize that future, we need to make machine learning more accessible — to every enterprise, every student, every developer, and, over time, everyone.

And the time to start is now. The Internet of Things is generating more data than ever before, and big data advancements allow us to process, store, connect and analyze all of this data economically in ways that were previously not possible. Machine learning allows us to reason over this data and make predictions about the future, and although machine learning was previously restricted to people with deep skills and deep pockets, cloud computing changes that dynamic completely. Now the immense scale, processing power, and deep scientific knowledge required for machine learning are available to anyone with

a browser through Microsoft Azure Machine Learning, our fully managed cloud service for building predictive analytics solutions. Azure Machine Learning is a part of the Cortana Analytics Suite that brings together everything a business, a startup or a developer needs to build big data and intelligent applications, and do so without datacenters, infrastructure, and capital or resource costs, as well as all the best practices and learnings to get your intelligent application deployed rapidly.

## ESMART — BUILDING THE BRAINS OF THE MODERN SMART GRID

eSmart's vision is to "build the brains of the modern smart grid," and Azure Machine Learning and Cortana Analytics are helping realize that vision. Today, energy industry companies face many complex challenges, including balancing supply and demand as well as integrating new energy sources and technologies. Soon customers will be able to meet these challenges, and use them as opportunities to innovate, by creating entirely new solutions that unite big data insights, the Internet of Things and predictive analytics. Powered by Cortana Analytics, Microsoft Azure and Microsoft's data platform, eSmart is building the brains of the next generation of smart grid systems.

*Joseph Sirosh, Board Member, eSmart Systems*





## CUSTOMERS AND PARTNERS

A rapidly expanding company needs forward-looking partners and customers who value innovation. In 2015, we further developed our relationship with existing partners in addition to establishing partnerships with numerous reputable, industry-leading companies.

Through an industrial and development contract with Innovation Norway, eSmart Systems is developing next generation intelligent Energy Management Systems for forward-thinking companies to operate on Smart Grids. These companies include Fredrikstad Energi, Sogn og Fjordane Energi, EB and Ringeriks-Kraft. Our customers have great ambitions and aim to play a key role in the future energy industry. Another important eSmart customer is EDF Trading, one of the

leading players in the wholesale energy market with around 950 employees and offices in the UK, Asia, Europe, USA, and Canada. EDF has been an eSmart customer since 2014.

eSmart Systems recognizes that becoming and maintaining the position of industry leader means partnering with the best. Among our key partners is the business cluster the Norwegian Centre of Expertise Smart Energy Markets. As a member of the cluster eSmart cooperate and participate in numerous R&D projects such as EMPOWER and IoTSec.

Schneider, Hafslund, Innovation Norway, GeoData, and Esri are other significant eSmart partners.



## MICROSOFT

Microsoft has been an important partner for eSmart Systems from day one. eSmart employees have been developing software using Microsoft tools for more than 15 years. Our experience and Microsoft's commitment to cloud computing combined with their Azure platform, makes this partnership a perfect match. In 2015, we further developed our partnership in many areas including participation in the design of the Azure platform through direct engagement with the Microsoft product team in Redmond.

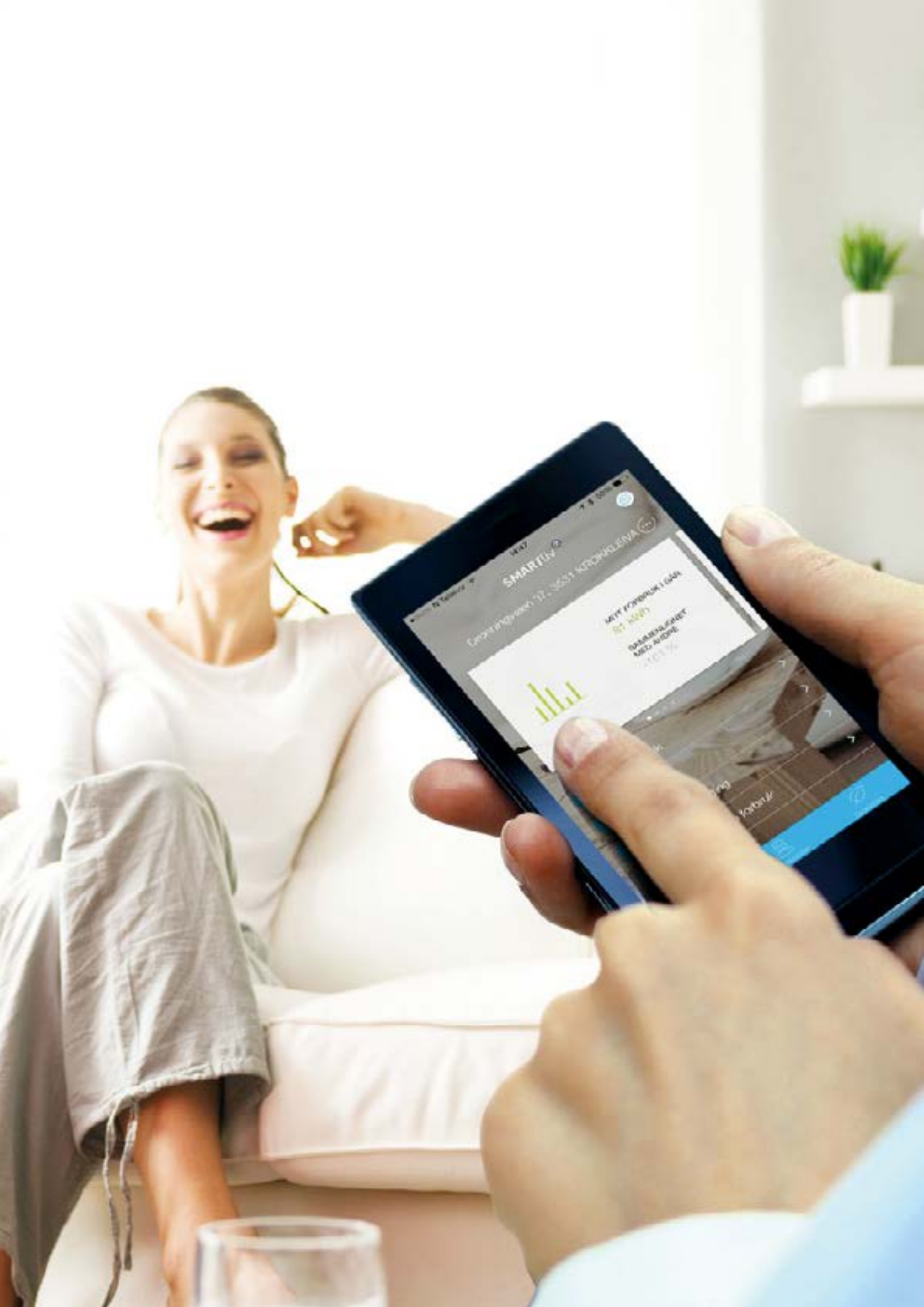
In April, eSmart Systems was showcased as an important customer story at the annual Microsoft Build Developer Conference in San Francisco. Head of Development and Product Architect in eSmart, Erik Åsberg, was a part of Joseph Sirosh' keynote speech at the conference. A great distinction for our predictive and machine learning work.

