



GreenLab
skive

A short presentation of

- Who we are and what we do
- The symbiotic network
- Purpose and vision
- Our partners
- Enabling the green transition

What is **GreenLab Skive**

Located at the nexus of the national gas and electricity infrastructure. GreenLab Skive is the world's most advanced and truly green symbiosis



**The Site
Industrial
Energy
Park**



**World's most
advanced full-
scale symbiotic
network**



**Green
Innovation,
research &
development**



**Global
partnerships &
green
transition**

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This is **what we do**



Infrastructure

Flexibility through conversion and optimization using multiple grids



Clean Energy/Green Products

Sustainability via a plug-and-play platform enabling the connection of multiple RE producers



Energy Conversion

Energy flexibility via conversion and distribution to optimal off taker using P2X technology



Energy Storage

Enabling optimization using multiple storage opportunities for all relevant energy types



Smart Grid

Intelligent balancing with demand-response via unique software solutions



Analysis, AI & IOT

Automated data collection and processing resulting in real-time energy trading, demand and prediction algorithms

Our model is a truly collaborative Public-Private-Partnership

COLLABORATION BETWEEN POLICYMAKERS, UTILITIES, COMMERCIAL AND ACADEMIC PLAYERS ALIGN INCENTIVES AND ENABLES CHANGE

COMPANY LEVEL

DRIVE THE GROWTH OF GREENLAB AND THE DEVELOPMENT OF OUR THE CONCEPT

GreenLab

MUNICIPALITY PARTNER

SKIVE City



UTILITY PARTNER

eniig

COMMERCIAL PARTNERS

PARTICIPATE IN THE COMMERCIAL SYMBIOSIS THAT ENABLES COMPANIES TO MINIMIZE CLIMATE IMPACT, REDUCE COST AND ENGAGE IN AN INNOVATIVE COMMUNITY THAT PUSHES NEW SOLUTIONS

SIEMENS Gamesa

QUANTAFUEL

HALDOR TOPSØE

BiomassProtein

Danish Marine Protein **e-on**

ACADEMIC PARTNERS

DEVELOP STATE OF THE ART SOLUTIONS THAT CONTINUOUS TO PUSH THE BOUNDARIES FOR WHAT IS POSSIBLE



Technical University of Denmark



AALBORG UNIVERSITY
DENMARK

Skive College



PUSHING THE BOUNDARIES BY TAKING NEW SOLUTIONS FROM R&D TO COMMERCIAL APPLICATION

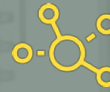
GreenLab combines green energy and intelligent technology in **the world's first truly green symbiosis**



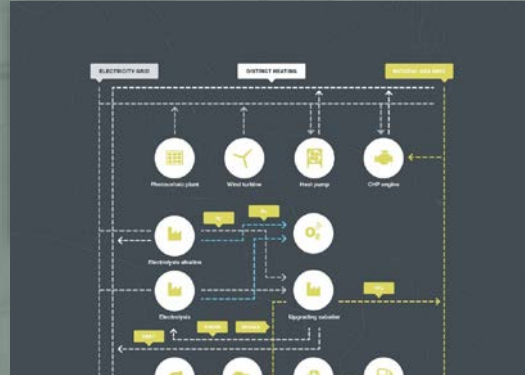
The Site – GreenLab Industrial Energy Park



Located at the **nexus of the national gas and electricity infrastructure** gives an ideal environment to apply **P2X Technology**. The symbiotic grid connects companies that consume and supply **green energy**, fuels, resources and products



A green, full-scale symbiotic network



SymbiosNet© is the world's most advanced and **first truly green commercial symbiosis**. A **fully integrated infrastructure for electricity, gas, fuel, thermal and data distribution** enables the **symbiotic energy network**



Innovation, research & development



Research partnerships with two of the **Top 10 engineering universities** in Europe: Aalborg University (#1) and DTU (#6) to expand the application of renewable energy (RE), **production of clean fuels** and to develop the **intelligent algorithm** at the center of our symbiosis



