

# ENERGY NOW

Sustainable energy congress, this year covering

## STORAGE & CONVERSION

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THE KEY TO A SUSTAINABLE ENERGY SYSTEM

# PROGRAMME

Initiated by



Main partner



**ALFEN**  
POWER TO ADAPT

# TABLE OF CONTENT

What you can find in this booklet

Preface .....	3
Programme.....	4
Floorplan.....	5
Theme.....	6
Host of the day .....	7
Speakers.....	7
Panel.....	9
Breakout sessions.....	10
Alfen .....	12
Carbon Neutral.....	13



# PREFACE

By chairman Lieke van Essen

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Dear visitor,

Welcome to the third edition of Energy Now! In a team of six students from the Eindhoven University of Technology, we have organised this congress. With this event we aim to connect students, professionals and researchers and give them an overview of what is happening in the energy sector regarding the transition towards sustainable energy.

We believe that including the vision of our generation is necessary to accelerate the energy transition and challenge the current system. To ensure the well-being of future generations, it is crucial to develop long-term sustainable solutions and distinguish them from temporary hypes. This is one of the main reasons we have chosen this year's topic Storage and Conversion, which is definitely going to contribute to a sustainable energy system.

With this day, we want to stimulate you to think critically while maintaining a positive mindset and to discover how you can contribute to the energy transition.

Get inspired!