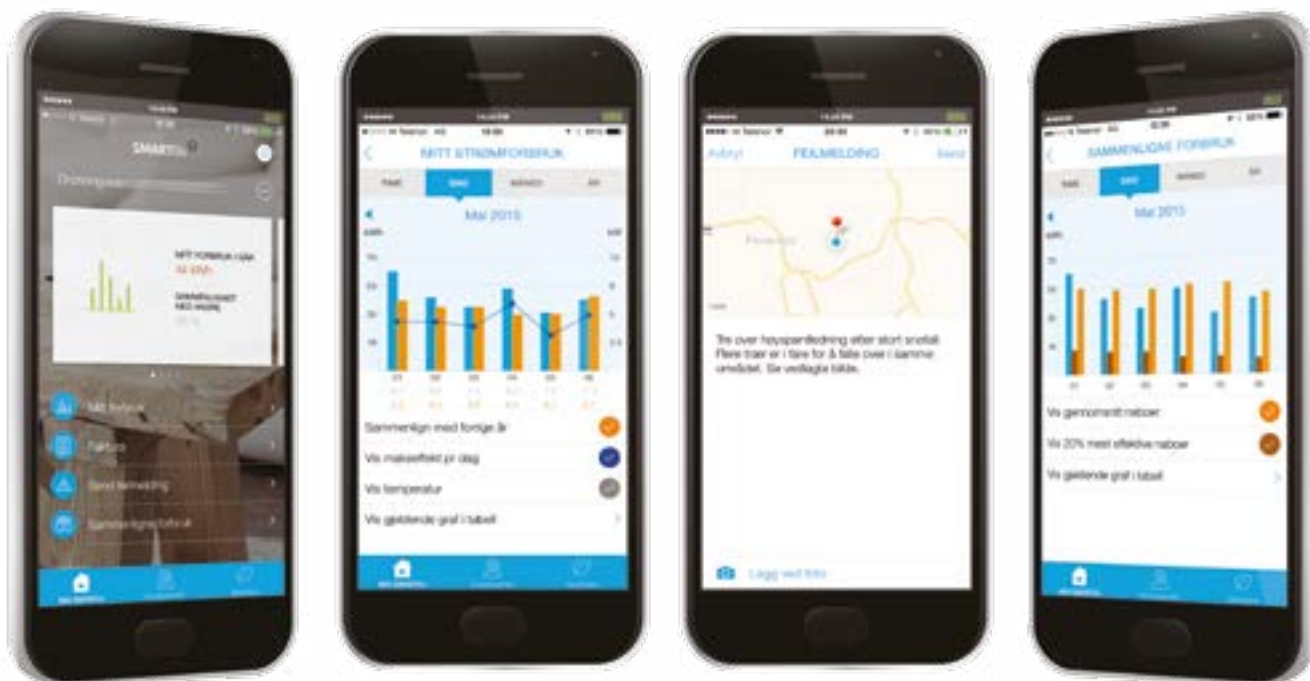
In July, Microsoft's Worldwide Partner Conference took place in the US. In competition with 700 Norwegian vendors, eSmart Systems won "Norwegian Software Vendor of the Year". The jury proclaimed eSmart Systems as a pioneer in the power and energy industry, and a distinguished early adopter of Microsoft Azure.

*«eSmart Systems was "born in the cloud" and is highly innovative, both commercially and technologically. Technologically, they have been very skilled at interpreting and predicting energy industry trends and recognized to need to opt for future-oriented solutions. On the business side, they realized that being forward-looking will help them in many ways. I think that this is just the beginning of our cooperation, and I expect Microsoft to share more stage time with eSmart Systems in the future».*

*Arif Shafique,  
Business developer, Microsoft*







## SMARTliv AS

In cooperation with Ringeriks-Kraft, eSmart Systems introduced the mobile app SMARTliv in the Spring of 2015. The app provides customers with a complete overview of their energy consumption and the ability to gain greater awareness of their consumption.

SMARTliv has been a great success for Ringeriks-Kraft. With the app, customers have shown that they are interested in taking control of their consumption, which has led to the demand for more of this type of smart technology. The app is the first of its kind and sets a new standard for customer relationship management in the energy industry. Good cooperation and high ambitions on the part of both parties has led to Ringeriks-Kraft and eSmart Systems uniting in the company SMARTliv AS to develop and deliver future energy products to end customers.

*«eSmart Systems is a forward-thinking player with long experience in the energy field. They are the best in the country when it comes to big data and real time analysis in this industry. Ringeriks-Kraft and eSmart Systems have a common conviction that end customers must and will play an increasingly significant role in the changing energy industry. Smart customers and houses are an important part of the smart grid future. The aim is for Ringeriks-Kraft, with its end customers and electricity supply experience and expertise, and eSmart Systems with their technology expertise, to take smart technology to a whole new level».*

*Ole Sunnset,  
CEO, Ringeriks-Kraft*

A low-angle, black and white photograph of several tall skyscrapers reaching towards a bright, hazy sky. The perspective makes the buildings appear to converge towards the top of the frame. The buildings have various architectural styles, with some featuring grid-like window patterns and others having more solid, textured facades. The lighting is dramatic, with strong highlights and deep shadows.

# FINANCIAL STATEMENT 2015

## INCOME STATEMENT

	Note	2015	2014
<b>OPERATING REVENUE</b>			
Sales	6,24	32 625 350	10 036 075
Other operating income	7	7 477 000	3 360 000
<b>TOTAL OPERATING REVENUE</b>		<b>40 102 350</b>	<b>13 396 075</b>
<b>OPERATING EXPENSES</b>			
Cost of sales		5 209 262	2 007 861
Personnel expenses	18,19,22	14 811 896	3 155 454
Other operating expenses	20,21,22,24	10 282 332	4 751 894
<b>TOTAL OPERATING EXPENSES</b>		<b>30 303 490</b>	<b>9 915 209</b>
<b>EBITDA</b>		<b>9 798 860</b>	<b>3 480 866</b>
Depreciation	8,9,10	680 834	438 604
<b>EBIT</b>		<b>9 118 026</b>	<b>3 042 262</b>
<b>FINANCIAL INCOME AND COST</b>			
Interest income		17 139	40 160
Other financial income		104 148	6 709
Interest expenses		49 344	27 667
Other financial expenses		73 993	21 398
<b>NET FINANCIAL PROFIT</b>		<b>-2 050</b>	<b>-2 196</b>
<b>PROFIT BEFORE TAXES</b>		<b>9 115 976</b>	<b>3 040 066</b>
Income tax expense	17	1 790 780	277 382
<b>NET PROFIT</b>		<b>7 325 196</b>	<b>2 762 684</b>
<b>OTHER COMPREHENSIVE INCOME</b>			
Other comprehensive income		0	0
<b>NET OTHER COMPREHENSIVE INCOME</b>		<b>0</b>	<b>0</b>
<b>TOTAL COMPREHENSIVE INCOME FOR THE YEAR</b>		<b>7 325 196</b>	<b>2 762 684</b>
<b>TRANSFERS</b>			
Allocated to retained earnings		7 325 196	2 762 684
<b>TOTAL TRANSFERS</b>		<b>7 325 196</b>	<b>2 762 684</b>



## BALANCE SHEET

ASSETS	Note	2015	2014
<b>FIXED ASSETS</b>			
Capitalized development cost	9,12	23 804 707	13 505 025
Licences	8	56 200	82 000
Operating equipment	8,25	2 612 601	1 785 690
Investments in asociated companies	4	75 000	60 000
<b>TOTAL FIXED ASSETS</b>		<b>26 548 508</b>	<b>15 432 715</b>
<b>CURRENT ASSETS</b>			
Trade receivables	13,24,25,27	31 849 910	2 791 765
Other short term receivables	13	1 957 778	4 336 716
Cash and cash equivalents	14	5 571 720	8 489 515
<b>TOTAL CURRENT ASSETS</b>		<b>39 379 408</b>	<b>15 617 996</b>
<b>TOTAL ASSETS</b>		<b>65 927 916</b>	<b>31 050 711</b>
<b>EQUITY</b>			
Subscribed equity			
Share capital	15,23	550 135	510 135
Share premium fund	15	22 849 944	19 489 944
<b>Total subscribed equity</b>		<b>23 400 079</b>	<b>20 000 079</b>
Retained equity			
Retained earnings		10 834 703	3 509 506
Total retained equity		10 834 703	3 509 506
<b>TOTAL EQUITY</b>		<b>34 234 782</b>	<b>23 509 585</b>