Global partnerships & regulatory advantages



GreenLab provides solutions to some of the most pressing global challenges and we **create both political and commercial partnerships** with leading international organisations to support the journey **towards a greener future**

GreenLab reconstructs **sustainable production**

PURPOSE

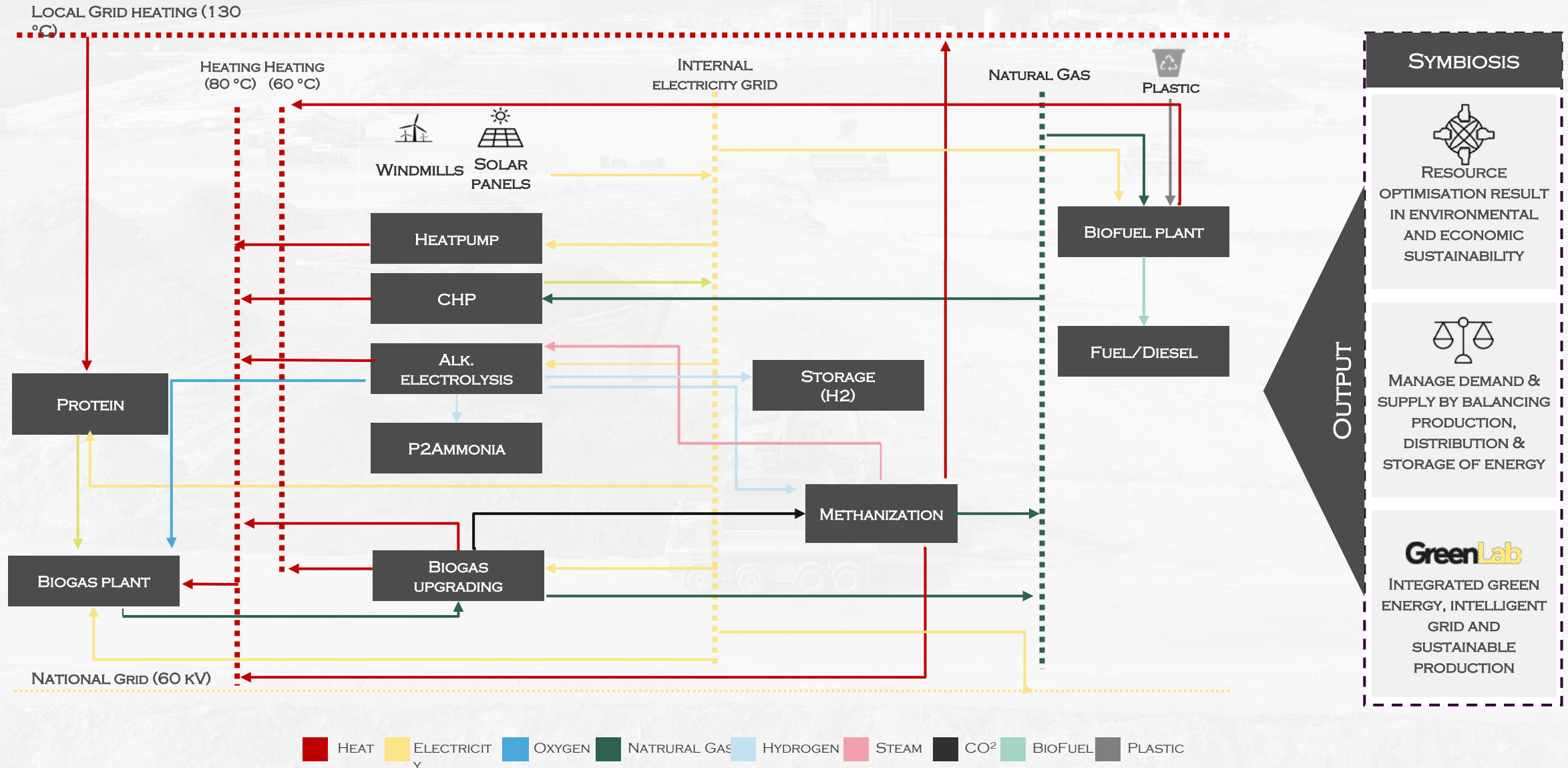
GREENLAB RECONSTRUCTS SUSTAINABLE PRODUCTION FOR A GREENER FUTURE. THE FUTURE CAN'T WAIT. WE RISE NOW. WE ARE INSTIGATING THE TRANSITION TO A SUSTAINABLE AND MORE COLLABORATIVE APPROACH TO ENERGY FOR THE WORLD OF TOMORROW.

