

BEHAVE
2020-2021



DANISH INDUSTRY SESSION

Thursday 22 April
13-14:30 PM CEST

Session 5c

**Enabling Energy Efficiency by
Addressing Behaviour in Technological
Solutions Towards Investors and Users**

SPEAKERS:

Ingrid Reumert, Vice President, VELUX

Anders Kruse, Vice President, Floor
Heating & Electronic Controls, Danfoss

Carsten Rudkjøbing Larsen, Energy
Manager, Brunata

Niels Nicolai Andersen, CSO, Energy
Solution

*Moderator: Hans Peter Slente, Senior
Advisor, Confederation of Danish
Industry*



COPENHAGEN CENTRE
ON ENERGY EFFICIENCY
SEforALL EE HUB



European Energy Network
A voluntary network of European energy agencies

ENABLING ENERGY EFFICIENCY BY ADDRESSING BEHAVIOUR

TESTIMONIALS FROM BUSINESS

Hans Peter Slente
Senior Advisor
22 April 2021



Danish Energy Industries Federation

AGENDA



- Ingrid Reumert, VP, Global External Relations & Sustainability, **VELUX**
- Anders Kruse, VP, Floor Heating & Electronic Controls, **Danfoss**
- Carsten Rudkjøbing Andersen, Energy Manager, **Brunata**
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Danfoss Energy Industries Federation

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Danfisk Energiindustri Federation

HEALTHY BUILDINGS, BEHAVIOUR AND CLIMATE ACTION

Ingrid Reumert

VP, Global External Relations & Sustainability

The VELUX Group

EU CLIMATE NEUTRALITY BY 2050





40
%

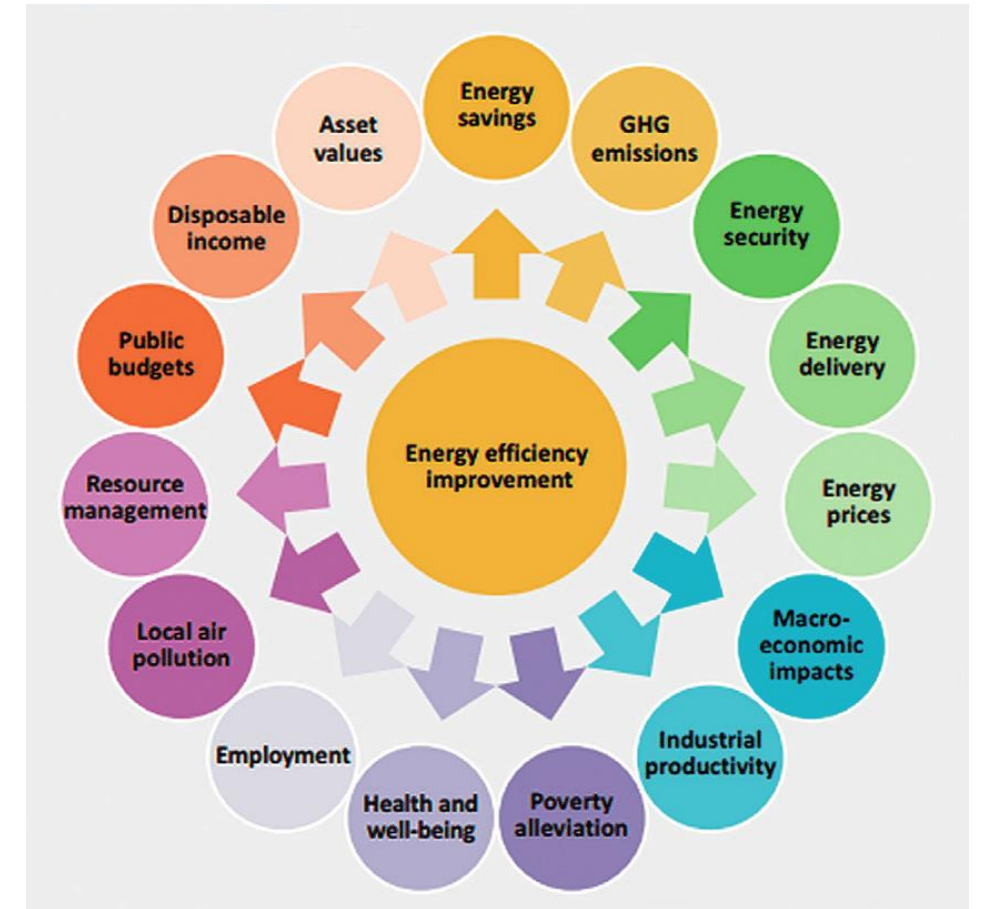
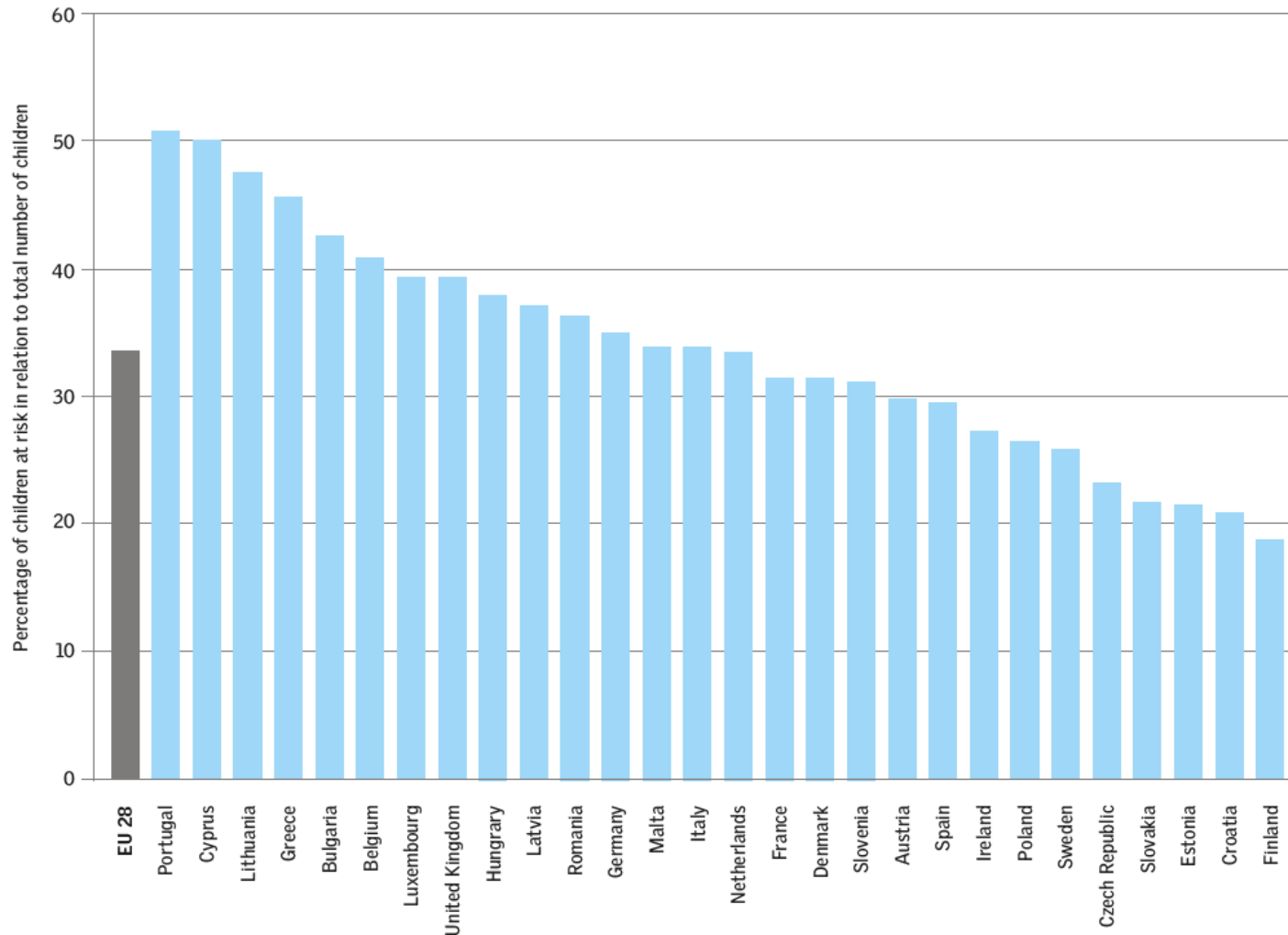
*of the total energy
consumption in
Europe is used in
buildings*