On behalf of the Energy Now committee,

Lieke van Essen  
*Chairman of Energy Now 2018*

# PROGRAMME

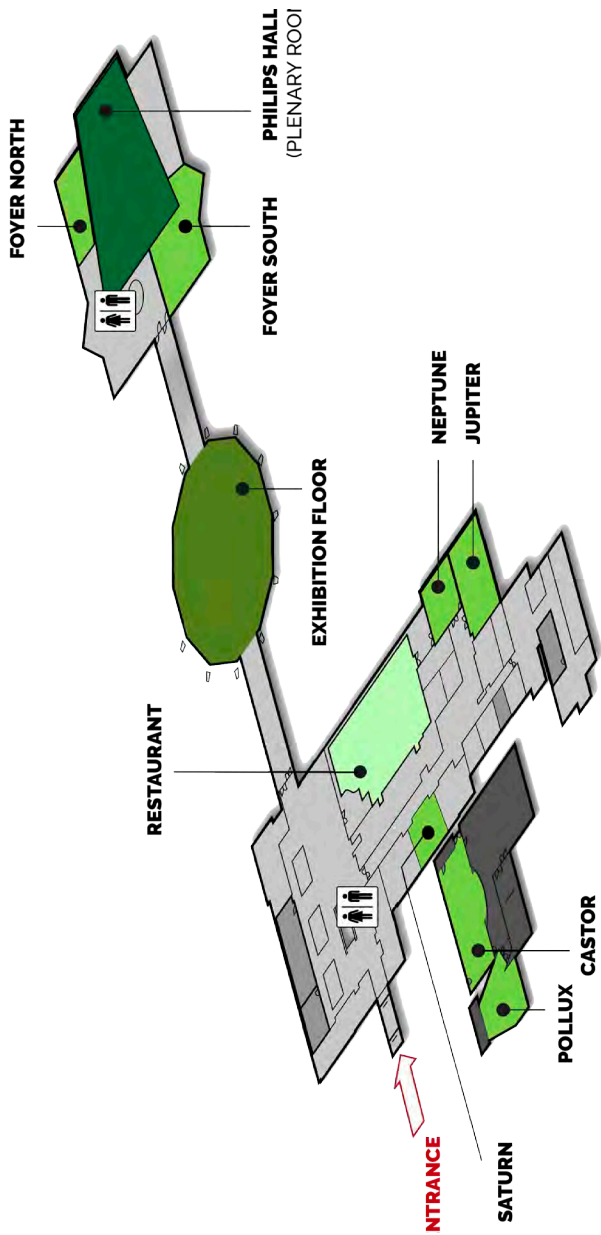
## Schedule of the day

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9:00 - 9:30		Doors open
9:30 - 9:50	Philips Hall	Welcome by Ruud Koornstra and Lieke van Essen
9:50 - 10:20	Philips Hall	Theme introduction by Richard van de Sanden
10:25 - 10:45	Philips Hall	SETalk by Andreas Plenk
11:00 - 12:30	See badge	Breakout sessions
12:30 - 13:30	Exhibition floor	Lunch break
13:30 - 15:00	See badge	Breakout sessions
15:00 - 15:30	Exhibition floor	Coffee break
15:30 - 15:50	Philips Hall	SETalk by Aart van Veller
15:55 - 16:45	Philips Hall	Panel discussion
16:45 - 17:00	Philips Hall	Closing

# FLOOR PLAN

Evluon



# THEME

## The missing link: Storage & Conversion

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“Storage & Conversion: the key to a sustainable energy system” is the theme of Energy Now 2018. The transition to a world powered by sustainable energy is up and running. Although energy sources such as solar and wind are successful, major steps still need to be taken to reach the targets as agreed on in Paris 2015. One of the issues with the most used sustainable energy resources is their weather-dependency: they do not produce on a constant level. Therefore, supply and demand are not meeting in the current system. On top of that, to take the energy transition to the next level and phase out fossil fuels, working alternatives to polluting activities in sectors such as industry and mobility are needed. Energy Now 2018 takes a closer look at the possible solutions for the missing links in the transition to a sustainable system, which can be found in the storage and conversion of energy.

The theme Storage & Conversion is divided in four sub-themes: built environment, transportation & mobility, energy production & infrastructure and industry. In our view, these are the target applications of Storage & Conversion.



# HOST OF THE DAY

Energy commissioner Ruud Koornstra

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Ruud Koornstra will be a guide to all visitors throughout the day. As of January 2017, Ruud Koornstra has taken on the challenge of being the first Chief Commissioner of Energy in the Netherlands. His ambition is to lead the Netherlands to energy neutrality and he aims to do this by accelerating the transition to clean energy technologies. With his sustainable vision and entrepreneurial experience, he is the perfect host for Energy Now.

# OPENING SPEAKER

Richard van de Sanden, DIFFER

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As the director of the Dutch Institute for Fundamental Energy Research, there is no one better to introduce the day's topic than Richard van de Sanden. He is a professor at the Eindhoven University of Technology and leading in research on solar fuels. With his expertise he is able to link fundamental research to applications in current innovations. At the end of the day he will be a member of the panel to share his vision on the energy transition.

# SETALK SPEAKER 1

Andreas Plenk, Alfen

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Andreas is an out-of-the-box thinker and a natural manager with a perfect sense of sustainable solutions. In the first SETalk of the day he will elaborate on Alfen's vision regarding the energy system. He is responsible for the global sales of energy storage systems and connecting storage solutions to sustainable energy sources.

# SETALK SPEAKER 2

Aart van Veller, Vandebron

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With his entrepreneurial spirit Aart van Veller translates ideas into reality. He is one of the founders of Vandebron, a company that brings locally produced green energy straight to households. In the second SETalk of the day he will take us with him on his journey to a more sustainable energy system.



# PANEL

## Interactive discussion climate agreement

This year's panel discussion offers a critical view on the current energy debate and opens up the discussion about the new climate agreement. In 2015 the Netherlands signed the Paris Agreement and thus agreed to limiting the increase in global average temperature to well below 2 °C and pursuing efforts to limit the temperature increase to 1.5 °C. The Netherlands is taking measures by writing its own climate agreement, which is due in summer this year. This process will be discussed by five relevant people from the research, business and political sector:

**LAETITIA OUILLET**

Strategic Area  
Energy TU/e

**RICHARD VAN DE SANDEN**

DIFFER

**JILLIS**

**RAADSCHELDERS**

DNV GL

**KEES VAN DER LEUN**

Ecofys

**FRANK WIERSMA**

TenneT



# BREAKOUT SESSIONS

Morning: 11:00 - 12:30

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## **ENERGY STORAGE: THEOBROMA CACAO FACTORY IN NIGERIA**

Hosted by Alfen in Jupiter



## **ENERGY TRANSITION SEEKS INFRASTRUCTURE FOR LONG-LASTING RELATIONSHIP**

Hosted by TKI Gas and Gasunie in Foyer Noord



## **THE ENERGY TRANSITION GAME**

Hosted by Enpuls in Castor



## **PRIMARY RESERVE**

Hosted by TenneT in Neptune



## **ENERGY STORAGE CASE STUDY: HOW TO BEAT DISCONTINUITY?**

Hosted by TATA Steel in Saturn



## **ELECTRONS TO MOLECULES: POWER TO FUELS!**

Hosted by Anecy and ECN, part of TNO in Foyer Zuid



## **SETALK XTRA: HEAT STORAGE**

Hosted by Henk Huinink, Wim van Helden and Ecovat in Pollux

# BREAKOUT SESSIONS

Afternoon: 13:30 - 15:00

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## **ENERGY STORAGE: ADO DEN HAAG**

Hosted by Alfen in Jupiter



## **WHAT MAKES CITIES AND HOMES SMART? AN INTERACTIVE DIVE INTO THE FUTURE OF CITIES**

Hosted by Schneider Electric in Foyer Noord



## **BLOCKCHAIN AND ELECTRIC TRANSPORT**

Hosted by Vandebron in Castor



## **STORING THE SUN IN ZWOLLE**

Hosted by Witteveen + Bos in Neptune



## **LOSS-FREE HEAT STORAGE: THE ENABLER FOR THE ENERGY TRANSITION**

Hosted by TNO and Alliander in Saturn



## **ENERGY STORAGE: VIABLE SOLUTION FOR NEIGHBOURHOODS OF EINDHOVEN?**

Hosted by InnoEnergy in Foyer Zuid



## **SETALK XTRA: SOLAR FUELS**

Hosted by René Janssen, Jan Philipp Hofmann and Mihalis Tsampas in Pollux

## Main partner of Energy Now 2018

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Netherlands-based Alfen is operating internationally in the heart of the energy transition, as a specialist in energy solutions for the future. With its 80-years' history, Alfen has a unique combination of activities. Alfen designs, develops and produces smart grids, energy storage systems, and electric vehicle charging equipment and combines these in integrated solutions to address the electricity challenges of its clients. In the period between 2015 and 2017 Alfen grew its revenues with 21% on average with a positive net profit. Alfen has market leading positions in the Netherlands and experiences fast international growth benefiting from its first mover advantage.

During the day, Alfen will pitch its vision on sustainable energy and host two breakout sessions about their innovative projects. On top of that, Alfen will bring its energy balancing system TheBattery to Evoluon for visiting purposes.



# CARBON NEUTRAL

## Making Energy Now even greener

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This year we have collaborated with GO Green Office to make Energy Now 2018 carbon neutral. Together we came up with a step-by-step plan because we find that sustainability is not just a topic but a vision. Seven key targets were considered: promotion, event setting, purchase or rent sustainable supplies, food and catering, decoration, reducing waste and social sustainability.

GO Green Office TU/e makes the university's sustainability vision tangible in the everyday reality of its students and staff members. This is the platform where students and employees with fresh minds connect to shape inspiring ideas and launch projects at the TU/e, all with the objective to stimulate the transition towards sustainability.



# THANK YOU

## for joining Energy Now 2018

powered by



# ALFEN

P O W E R T O A D A P T



vandebron



TATA STEEL



ECN



TKI GAS  
Topsector Energie



ANTECY



Provincie Noord-Brabant