**NON CURRENT LIABILITIES**

Deferred income tax liability	17	70 557	317 113
Borrowings	25	3 467 542	485 511
<b>TOTAL NON CURRENT LIABILITIES</b>		<b>3 538 099</b>	<b>802 624</b>

**CURRENT LIABILITIES**

Trade payables		1 724 129	2 918 606
Payable tax	17	0	0
Public duties payable	14	8 042 028	907 078
Other current liabilities	16,24	18 388 878	2 912 818
<b>TOTAL CURRENT LIABILITIES</b>		<b>28 155 035</b>	<b>6 738 502</b>

<b>TOTAL EQUITY AND LIABILITIES</b>		<b>65 927 916</b>	<b>31 050 711</b>
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Halden, March 3rd 2016



Bjarne Haugen  
Chairman of the Board



Erling Sande  
Member of the Board



Bjørn Svendsen  
Member of the Board



Jørgen Kildahl  
Member of the Board



Erik Åsberg  
Member of the Board



Joseph Sirosch  
Member of the Board



Knut Johansen  
Member of the Board / CEO

## STATEMENT OF CASH FLOW

The statement of cash flow is a systematic overview that shows how the company has received and used cash and cash equivalents during the year. The statement of cash flow is supposed to present the development of operation, investment and financing during the periods.

	2015	2014
<b>Cash flow from operational activities</b>		
Operating result before tax	9 115 976	3 040 066
Paid taxes	0	0
Depreciation and write off	680 834	438 604
Changes in receivables	-29 058 145	-2 173 584
Changes in trade payables	-1 194 477	2 382 921
Changes in other current assets/debt items	22 952 613	-520 752
<b>Net cash flow from operational activities</b>	<b>2 496 801</b>	<b>3 167 255</b>
<b>Cash flow from investment activities</b>		
Purchase of shares	-15 000	-60 000
Purchase of operating equipment	-1 481 945	-591 793
Purchase of intangible assets	-10 299 682	-8 267 870
<b>Net cash flow from investment activities</b>	<b>-11 796 627</b>	<b>-8 919 663</b>
<b>Cash flow from financial activities</b>		
Proceeds from other borrowings	3 047 295	0
Payment of long term debt	-65 264	-52 728
Issue of shares	3 400 000	10 000 080
<b>Net cash flow from financial activities</b>	<b>6 382 031</b>	<b>9 947 352</b>
Net changes in cash and cash equivalents	-2 917 795	4 194 944
Cash and cash equivalents 01.01	8 489 515	4 294 571
<b>Cash and cash equivalents 31.12</b>	<b>5 571 720</b>	<b>8 489 515</b>

## STATEMENT OF CHANGES IN EQUITY

	Share Capital	Non registered capital	Share premium fund	Other Equity	Total Equity
<b>Equity 01.01.2014</b>	<b>333 333</b>	<b>1 999 999</b>	<b>7 666 667</b>	<b>746 822</b>	<b>10 746 821</b>
Registration of capital	59 154	-1 999 999	1 940 845	0	0
Rise of capital	117 648	0	9 882 432	0	10 000 080
Total comprehensive income	0	0	0	2 762 684	2 762 684
<b>Equity 31.12.2014</b>	<b>510 135</b>	<b>0</b>	<b>19 489 944</b>	<b>3 509 506</b>	<b>23 509 585</b>
<b>Equity 01.01.2015</b>	<b>510 135</b>	<b>0</b>	<b>19 489 944</b>	<b>3 509 506</b>	<b>23 509 585</b>
Rise of capital	40 000	0	3 360 000	0	3 400 000
Total comprehensive income	0	0	0	7 325 197	7 325 197
<b>Equity 31.12.2015</b>	<b>550 135</b>	<b>0</b>	<b>22 849 944</b>	<b>10 834 703</b>	<b>34 234 782</b>



## NOTES TO THE FINANCIAL STATEMENTS

### NOTE 1 - GENERAL INFORMATION

eSmart Systems AS develop, sells and deliver software products and services for the energy markets where user flexibility and efficient utilization for energy markets is central. In addition the company delivers consultancy services within the same markets. The company's products and services are based on active use of Advanced Metering Infrastructure (AMI) through integrated IT solutions, where among other available options for user flexibility automatically is analysed and optimised towards the energy markets.

The main deliveries is done in Norway, the Nordic Countries and England.

eSmart Systems AS is a Norwegian company with headquarter in Halden. The company does not have any subsidiaries or shares in other companies.

These financial statements have been approved for issue by the Board of Directors on March 3rd 2016.

### NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### 2.1 Basis of preparation

The financial statements of eSmart Systems AS have been prepared in accordance with International Financial Reporting Standards and IFRIC interpretations.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Company's accounting policies. Areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements, are disclosed in note 5.

#### 2.2 Segment reporting

The company is organised as one operational segment. Since the company still is in a development phase with the products there is no split of sales based on product groups or geography. Therefore, segment reporting based on sales in accordance to IAS 14 Segment reporting has not been prepared.

#### 2.3 Foreign currency translation

##### (a) Functional and presentation currency

Items included in the financial statements are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The financial statements are presented in NOK, which is the company's functional and presentation currency.

##### (b) Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement.



## 2.4 Operating equipment

All machinery and equipment is stated at historical cost less depreciation. Historical cost includes expenditure that is directly attributable to the acquisition of the items. Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance are charged to the income statement during the financial period in which they are incurred.

Depreciation on all assets is calculated using the straight-line method to allocate their cost or revalued amounts to their residual values over their estimated useful lives.

The assets' residual values and useful lives are reviewed, and adjusted if appropriate, at each balance sheet date. An asset's carrying amount is written down immediately to its recoverable amount if the asset's carrying amount is greater than its estimated recoverable amount (note 2.6).

Gains and losses on disposals are determined by comparing proceeds with carrying amount. These are included in the income statement.

## 2.5 Intangible assets

### *Computer software*

Costs associated with maintaining computer software programmes are recognised as an expense as incurred. Development costs that are directly attributable to the design and testing of identifiable and unique software products controlled by the group are recognised as intangible assets when the following criteria are met:

- it is technically feasible to complete the software product so that it will be available for use;
- management intends to complete the software product and use or sell it;
- there is an ability to use or sell the software product;
- it can be demonstrated how the software product will generate probable future economic benefits;
- adequate technical, financial and other resources to complete the development and to use or sell the software product are available; and
- the expenditure attributable to the software product during its development can be reliably measured.

Directly attributable costs that are capitalised as part of the software product include the software development employee costs and an appropriate portion of relevant overheads.

Other development expenditures that do not meet these criteria are recognised as an expense as incurred. Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

Computer software development costs recognised as assets are amortised over their estimated useful lives, which does not exceed three years.

## 2.6 Impairment of non-financial assets

Operating equipment and intangible assets with definite useful life are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash-generating units). Non-financial assets that suffered an impairment are reviewed for possible reversal of the impairment at each reporting date.

## 2.7 Trade receivables

Trade receivables are amounts due from customers for merchandise sold or services performed in the ordinary course of business. If collection is expected in one year or less (or in the normal operating cycle of the business if longer), they are classified as current assets. If not, they are presented as non-current assets.