36
%

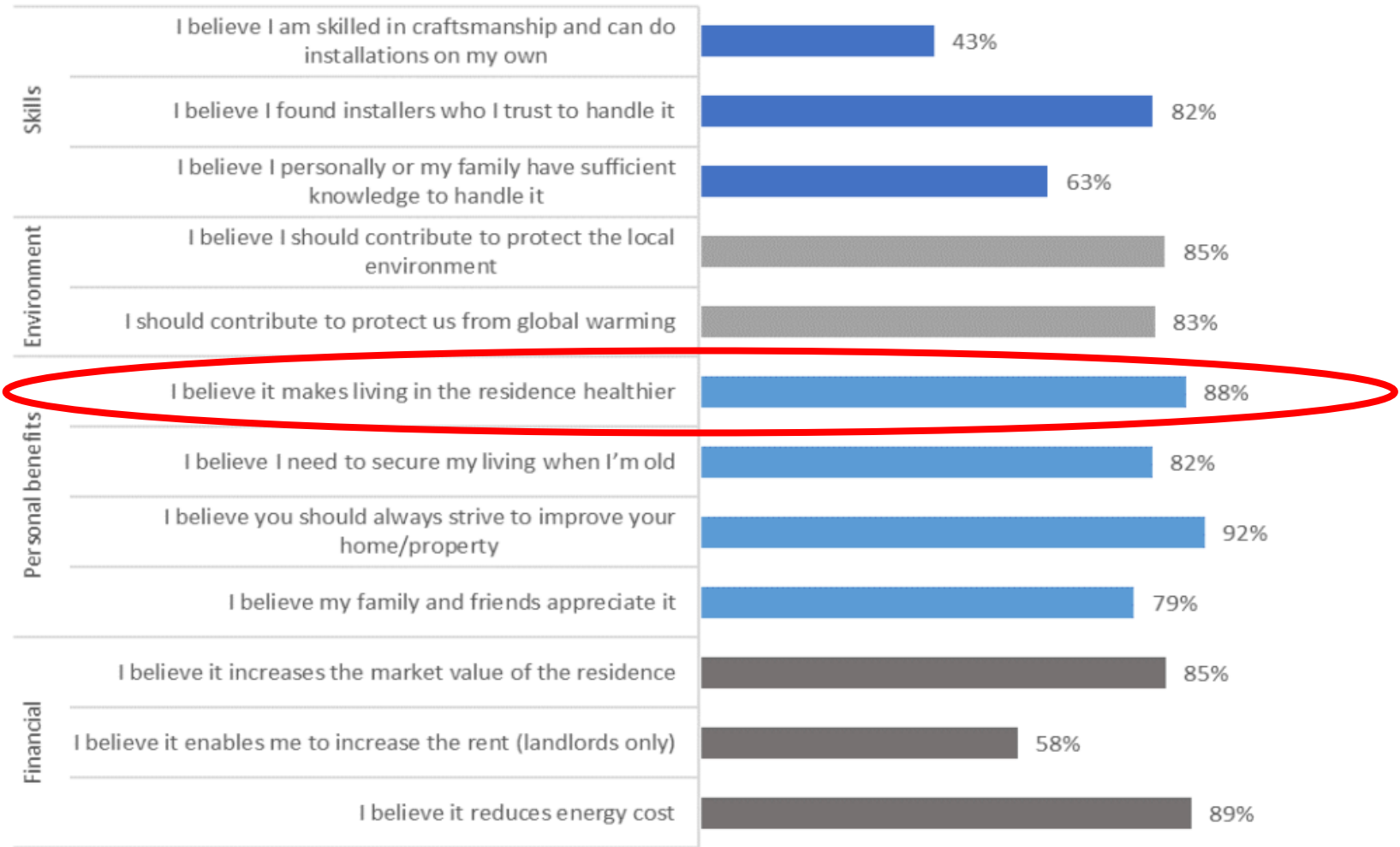
*of Europe's total
CO₂ emissions
are emitted by
homes and
buildings*