Vision

GREENLAB LEADS THE WORLD'S MOST INTELLIGENT ENERGY SYMBIOSIS. OUR DREAM IS TO IGNITE A GLOBAL ENERGY REVOLUTION, SUBSTANTIATING THE BELIEF THAT GREEN TRANSFORMATION IS NOT ONLY A FEASIBLE — BUT ALSO A PROFITABLE — SOLUTION.



THE GREENLAB CONCEPT ALLOWING OPTIMIZATION AND BALANCE

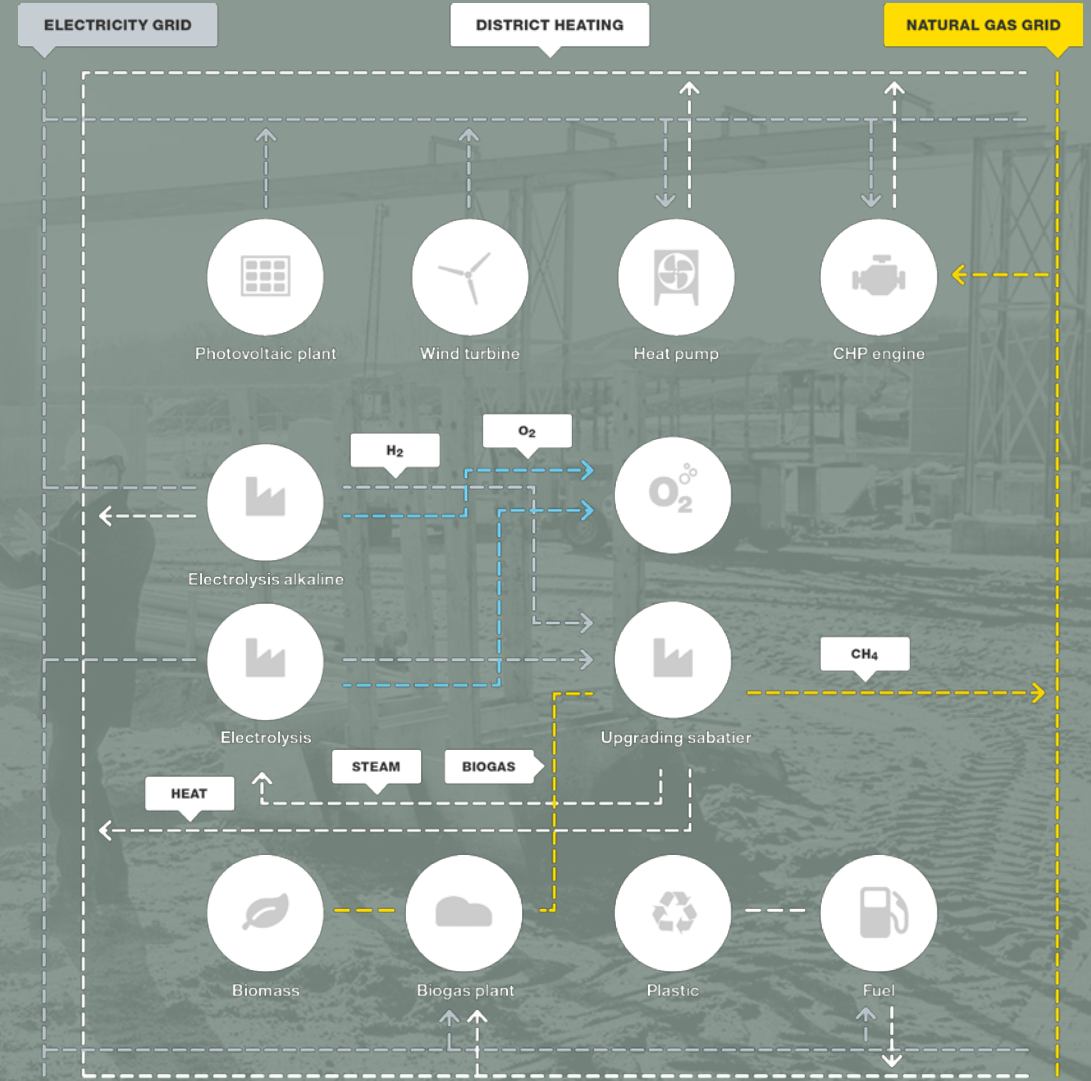


A full-scale, green symbiotic network

The SymbiosNet© is the world's most advanced and first truly green commercial symbiosis.

A fully integrated infrastructure for electricity, gas, fuel, thermal and data distribution enables the symbiotic industrial network. Fully operational by 2020.

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THE GREENLAB PRINCIPLES

- 1. POSITIVE COMMUNITY EFFECT**
LOCAL GROWTH, GLOBAL VIEW, TRUST
- 2. COMPETITIVE ADVANTAGE**
ATTRACT RESOURCEFUL PARTNERS
- 3. SYMBIOSIS TO SYNERGY**
PARADIGM SHIFT PROGNOSIS TO PRODUCTS
- 4. MUTUAL INCENTIVES**
LONG TERM ENGAGEMENT
- 5. SUSTAINABLE**
ACCELERATE THE CIRCULAR ECONOMY
- 6. CONTINUOUS LEARNING AND DEVELOPMENT**
R&D TO COMMERCIAL
- 7. GLOBAL FRONTRUNNER**
SHOW IT, DON'T TELL IT

2018

GROUNDBREAKING

2019

FOUR SITES OPERATIONAL

2020

FULL OPERATIONS

2021

EXPANSION

GreenLab enables **the green transition**



**Hydrogen economy,
mobility and renewable
fuels**

We drive the commercial
development of production of truly
clean fuels



**RE use-cases and
challenges with
cyclicity**

We power developments of clean
energy storage and expand RE
application to products



**Increasing resource
efficiency through
circularity**

Our circular production drives
resource optimisation with a
positive business case

The renewable product **platform of the future**