Trade receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment.

## 2.8 Cash and cash equivalents

Cash and cash equivalents includes cash in hand and deposits held at call with banks with original maturities of three months or less.

## 2.9 Trade payables

Trade payables are obligations to pay for goods or services that have been acquired in the ordinary course of business from suppliers. Accounts payable are classified as current liabilities if payment is due within one year or less (or in the normal operating cycle of the business if longer). If not, they are presented as non-current liabilities. Trade payables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method.

## 2.10 Borrowings

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the income statement over the period of the borrowings using the effective interest method.

## 2.11 Taxes

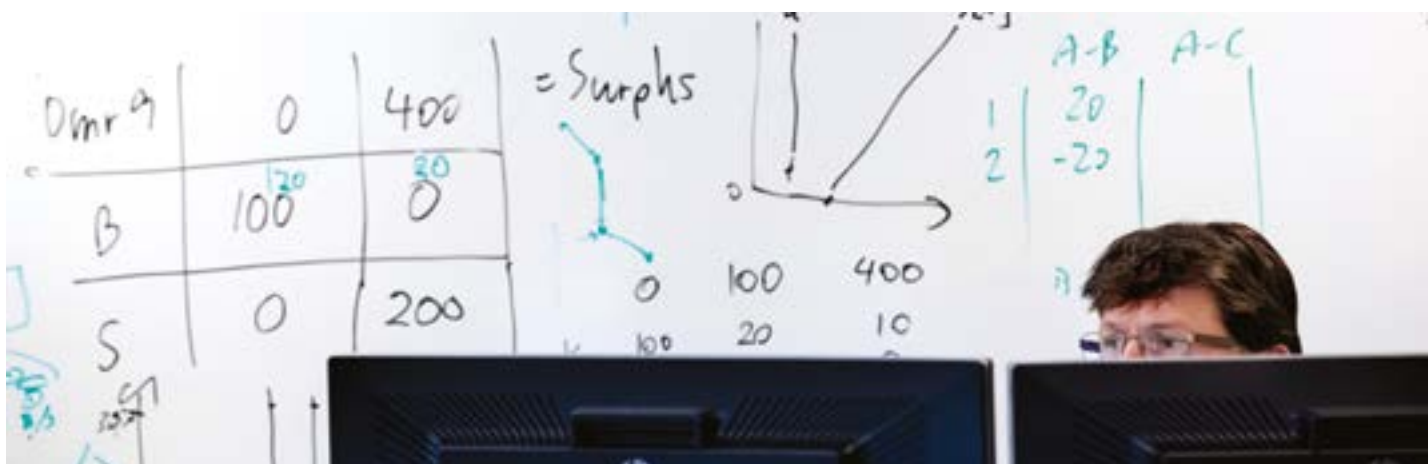
The tax expense for the period comprises current and deferred tax. Tax is recognised in the income statement, except to the extent that it relates to items recognised in other comprehensive income or directly in equity. In this case, the tax is also recognised in other comprehensive income or directly in equity, respectively.

The current income tax charge is calculated on the basis of the tax laws enacted or substantively enacted at the balance sheet date in the countries where the company operate and generate taxable income. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax is recognised, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred tax liabilities are not recognised if they arise from the initial recognition of goodwill; deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss. Deferred income tax is determined using tax rates (and laws) that have been enacted or substantively enacted by the balance sheet date and are expected to apply when the related deferred income tax asset is realised or the deferred income tax liability is settled.

Deferred income tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities and when the deferred income taxes assets and liabilities relate to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities where there is an intention to settle the balances on a net basis.



## 2.12 Employee benefits

### (a) Pension obligations

The company has a defined contribution plans. A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate entity. The company has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior period. The company has no further payment obligations once the contributions have been paid. The contributions are recognised as employee benefit expense when they are due. Prepaid contributions are recognised as an asset to the extent that a cash refund or a reduction in the future payments is available.

### (b) Profit-sharing and bonus plans

The company recognises a liability and an expense where it is contractually obliged or where there is a past practice that has created a constructive obligation. There are no such provisions in the accounts of 2015 or 2014.

## 2.13 Revenue recognition

Revenue comprises the fair value of the consideration received or receivable for the sale of goods and services in the ordinary course of the Group's activities. Revenue is shown, net of value-added tax, estimated returns, rebates and discounts. Sales of goods are recognised when a group entity has delivered products to the customer; the customer has accepted the products and collectibility of the related receivables is reasonably assured.

Consultancy services are recognised as revenue incrementally as the service is performed or on a straight-line basis during the period in which the service is performed.

## 2.14 Leases

Leases in which a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the income statement on a straight-line basis over the period of the lease.

There are no financial leases in the company.

## 2.15 Provisions

Provisions are recognised when the company has an obligation as a result of past events, and when it is probable that there will be a financial settlement as a result of this obligation and the amount can be measured reliably. Generally speaking, provisions are based on historical data and a weighting of possible outcomes against the probability they will occur. If the time value is significant, the provision will be the net present value of the amount expected to be required to meet the obligation.



### **NOTE 3 - FINANCIAL RISK MANAGEMENT**

#### **Financial risk factors**

The company's activities expose it to a variety of financial risks: market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The company's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the company's financial performance. Risk management is carried out under policies approved by the board of directors.

#### **Currency risk**

The company operates internationally and is exposed to foreign exchange risk arising from various currency exposures. Foreign exchange risk arises when future commercial transactions or recognised assets or liabilities are denominated in a currency that is not the entity's functional currency.

#### **Credit risk**

The company has no significant concentrations of credit risk. It has policies in place to ensure that wholesale sales of products and services are made to customers with an appropriate credit history.

#### **Interest rate risk**

As the company has no significant interest-bearing assets or interest-bearing liabilities, the company's income and operating cash flows are substantially independent of changes in market interest rates.

#### **Liquidity risk**

The company is in a development phase, and there is expected to take some time before the company can show positive cashflow. The Board monitors rolling forecasts of the company's liquidity requirements to ensure it has sufficient cash to meet operational needs and planned investments while maintaining sufficient headroom on its undrawn committed borrowing facilities (note 26).

### **NOTE 4 - CHANGES IN THE COMPANY'S STRUCTURE**

In 2015 the company has bought 50% of the shares in SMARTliv AS. The shares was bought for NOK 15 000. In the accounts the shares are presented as investment in asociated companies. In 2016 the receivale of NOK 19 000 000 on SMARTliv AS will be converted to share capital.

In 2014 the Company paid NOK 60 000 for shares in Smart Simulation AS. The company owns 20% of the shares in Smart Simulation AS. In the accounts the shares are presented as investment in associated companies.



## NOTE 5 - ESTIMATION UNCERTAINTY

In the process of applying the company's accounting policies in according to IFRS, management has made several judgements and estimates. All estimates are assessed to the most probable outcome based on the managements best knowledge. Changes in key assumptions may have significant effect and may cause material adjustments to the carrying amounts of assets and liabilities, equity and the net result.

The company's most important accounting estimates are the following items:

- Write-down/reversal of other intangible fixed assets and of tangible fixed assets
- Accruals of unearned revenue and obligation related to sales agreements.

The company test annually whether intangible assets has suffered any impairment in accordance with IAS 36. The impairment tests are shown in note 12.

The company's capitalized intangible assets are tested annually for impairment and any reversal of previous write-downs.

Estimates of unearned revenue and obligations related to sales agreements are calculated annually. Some deliveries continues for several years and might have changes in the estimates.