THE PROBLEM IS ENORMOUS... BUT SO IS THE POTENTIAL

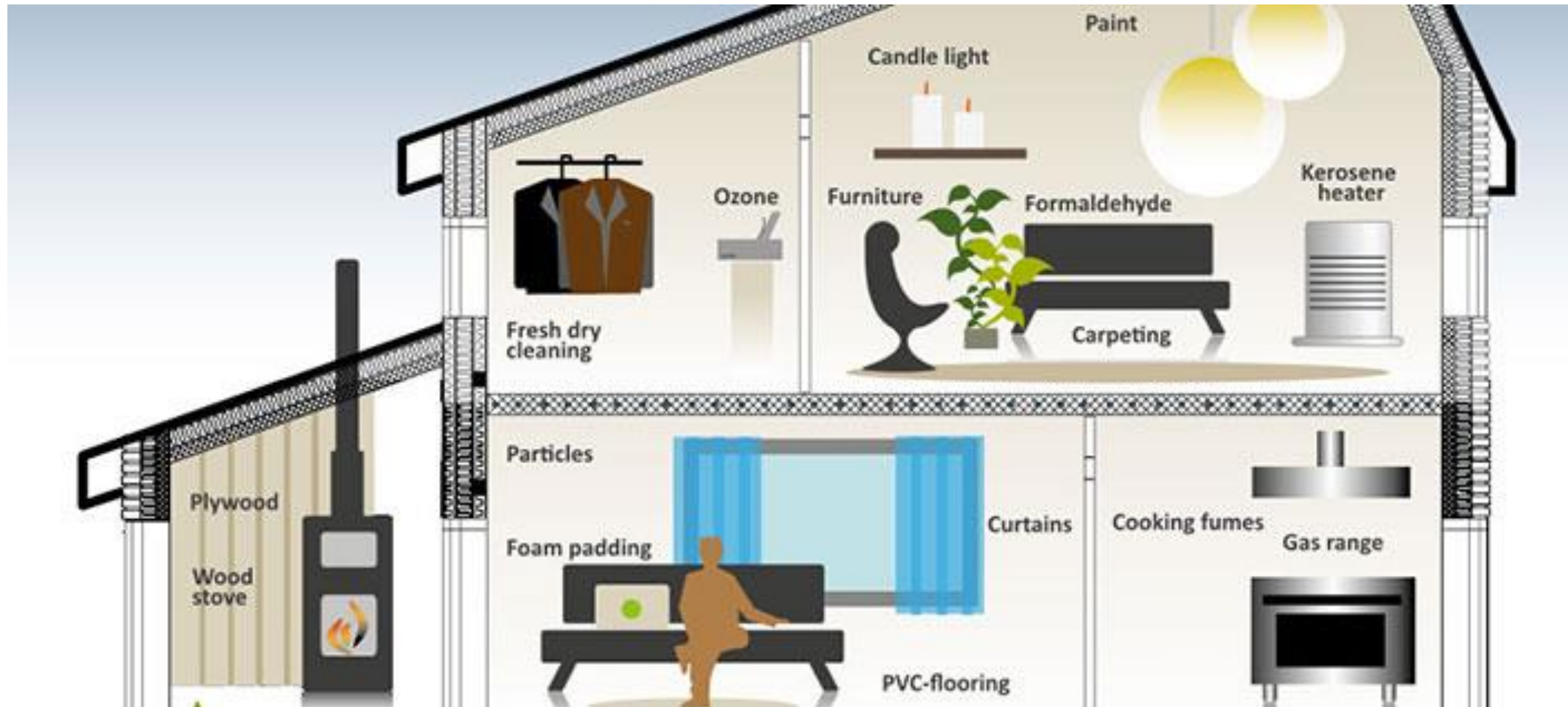


HEALTH AND QUALITY OF LIFE ARE TRIGGER POINTS

Figure 25 : Drivers for consumers



HAVING A HEALTHY HOME MUST BE WITHIN REACH



VELUX ACTIVE WITH NETATMO IS THE EASY WAY TO A HEALTHIER INDOOR CLIMATE



80 MILLION PEOPLE
LIVE IN DAMP AND
UNHEALTHY BUILDINGS

MANY PEOPLE DO
NOT REALISE THEY
ARE LIVING WITH
HIGH CO₂ LEVELS





VELUX®

SOCIAL CHANGES IN THE FUTURE

There will be a complete generation change by 2035. Our familiar customer group “baby boomers” will retire. Generation X,Y,Z will fill the gap with different living habits, financial freedom, spending attitudes, and new interpretations of what value means to them.

Generation Y and Z:

- *Digital natives and techaholics*
- *Sustainability as a key driver*
- *More Gen Y,Z living with parents unable to afford own home*
- *Gen X and especially Y & Z don't expect to live in the same place as long as previous generations had done*
- *Spending more on things that are “important to me” and often significantly less on things that are not*