Renewable energy is needed to fill the gap towards the UN goals, which offers a huge economic potential for the GreenLab Model



Direct connection to new renewable sources with additional capacity

The GreenLab concept is currently the only system that fulfil requirements to produce 100% renewable fuels and p2x products



A biogenic CO₂ source available on site

The biogenic CO₂ source ensure climate optimised production and overcome any regulatory uncertainty



Essential partners are already in place and on site

Central partners create the backbone of the symbiosis and are committed and provide the foundation of an ideal environment



Active farmers and strong organisation

GreenLab and/or partners can provide rawmateriel and financing for bioeconomy projects

This is **where we are today**

2018

Groundbreaking

2019

4 factories in operations,
including 20m³ Biogas plant

2020

Full operations, including
80MW wind and solar park
with direct coupling to
GreenLab SymbiosNet®.
Start of new partner sites
internationally

2021

Full industrial build out of
600,000 m² SymbiosNet®
energy park. Start
operations at international
sites

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Join us and our partners

In contributing to the green transformation on a global scale

SIEMENS Gamesa

e-on

HALDOR TOPSØE 

 **NIPPON
GASES**
The Gas Professionals

 **QUANTAFUEL**


Danish Marine Protein

 **DEIF**

PlanEnergi

 **ALL
NRG**

DTU Technical University
of Denmark


AALBORG UNIVERSITY
DENMARK

Skive
College 

eniig

SKIVEKOMMUNE 

SKIVE  VAND

GreenLab
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Visit us at greenlab.dk