## NOTE 6 - OPERATING REVENUE

	2015	2014
Sales of products	16 768 724	7 391 000
Consultancy services	15 856 626	2 645 075
<b>TOTAL OPERATING REVENUE</b>	<b>32 625 350</b>	<b>10 036 075</b>

## NOTE 7 - OTHER OPERATING INCOME

Other operating income includes public funding related to development projects from Innovasjon Norge, Norges Forskningsråd and the EU. The funding amounts to NOK 7 477 000 in 2015 (NOK 3 360 000 in 2014).

## NOTE 8 - OPERATING EQUIPMENT

	Licences	Operating equipment
Cost 1.1.2015	129 225	2 312 872
Additions	0	1 481 945
Disposals	0	0
<b>Cost 31.12.2015</b>	<b>129 225</b>	<b>3 794 817</b>
Accumulated depreciation 1.1.2015	47 225	527 182
Depreciation charge	25 800	655 034
<b>Accumulated depreciation 31.12.2015</b>	<b>73 025</b>	<b>1 182 216</b>
<b>Net book amount 31.12.2015</b>	<b>56 200</b>	<b>2 612 601</b>
Economic lifetime	5 years	3-5 years

**NOTE 9 - CAPITALIZED DEVELOPMENT COST**

	<b>Capitalized dev. cost</b>
Cost 1.1.2015	13 505 025
Additions	10 299 682
Disposals	0
<b>Cost 31.12.2015</b>	<b>23 804 707</b>
Accumulated depreciation 1.1.2015	0
Depreciation charge	0
<b>Accumulated depreciation 31.12.2015</b>	<b>0</b>
<b>Net book amount 31.12.2015</b>	<b>23 804 707</b>
Economic lifetime	3-10 years

Capitalized development cost is depreciated through the useful life of the products. Expected income on capitalized development cost and booked value is tested for impairment at the time of the balance sheet, and written off if necessarily, see note 12. Total capitalized development cost as of 31.12.2015 of NOK 23 804 707 (NOK 13 505 025 in 2014) regards products that are not commercialized or available on the market. It is expected that the first products will be available to the market in 2016.

**NOTE 10 - DEPRECIATION**

	<b>2015</b>	<b>2014</b>
Operating equipment (see note 8)	680 834	438 604
Capitalized development cost (see note 9)	0	0
<b>Total</b>	<b>680 834</b>	<b>438 604</b>

**NOTE 11 - WRITE OFF**

	<b>2015</b>	<b>2014</b>
Operating equipment (see note 8)	0	0
Capitalized development cost (see note 9)	0	0
<b>Total</b>	<b>0</b>	<b>0</b>

## NOTE 12 - IMPAIRMENT TEST OF INTANGIBLE ASSETS

Recognised capitalized development cost in the company as of 31.12.2015 amounts to MNOK 23,8 (MNOK 13,5 in 2014). This relates mainly to development of products based on active use of Advanced Metering Infrastructure (AMI) through integrated IT solutions, where among other available options for user flexibility automatically is analyzed and optimized towards the energy markets.

The company as a whole is considered to be the only cash generating unit (CGU) since there is no possibility to isolate and measure the cash flow for any of the units or the products alone.

The impairment test is carried out by the company's accountants' department. The valuation was done in December 2015. The recoverable amount is set to the estimated value in use. The value in use is estimated to the net present value of the anticipated cash flow before tax, using a discount rate taking into account the duration of the cash flows and the expected risk. Projected cash flows has been determined on financial budget approved by the management of the company. The cash flows are determined based on the financial budget for 2016 and forecasts for the period 2017 - 2020.

### The following assumptions are used in the impairment tests:

- \* It is expected a growth of the company's revenue.
- \* It is expected an increase of the company's operating expenses.
- \* The discount rate used for calculating the net present value of the cash flow is 25 %. This is based on a risk free rate of 5 % and a risk premium of 20 %. The risk premium is based on uncertainty regarding the expected growth.
- \* There has not been calculated with a terminal value of the products.

### Sensitivity at changes in the key assumptions

As of 31.12.2015 the value in use of capitalized development cost amount to MNOK 90,7, compared to a total booked value of MNOK 23,8.

An analysis on the sensitivity based on reasonable possible changes in the key assumptions regarding growth and margins shows the following reduction of value in use (amounts in MNOK) with following write down of capitalized development cost (amounts in MNOK):

Reduced revenue	Increased op. exp.	Value in use	Write off
5%	0%	69,3	0,0
5%	5%	52,4	0,0
10%	0%	47,9	0,0
10%	5%	31,0	0,0
15%	0%	26,5	0,0
15%	5%	9,6	14,2



#### NOTE 13 - TRADE RECEIVABLES AND OTHER SHORT TERM RECEIVABLES

##### Trade receivables

There are none provisions for bad debt for the company as of 31.12.2015 or 31.12.2014.

Trade receivables as of 31.12.2015 and 31.12.2014 is booked to fair value, less provisions for bad debt, with NOK 31 849 910 and NOK 2 791 765.

Booked losses on trade receivables was NOK 0 in 2015 and NOK 0 in 2014.

Other short term receivables	2015	2014
Skattefunn*	518 803	1 923 010
Accrued public funding	553 999	700 000
Pre paid costs	876 114	1 322 381
VAT	8 862	391 325
<b>Total</b>	<b>1 957 778</b>	<b>4 336 716</b>

\* Tax reduction related to enterprises engaged in research and development.

#### NOTE 14 - CASH AND CASH EQUIVALENTS

As of 31.12.2015 NOK 1 117 614 of the total cash and cash equivalents is tied to withholding tax (NOK 484 547 in 2014).

Liabilities to withholding tax as of 31.12.2015 was NOK 1 113 398 (NOK 480 611 in 2014).



## NOTE 15 - SHARE CAPITAL AND SHAREHOLDERS

Total share capital of the company as of 31.12.15 was NOK 550 135 divided on 550 135 shares with a nominal value of NOK 1,00.

Changes in share capital and share premium fund	Numbers of shares	Share capital	Share premium fund
Issued shares as of 31.12.2014	510 135	510 135	19 489 944
Rise of capital	40 000	40 000	3 360 000
<b>Issued shares as of 31.12.2015</b>	<b>550 135</b>	<b>550 135</b>	<b>22 849 944</b>

Figures for result per share and fully diluted result per share can be found in note 23.

Shareholders as of 31.12.2015	Numbers of shares	ownership interest
eCapital AS*	172 956	31,44%
Fredrikstad Energi	81 834	14,88%
Sogn og Fjordane Energi	76 728	13,95%
Energi og IKT Invest AS*	22 692	4,12%
Fryden Consulting AS	18 155	3,30%
Rostskydd AS**	15 039	2,73%
Knut Erik Gustavsen	14 474	2,63%
t-hox AS	14 053	2,55%
Forksound AS	14 039	2,55%
Yngvar Seteklev	13 013	2,37%
Jo Morten Sletner	12 422	2,26%
Jørgen Kildahl	10 000	1,82%
Joseph Sirosh	10 000	1,82%
Frode Teigen	9 000	1,64%
DataSET AS	7 419	1,35%
Roy Einar Angell	5 480	1,00%
Henrik Ericsen	5 141	0,93%
Thomas Norrsèn	4 852	0,88%
Hovengen Invest AS	3 750	0,68%
Davide Roverso	3 750	0,68%
<b>Total 20 largest shareholders</b>	<b>514 797</b>	<b>93,58%</b>
Other shareholders	35 338	6,42%
<b>Total number of shares</b>	<b>550 135</b>	<b>100,00%</b>

\* eCapital AS and Energi og IKT Invest AS is owned by CEO and member of the board Knut Johansen.