	1928-1945	1946-'64	1965-'80	1981-'96	1997- 2010
					
Characteristics	Silent Generation	Baby Boomers	Generation X	Generation Y Millennials	Generation Z
Age	73-90 year olds	54-72 year olds	38-53 year old	22-37 year olds	8-21 year olds
Characteristics& Demographics	<ul style="list-style-type: none"> Not a big spender - only replace when broken 	<ul style="list-style-type: none"> Privileged generation Increased consumerism Don't throw out things that work. Getting ready to retire. 	<ul style="list-style-type: none"> Hard working generation. Children under 18 living at home. Curling parents 	<ul style="list-style-type: none"> Small generation in Europe. Many academics educated (less craftsmen), but high unemployment* A large share live with parents at a later age** 30% are unmarried at the age of 40 (twice as many as Gen X) Spend more money on experience. <p><small>*40% is unemployed in Spain, 25% in France **UK + US, IT: ~50% Italians aged 25-34.</small></p>	<ul style="list-style-type: none"> Digital native. The most Self-Conscious, demanding consumer with a high demand for services. Individuality is key – brands have to be loyal to them! Buys online/Amazon.....
Technology attitude	Largely disengaged - Letter	Early information technology adaptors - Telephone	Digital immigrants - Email/SMS	Digital natives - SMS/SOME/Smart phones	Techonolics - Hand held com. Device/3D printing
Share of population 2018	~15.5%	~24,5% (increasing)	~25%	~19%	~16% 2020: 20,7% 2035: 22,2% Source: Eurostat
Housing Own/rent	Home ownership ~60% in DE, ~80% in UK	Home ownership ~60% in DE, ~80% in UK	Home ownership ~55% in DE, ~65% in UK	Generation rent Booming house prices = declining home ownership (especially in DE + UK) In UK 1/3 will rent into retirement. Home owners: ~35% in DE, ~30% in UK	Rent is increasing

Bringing light to life™

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Danfoss Energy Industries Federation

Introduction to **Danfoss Climate Solutions**

Anders Kruse

Vice President Floor Heating & Electronic Controls




Customers are served within a variety of key segments

Our offering is based on advanced solutions delivering comfort and energy efficiency



Danfoss Climate Solutions and the Global Megatrends

Energy efficiency at the core of Danfoss offerings – has been since 1933

 = COVID19 accelerated

MEGATRENDS




Climate Change

- **Buildings** account for almost 1/3 of global energy consumption and emissions
- Cooling sector accounts for 8% global green house gas emissions
- Low GWP **refrigerants & energy efficiency** can deliver more than 38% of the Paris Agreement



Digitalization

- Data centers consume about 2% of global electricity
- Digitalization incl. IoT enables new **services** in industries we serve 
- **Smart HVAC control** solutions can lead to energy savings of up to 40%



Food Supply

- Population growth, 60 % more food needed 2050
- Reliable **cold chain** can reduce food losses by over 20%
- Decentral and online food shopping on the rise 




Electrification

- HVACR responsible for 17% of world electricity consumption
- Electricity for heat pumps expected to substitute oil and gas
- Large **heat pumps** could deliver 30% of district heating



Urbanization

- 1.5 billion more people to live in cities by 2030
- **District energy** could supply 50% of heating in Europe (today 12%)
- Number of air conditioners will triple by 2050 – with increasing focus on **indoor air quality** 

Sustainability - We insits on taking our own medicine

Headquarters carbon neutral by 2022, Global Operations decarbonized by 2030



**Photovoltaic park 2,1 MW, equivalent to 400 households yearly consumption*



**District Heating utility based on bio-fuel*



ENGINEERING
TOMORROW

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Danish Energy Industries Federation



ENERGY **SOLUTION**

BEHAVE 2020-2021

DANISH INDUSTRY SESSION

PRIVATE SECTOR BEHAVIOR SOLUTIONS FOR CLIMATE NEUTRALITY

SESSION 5C

APRIL 22, 2021



AGENDA

1

Shortly about EnergySolution

- Who we are and what we do

2

Industrial approach to energy efficiency in a danish context

- What are the key drivers
- Transition in mindset
- How it has affected our approach

3

Driving behavior even further





NIELS NICOLAI ANDERSEN

CSO - Chief Sustainability/Sales Officer

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M.Sc. in Industrial Design

- 15 years in strategic planning & management
- Operational processes
- Sustainability



ENERGYSOLUTION
Engineering Sustainability



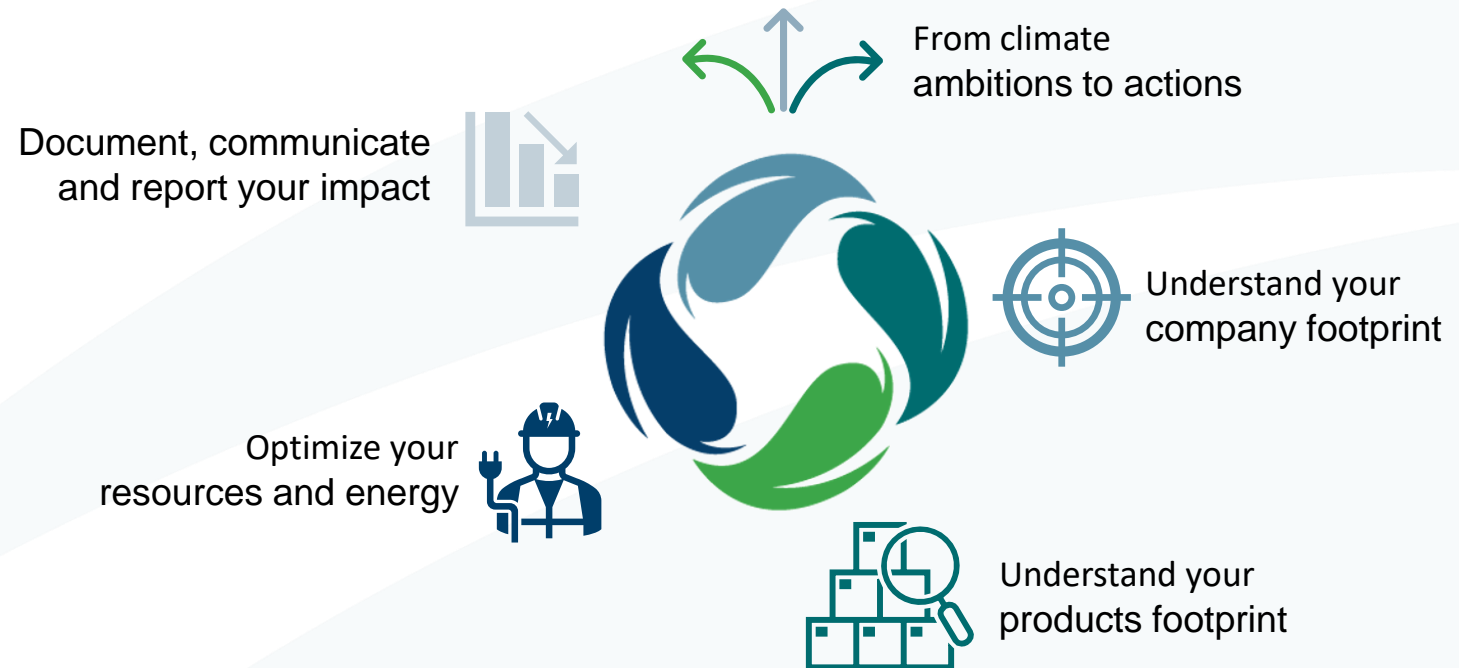


ENERGYSOLUTION LEAD SUSTAINABLE TRANSITION

Our purpose is to lead transition to sustainability in the industrial sector in a sustainable financial way.

EnergySolution is a strategical and technical expert within green transition, energy, resources, and operations.

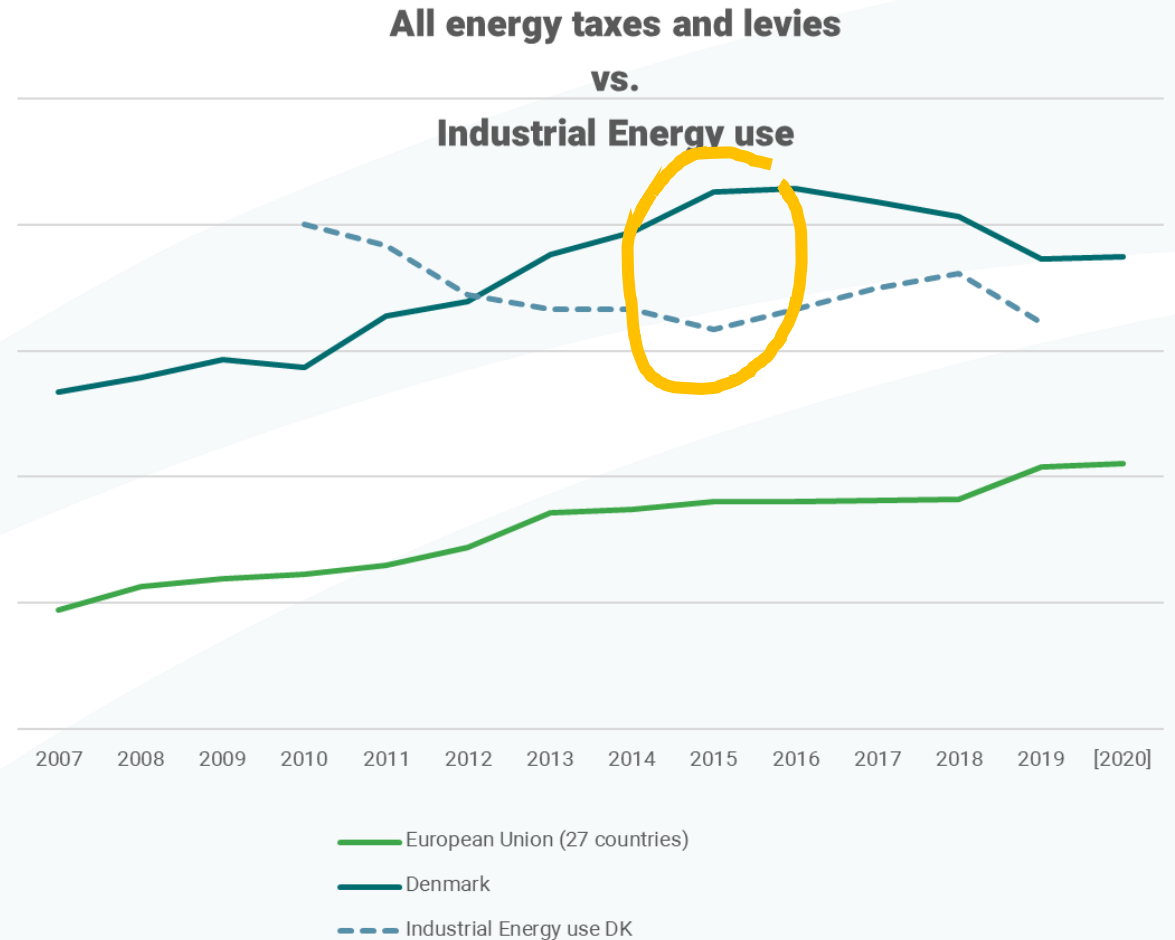
We daily strive to drive the sustainability transition together with our clients.



DRIVERS IN INDUSTRY

Beside a general focus on **operational cost**, we experience a clear connection between companies focus on energy optimization linked to **regulation and taxation/levies**.