\*\* Rotskydd AS is owned by member of the board Erik Åsberg.

**NOTE 16 - OTHER CURRENT LIABILITIES**

<b>Other current liabilities</b>	<b>2015</b>	<b>2014</b>
Advances from costumers	6 455 521	1 252 192
Unearned revenue	8 045 000	0
Accrued vacation salary	2 174 075	1 109 514
Debt to eCapital AS	176 002	176 002
Accrued salary	49 511	30 863
Accrued expenses	1 488 769	344 247
<b>Total</b>	<b>18 388 878</b>	<b>2 912 818</b>

**Note 17 - Taxes**

<b>Income taxes</b>	<b>2015</b>	<b>2014</b>
Tax payable	2 037 336	95 555
Changes in deferred tax	-246 556	181 827
<b>Total income taxes</b>	<b>1 790 780</b>	<b>277 382</b>

The company receives Skattefunn, tax reduction related to enterprises engaged in research and development. Therefore the company will not pay any tax for 2015, but will receive NOK 518 803 (NOK 1 923 010 i 2014) through the Skattefunn program.

<b>Reconciliation from nominal to actual tax rate</b>	<b>2015</b>	<b>2014</b>
Profit before taxes	9 115 976	3 040 066
Estimated income tax at nominal tax rate (27%)	2 461 314	820 818

**Tax effect on following items:**

Skattefunn	-690 158	-545 013
Changed tax rate	-5 645	0
Non taxable income	-2 157	-1 881
Non-deductible costs	27 426	3 457
<b>Total income taxes</b>	<b>1 790 780</b>	<b>277 382</b>
Effective tax rate	19,6 %	9,1 %

**Specification of tax effect of temporarily differences and loss to be carry forward:**

	<b>2015</b>		<b>2014</b>	
	Asset	Liability	Asset	Liability
Operating equipment	0	320 558	0	317 113
Accruals	250 000	0	0	0
<b>Total</b>	<b>250 000</b>	<b>320 558</b>	<b>0</b>	<b>317 113</b>
Non-capitalized deferred tax assets	0		0	
<b>Net deferred income tax assets/liability</b>	<b>0</b>	<b>70 558</b>	<b>0</b>	<b>317 113</b>

**NOTE 18 - PENSION OBLIGATIONS**

The employees in the company have a defined contribution plan. As of 31.12.2015 there is 35 employees included in the pension plan (19 in 2014). The pension plan is administrated by an insurance company. Total payments regarding this scheme in 2015 amounted to NOK 715 736 (NOK 317 113 in 2014).

**NOTE 19 - PAYROLL EXPENSES**

	<b>2015</b>	<b>2014</b>
Salaries*	9 561 765	661 578
Employers' contribution	3 076 313	1 524 964
Pension cost, see note 18	715 736	335 205
Other payroll cost	1 458 082	633 707
<b>Total</b>	<b>14 811 896</b>	<b>3 155 454</b>

Average number of man-year	28	18
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\* NOK 10 409 154 of the salaries has been capitalized as research and development cost in 2015 (NOK 9 608 980 in 2014).

**NOTE 20 - OTHER OPERATING EXPENSES**

	<b>2015</b>	<b>2014</b>
Premises	1 231 724	901 293
Office cost	1 154 690	562 966
IT services	2 001 093	407 908
Meetings, training	806 428	373 044
Accounting, audit, lawyers	1 389 142	582 242
Consultants	1 342 338	86 923
Travelling	1 468 302	474 988
Sales and marketing	701 427	1 235 869
Other costs	187 188	126 661
<b>Total</b>	<b>10 282 332</b>	<b>4 751 894</b>

**NOTE 21 - FUTURE LEASE OBLIGATIONS**

The company has future lease obligation related to office rental and rental of office equipment. The rent will be index regulated each year.

Annual rental costs in 2015 amounts to NOK 1 465 418 (NOK 917 083 in 2014).

Future accumulated minimum payments regarding the lease obligations:

	<b>2015</b>	<b>2014</b>
Mature within one year	1 562 701	849 375
Mature between one and five years	2 439 594	2 441 953
Mature later than 5 years	0	0

**NOTE 22 - FEES AND REMUNERATION**

<b>Salaries and other fees to:</b>	<b>Managing director</b>	<b>Chairman of the board</b>	<b>Board</b>
Salary	1 761 692	80 000	0
Other benefits	5 101	0	0
Pension cost	39 849	0	0

The managing director has an agreement to receive at least one years salary and other benefits in case on a resignation.

**Loan to managing director, members of the board and shareholders**

There is no loans to the managing director, members of the board or shareholders as of 31.12.2015.

**Auditor**

Expensed auditing fee in 2015 amounts to the following, exclusive value-added tax:

Mandatory audits	105 000
Tax consulting	7 000
Other services	77 000
<b>Total fees</b>	<b>189 000</b>

**NOTE 23 - NET PROFIT PER SHARE**

Net profit per share is calculated by dividing the net profit before prospective minority interests on the average number of issued shares during the year.

	2015	2014
Net profit	7 325 196	2 762 684
Average number of issued shares	511 779	431 648
<b>Net profit per share</b>	<b>14,31</b>	<b>6,40</b>
Net comprehensive income	7 325 196	2 762 684
Average number of issued shares	511 779	431 648
<b>Net comprehensive income per share</b>	<b>14,31</b>	<b>6,40</b>

Fully diluted net profit per share is equal as net profit per share since the company not has issued any options.



#### NOTE 24 - RELATED-PARTY TRANSACTIONS

All related-party transactions is based on normal market conditions.

The company rent offices from a company where the managing director and member of the board has ownership interests. Paid rent in 2015 amounts to NOK 1 231 724 (NOK 968 239 in 2014).

The company has a short term debt to a company related to the managing director and member of the board of NOK 176 002 as of 31.12.2015 (NOK 176 002 i 2014). There have not been calculated any interest on the debt in 2015 or 2014.

In 2015 the company has income from consultancy services of NOK 2 015 377 from companies where the managing director and member of the board has ownership interests (NOK 1 920 066 in 2014). eSmart Systems AS has also bought services from companies where the managing director and member of the board has ownership interests of NOK 604 244 in 2015 (NOK 222 186 in 2014).

In 2015 eSmart Systems AS sold licences of NOK 19 000 000 to the asociated company SMARTliv AS. eSmart Systems has obligation to provide services in the future related to this salesagreement. A part of the revenue has been treated as unearned revenue. As of 31.12.2015 the company has a receivable on SMARTliv AS of NOK 23 750 000.



**NOTE 25 - BORROWINGS / PLEDGED ASSETS**

<b>Borrowings secured with pledge</b>	<b>2015</b>	<b>2014</b>
Loan DNB	967 542	485 511
Loan Innovasjon Norge	2 500 000	0
<b>Total</b>	<b>3 467 542</b>	<b>485 511</b>
<b>Par value of pledge</b>		
Cars	1 090 218	542 923
Operating equipment	5 000 000	0
Receivables	5 000 000	0
<b>Total</b>	<b>11 090 218</b>	<b>542 923</b>
<b>Booked value of pledged assets</b>		
Cars	1 217 700	646 200
Operating equipment	1 394 901	0
Receivables	31 849 910	0
<b>Total</b>	<b>34 462 511</b>	<b>646 200</b>

NOK 225 174 of the loans from DNB will be repaid later than five years after the end of the financial year end. The loan from Innovation Norway is a project loan, with a total amount of NOK 5 000 000, where the remaining last NOK 2 500 000 is paid out if the project requires increased access to capital. Then follows one year free of installments before annual repayments of NOK 714 284.