And now there is a new motivator



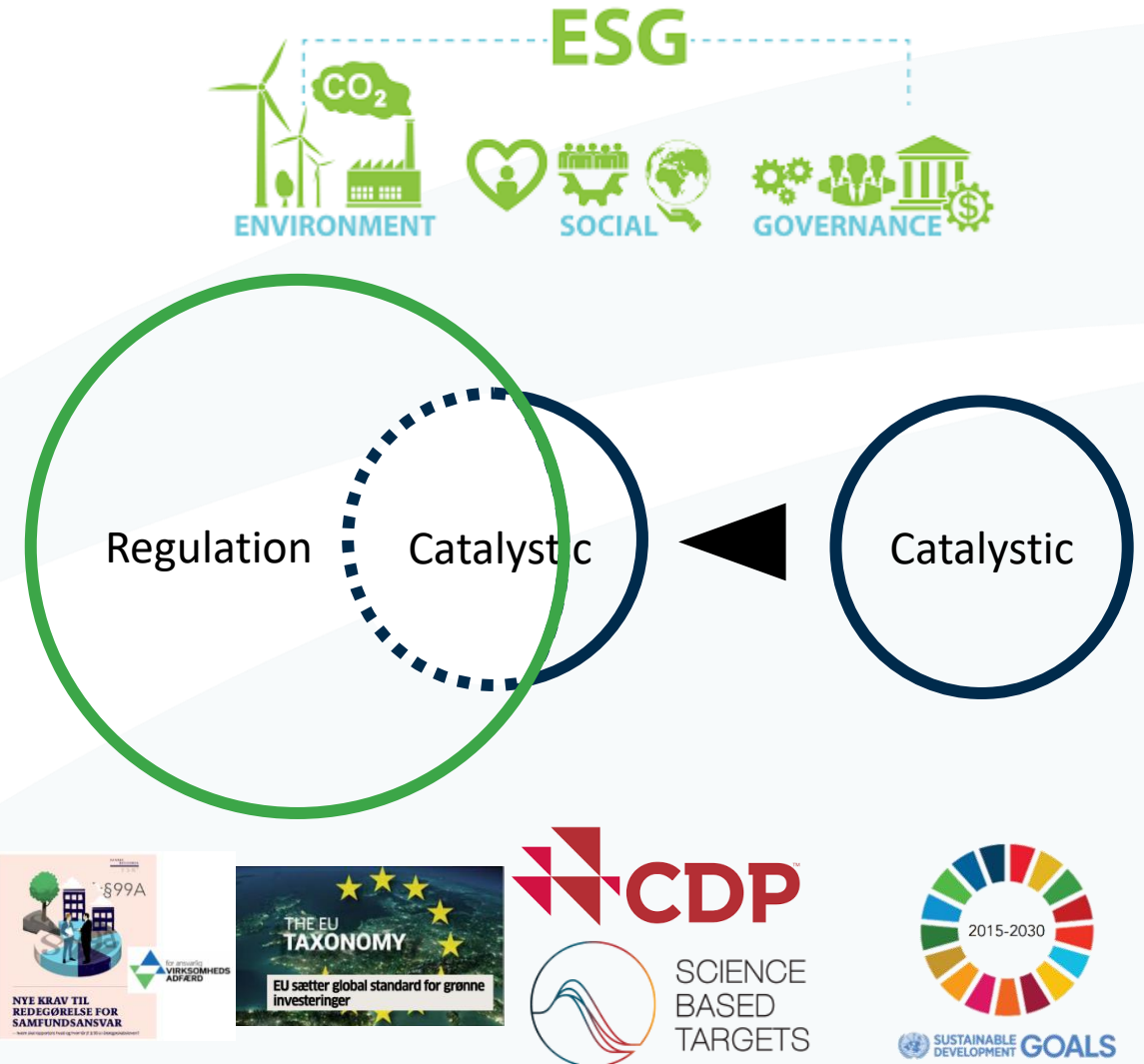
Source: Eurostat
<http://ec.europa.eu/eurostat/data/database>
Dataset: nrg_pc_205



REASON TO ACT

Legislations, global commitments and rising demands from the financial investors will push climate awareness even further.

Because it is about sustainable business, as the derived effects of climate change can have a direct impact on our way of living and on the companies' bottom lines.

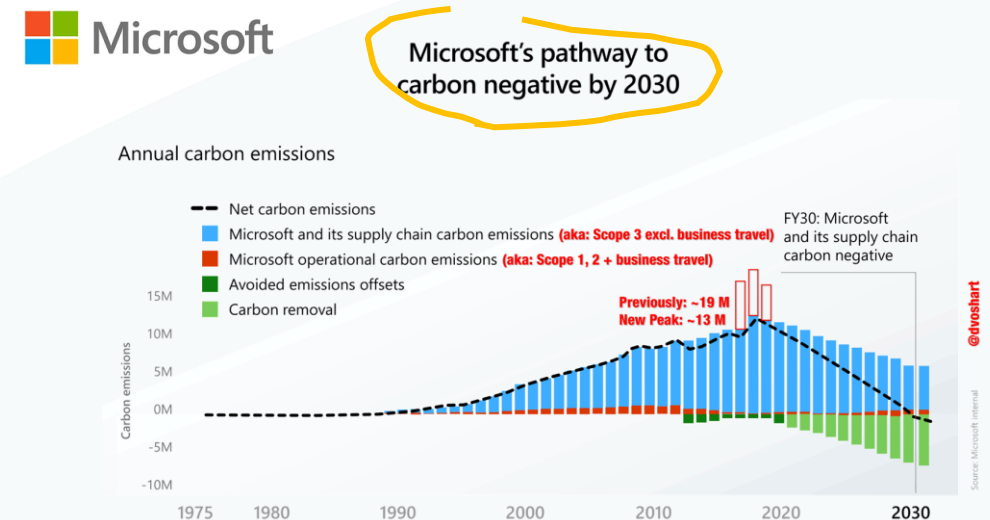
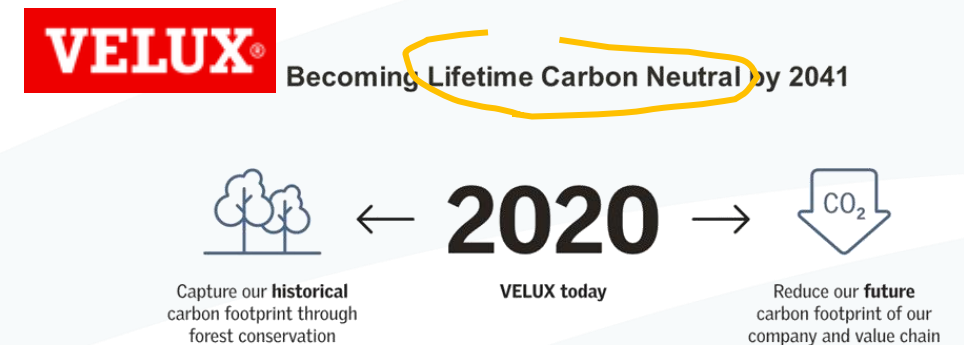


TRENDS - MOVING THE BAR BEYOND ZERO

+30% of our clients are working towards a ZERO emission vision.....

.... and the bar and ambitions are moving – very fast!

- 2050 target becomes the new 2030 targets
- Climate ambitions becomes Biodiversity ambitions
- Climate statements require solid proof and documentation
- Emission focus in Scope 1+2 is viewed as Greenwashing
- Increased level of consumer boycotts are linked to lack in transparency
- Transparency is linked to relevance and materiality combined with the ability to make understandable and credible actions and communication on climate effort





CHANGE IN INTERNAL ANCHORING

From Energy to Climate

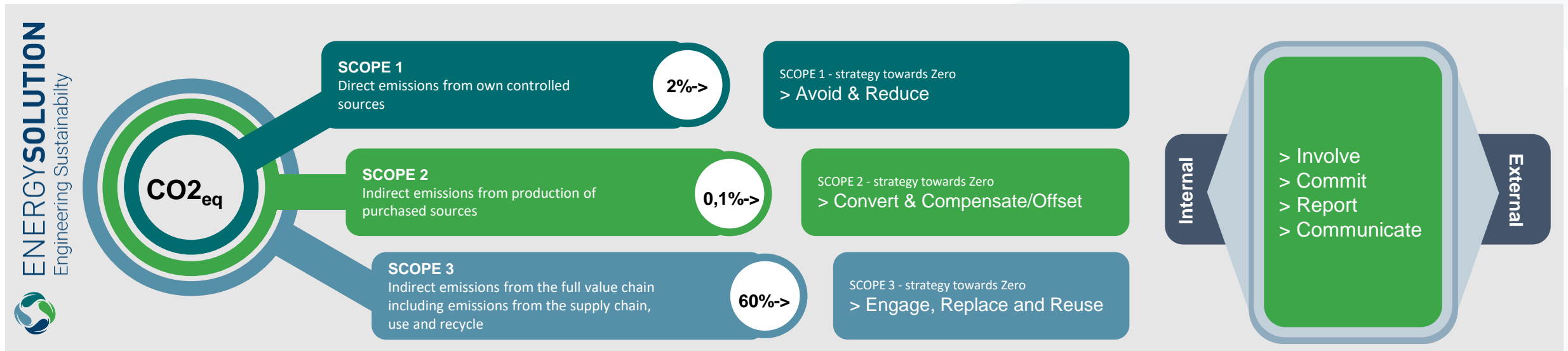
- **Energy Efficiency is traditional anchored in operation and as cost optimization**
- **The Climate agenda moves Energy Efficiency to the Top Management level**
- **Driven by regulation (and expectation of)**
- **And the key motivator - consumer expectation of corporate responsibility.**

Our business model has changed

- **From Energy Consulting to Climate Consulting.**
- **From Operations to Top Management**
- **Our Value Propositions and Solutions has changed and developed**
 - **Driving even greater impact on Energy Efficiency**



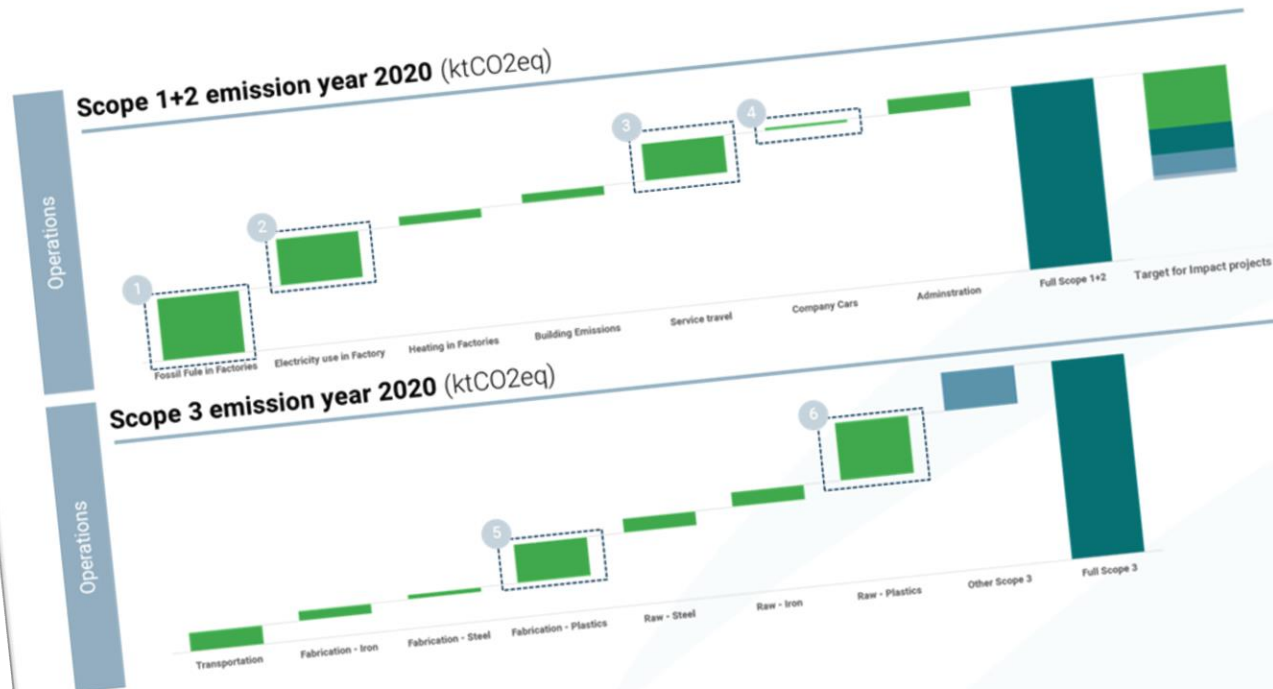
GUIDING CUSTOMERS TOWARDS ZERO



Different Scope requires differentiated approach;
however, key is to clarify level of ambition for vision
to reach ZERO emission.