**NOTE 26 - BORROWING FACILITIES / CONVERTIBLE LOAN**

The company have borrowing facilities from two of the shareholders of the company, the total facility amounts to NOK 4.000.000. As of 31.12.2015 none of the facilities have been used. The borrowing facilities last until 30.06.2016. If the facilities are used, the company has to pay 8 % interest on the borrowings. The lenders have the right to convert the borrowings to shares at the end of the period if the company does not manage to repay the amount borrowed.

**NOTE 27 - SUBSEQUENT EVENTS**

There has been signed an agreement with SMARTliv AS that the receivable of NOK 19 000 000 on SMARTliv AS will be converted to share capital in 2016. The other shareholder in SMARTliv AS will also pay NOK 19 000 000 in the rise of capital, thus the share of ownership remains unchanged.

In 2016 it will be founded subsidiaries in Singapore, England and the USA.



# AUDITORS REPORT

**MYRDAHL OG SVEEN**  
STATSAUTORISERTE REVISORER

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TOMMY MORTEN MYRDAHL  
INACE SVEEN  
MORTEN RUCHVIST  
Registrert revisor:  
LISBETH SØRENSEN  
  
/ kontorforbelskap  
med registrert revisor:  
TOMMY D. RAAUM - Revisornr. 962 605 435

To the Annual Shareholders' Meeting of eSmart Systems AS

## Independent auditor's report 2015

### Report on the Financial Statements

We have audited the accompanying financial statements of eSmart Systems AS showing a profit of NOK 7 325 196. The financial statements comprise the balance sheet as at 31 December 2015, income statement, changes in equity and cash flow for the year then ended, and a summary of significant accounting policies and other explanatory information.

### *The Board of Directors and the Managing Director's Responsibility for the Financial Statements*

The Board of Directors and the Managing Director are responsible for the preparation and fair presentation of these financial statements in accordance with International Financial Reporting Standards as adopted by EU, and for such internal control as The Board of Directors and the Managing Director determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

### *Auditor's Responsibility*

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with laws, regulations, and auditing standards and practices generally accepted in Norway, including International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the company's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### *Opinion*

In our opinion, the financial statements are prepared in accordance with the law and regulations and present fairly, in all material respects, the financial position of eSmart Systems AS as at 31 December 2015, its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards.



A member of Kreston International | A global network of independent accounting firms

Medlem av Den norske Revisorforening

**Report on Other Legal and Regulatory Requirements**

*Opinion on the Board of Directors' report*

Based on our audit of the financial statements as described above, it is our opinion that the information presented in the Board of Directors report concerning the financial statements, the going concern assumption and the proposal for the allocation of the profit is consistent with the financial statements and complies with the law and regulations.

*Opinion on Registration and Documentation*

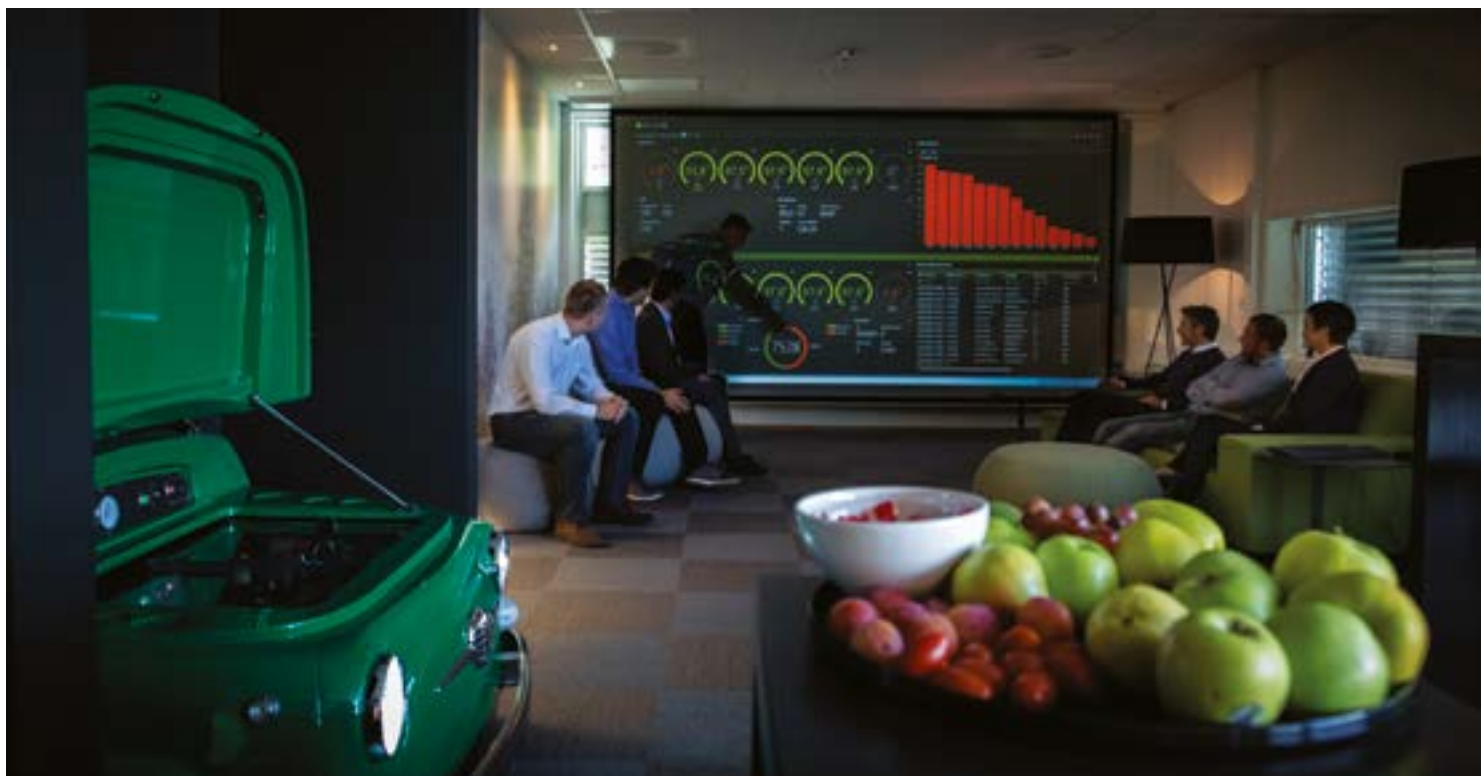
Based on our audit of the financial statements as described above, and control procedures we have considered necessary in accordance with the International Standard on Assurance Engagements ISAE 3000 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information", it is our opinion that management has fulfilled its duty to produce a proper and clearly set out registration and documentation of the company's accounting information in accordance with the law and bookkeeping standards and practices generally accepted in Norway.

Strømmen, March 3<sup>rd</sup>, 2016  
**Myrdahl og Sveen AS**



Morten Rugtvedt  
State Authorised Public Accountant (Norway)





# BOARD OF DIRECTOR'S REPORT 2015

## OPERATIONS AND LOCATIONS

eSmart Systems AS is based on more than two decades of successful and extensive international experience at establishing, growing and operating knowledge-based and world-leading companies targeting global markets.

eSmart Systems AS develops next generation software systems for grid companies, large energy consumers, prosumers and retailers. Its solutions focus on helping customers benefit from energy market price fluctuations to reduce energy consumption and greenhouse gas emissions. The Company's systems and solutions also have applications in

broader perspectives in rapidly growing areas such as smart buildings and smart cities.

Integrity and teamwork coupled with ambitions of excellence and innovation form eSmart Systems' values foundation. Value-driven processes put our customers at the center of all we do and contribute to our competitive advantage in the global marketplace.