VISUALIZATION OF CLIMATE FOOTPRINT -> STRATEGIC ACTIONS



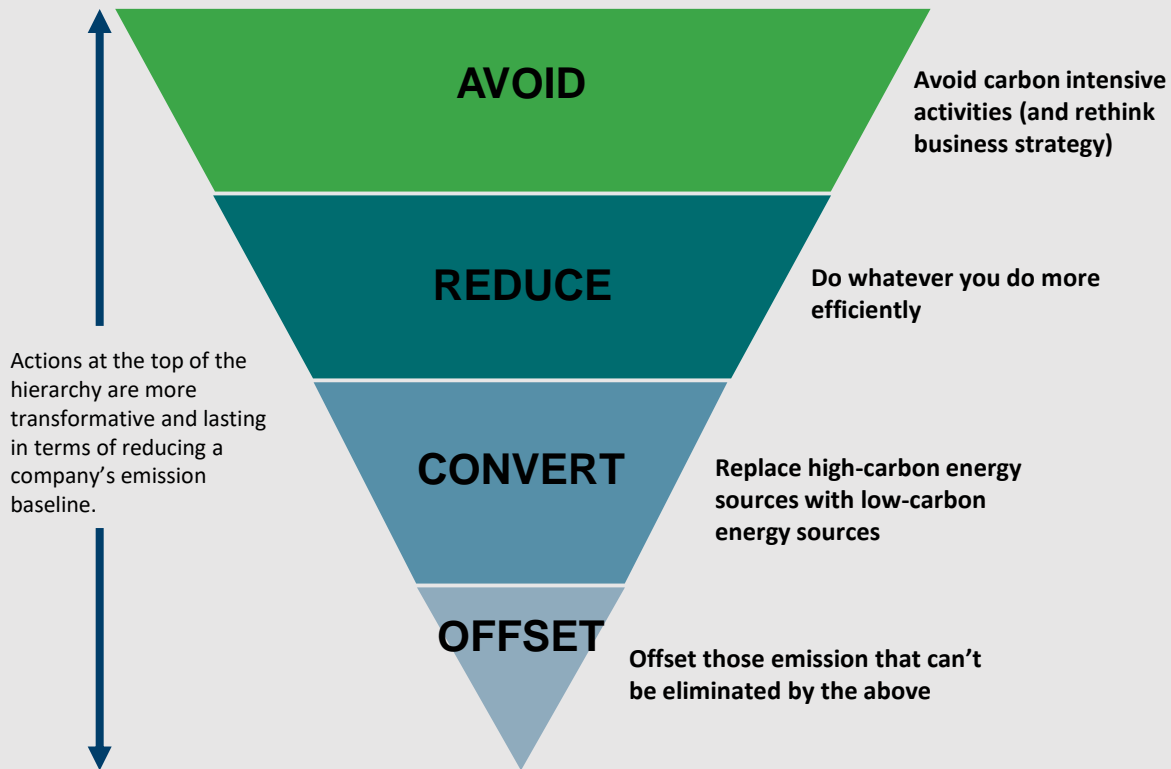
TOWARDS ZERO TOGETHER

1. Energy Conversion
2. Energy Optimization
3. Stronger Planning - Together
4. From Fossil to Electrical
5. Responsibility Together
6. From Virgin to Recycle



DOING THE RIGHT THINGS FIRST

The Carbon Management Hierarchy



Building the right mindset and understanding how to progress most efficient with energy optimization.

Lacking understanding of required energy needs leading to wrong investments.

A common case:

CSR strategi: Reduce CO₂ by converting Fossil Fuel

Operations action: Convert fuel boilers to Heatpumps

Issue: capacity replacement often happens 1:1

Solution: Avoid, reduce – understand actual requirement and link systems before investing
– often we see an 30-70% energy reduction



DRIVING BEHAVIOR EVEN FURTHER

Transition is moving ahead in Denmark with national and corporate ambitions and visions.

However, transition can be driven further from our point of view.

- Backing and implementation of The European Green Deal and EU Taxonomy for Sustainability
- Harmonies a common language across the industrial sector
- Establish more common classification systems for tracking and reporting
- Models for internal and external CO2 taxation
- Finances to support the green transition including more clean and affordable energy



THANK YOU



WWW.ENERGYSOLUTION.DK

DEBATE

Enabling Energy Efficiency by Addressing Behaviour in Technological Solutions

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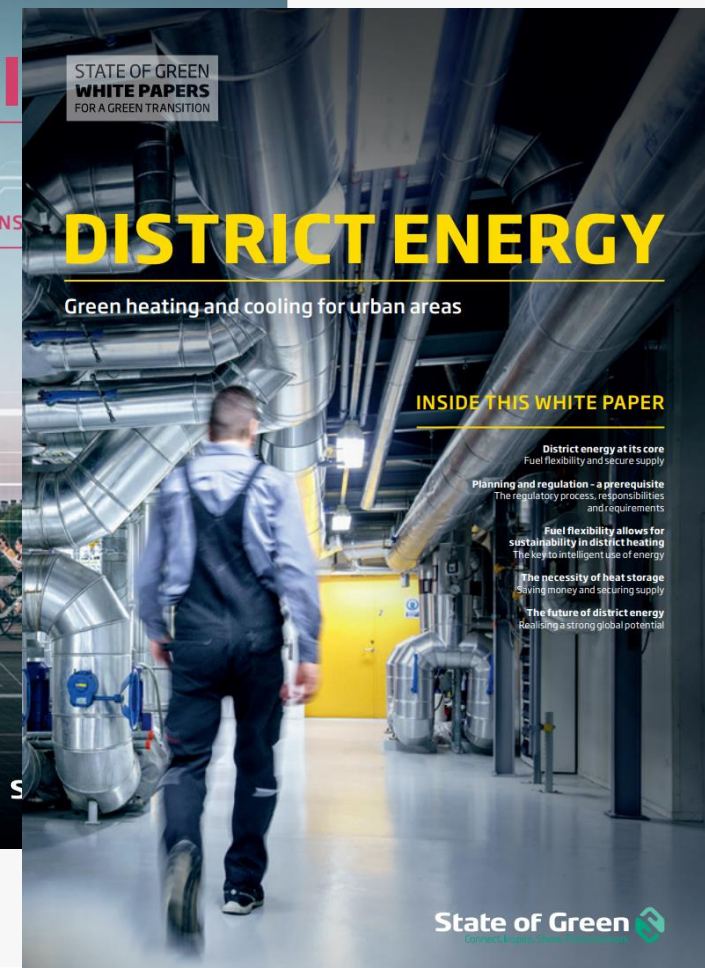


Danish Energy Industries Federation

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THANK YOU

STAY IN TOUCH

DANISH ENERGY INDUSTRIES FEDERATION
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