The Company's headquarters are in Halden, Norway, which over the last two decades, has developed into one of the most competent energy IT environments in Norway.





## CONTINUED STRONG GROWTH IN 2015

The company doubled its revenue from 2013 to 2014, and had even stronger growth in 2015 with a 199 % growth compared to 2014. The Company is experiencing a strong and growing interest in the market for its solutions. Marketing of the second product in its portfolio, Connected Home, resulted in commercial contracts in the second half of the year. In 2015 there was further development of a strong partnership with Microsoft and continued significant focus on cluster collaboration in and around IT environments in Halden with the continuation of the 3-year program for Empower, part of the EU's Horizon 2020 program. The 3-year Research Council program with its pioneering research, Chargeflex, continued in 2015. Towards the year's end, the Company successfully delivered Phase 1 of a trading solution for EDF Trading, London, and was awarded Phase 2 and Phase 3 of the project as well.

The Company continued to focus on product development according to the three-year R&D contract established in 2013 in collaboration with demanding customers and Innovation Norway. As a result, by the end of 2015, the Company had several products in its portfolio ready for commercial sales. This contract was enhanced in 2015 as two new demanding customers joined the project.

Market interest grew faster than expected, and as part of preparing the Company for international activities, the Company expanded the BoD with two new members, Joseph Sirosh and Jørgen Kildahl in the fall of 2015.

Towards the end of 2015, the Company acquired a 50 % stake in SMARTliv AS. The other 50 % is owned by Ringeriks-Kraft AS.

The Company's sales growth and financial results were again better than expected in 2015.



## COMMENTS RELATED TO THE FINANCIAL STATEMENTS

Turnover for eSmart Systems AS increased from 13,4 MNOK in 2014 to 40,1 MNOK in 2015. Net income in for the year was 7,3 MNOK compared to a profit of 2,8 MNOK in 2014. The Company delivered revenue growth and earnings in excess of its business plan. The financial result for 2015 was good.

During 2015, research and development costs amounted to 18,7 MNOK (12.4 MNOK in 2014). Of total R&D costs, product development amounted to 10,3 MNOK (8.3 MNOK in 2014), which was activated and balance sheet disclosure requirements are considered to be met.

Total cash flow from operations was 2,5 MNOK in 2015 (3.2 MNOK in 2014), and operating profit before tax for the Company amounted to 9,1 MNOK (3.0 MNOK in 2014).

The difference is mainly due to changes in other accruals 22,9 MNOK), receivables (- 29,0 MNOK), changes in trade payables (-1,2 MNOK) and depreciation (0.7 MNOK).

The Company's liquid reserves amounted to 5,6 MNOK as at 31.12.2015. The Company's ability to finance its investments is good.

The Company's short-term debt as of 31.12.2015 amounted to 88,8% of total debt, compared with 89,4% at 31.12.2014.

This decrease is mainly due to one new long term loan from Innovasjon Norge.

The Company's financial position is good and is adequate to settle short-term debt as of 31.12.2015 with the Company's most liquid assets.

Total assets at the end of the year amounted to 65,9 MNOK compared to 31,1 MNOK last year. The equity ratio was 51,9% as of 31.12.2015 compared to 75,7% the previous year.

# ■ FINANCIAL RISK

## OVERALL VIEW ON OBJECTIVES AND STRATEGY

The Company currently has limited exposure to financial risks in most areas. The Company's current strategy does not include the use of financial instruments although the use of such is subject to ongoing evaluation by the Board of Directors.

## MARKET RISK

The Company is currently not exposed to currency exchange rate risk as the majority of the Company's revenues are in local currency (NOK). The Company has not entered into derivatives or other agreements to reduce exchange rate risk or market risk.

The Company is not currently exposed to changes in interest rates.

## CREDIT RISK

The risk for losses on receivables is considered low. The Company has not yet experienced any losses on receivables, and is not anticipating any changes in this trend in the near future. Gross credit risk exposure as of 31.12.2015 was 33,8 MNOK for the Company. This is an increase from 2014 when the Company's exposure was 7,1 MNOK.

The Company has not made any offset or other derivative agreements to reduce eSmart Systems AS' credit risk.

## LIQUIDITY RISK

The Company's liquidity is good. The Company has secured additional liquidity in the form of a convertible loan facility from two of the Company's shareholders. This loan facility had not been activated as of 31.12.2015.

On average, credit terms from suppliers are 20 days. There are currently no plans to renegotiate terms with any specific suppliers.







## GOING CONCERN

In accordance with Section 3-3a of the Accounting Act, the Board of Directors confirms that the Company has basis for continued operations. This assumption is based on 2016 profit forecasts and the Company's long-term strategic forecasts. The Company's financial position is sound.

## WORKING ENVIRONMENT AND EMPLOYEES

Leave of absence due to illness totaled 1047 hours in 2015 (221 hours in 2014), which equals approximately 2,1 % (0.7 % in 2014) of the total working hours in the Company. The Company considers this figure to be low and is satisfied. The Company has, from its very beginning, focused on ensuring a good physical and social working environment, and has established a training offer for all employees.

No incidents or reporting of work-related accidents resulting in significant material damage or personal injury during the year.

The working environment is considered to be good, and improvement efforts are made on an ongoing basis.

## EQUAL OPPORTUNITIES

The Company aims to be a workplace where there is full equality between women and men. The Company has incorporated into its policy provisions the aim to ensure that there is no gender discrimination in matters such as salary, promotion and recruiting. The Company has traditionally recruited from environments where men are overrepresented.

The Company has 35 employees, of which 6 are women. The chair of the Board is male, and there are no women in leader positions. Female employees are therefore not well represented in the Company.

The Company conducts a working environment survey annually. Important objectives are to detect gender discrimination concerning salaries, promotion and participation in internal offers of in-service training.

Working time arrangements are determined by the various positions and do not depend on gender.

The Company is planning to implement measures to attract more female employees in the future.



## DISCRIMINATION

The Discrimination Act's objective is to promote gender equality, ensure equal opportunities and rights, and to prevent discrimination based on ethnicity, national origin, descent, skin color, language, religion or faith. The Company actively works purposefully and systematically to promote the Act's purpose within its business. Included in its activities are recruiting, salary and working conditions, promotion, development opportunities and protection against harassment.

## ENVIRONMENTAL REPORT

eSmart System's operations do not pollute the environment beyond what is reasonable and necessary for the operation of the Company. To actively contribute to a better environment, all employees use the Company's electric cars for short and medium distance work trips.

## FUTURE PROSPECTS

The Board of Directors emphasizes that there is normally significant uncertainty associated with assessing future prospects in the phase eSmart Systems AS is in. In accordance with its business plan, eSmart delivered the second major release of its new system portfolio in the second half of 2015. The release was operational on customer sites in the second half of 2015. Revenue and operational results were better than expectations in 2015.

The many changes taking place in energy markets fit well with the Company's expectations and the Company's systems and marketing strategy. Order intake is satisfactory.

On this basis, the Board of Directors is positive that the Company will develop according to its business plans.





## ALLOCATION OF NET INCOME

The Board of Directors proposes the following allocation of profit for eSmart Systems AS:

Other equity	NOK 7 325 196
Total allocated	NOK 7 325 196

The proposal is based on the owners' desire to strengthen the capital structure of the Company.

Halden, March 3rd 2016

Bjarne Haugen  
Chairman of the Board

Erling Sande  
Member of the Board

Bjørn Svendsen  
Member of the Board

Jørgen Kildahl  
Member of the Board

Erik Åsberg  
Member of the Board

Joseph Sirosh  
Member of the Board

Knut Johansen  
Member of the Board / CEO



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