ADVANCED ENERGY STORAGE CONFERENCE 2025

PART 1

AARHUS
4 DECEMBER 2025

DANISH TECHNOLOGICAL INSTITUTE

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ADVANCED ENERGY STORAGE CONFERENCE 2025

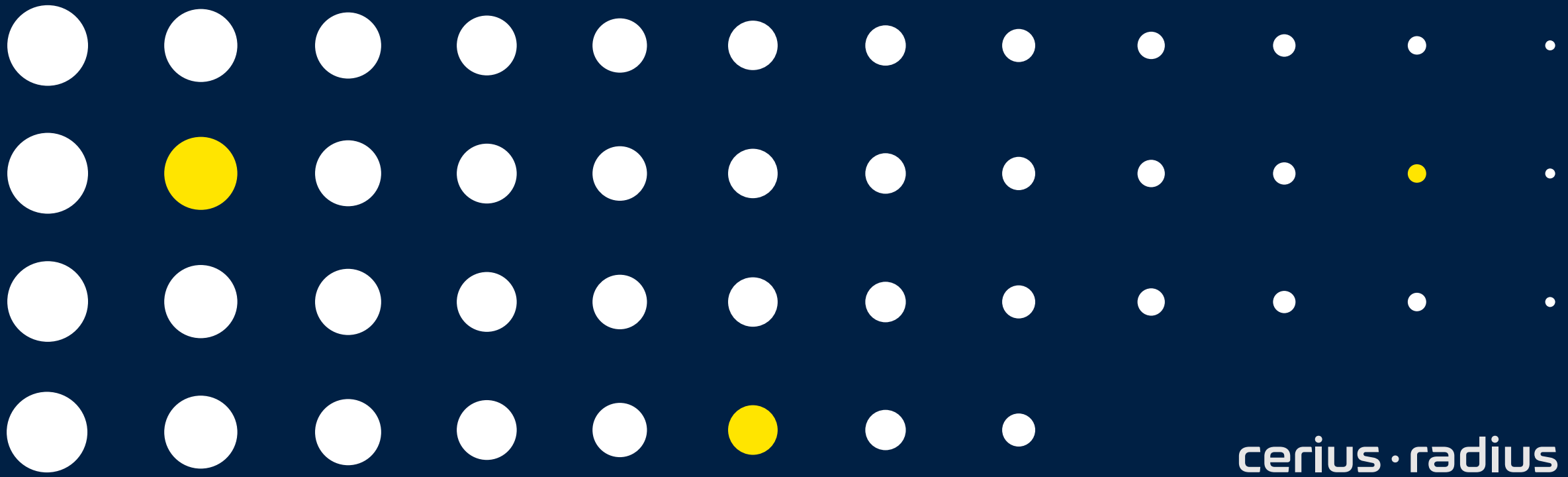
Keynote: Local Collective Tariffing – Background and Method

Jimmy Schipper Bjaaland, Cerius-Radius

Local Collective Tariff

4. December 2025, DTI, Advanced Energy Storage 2025

Jimmy S. Bjaaland



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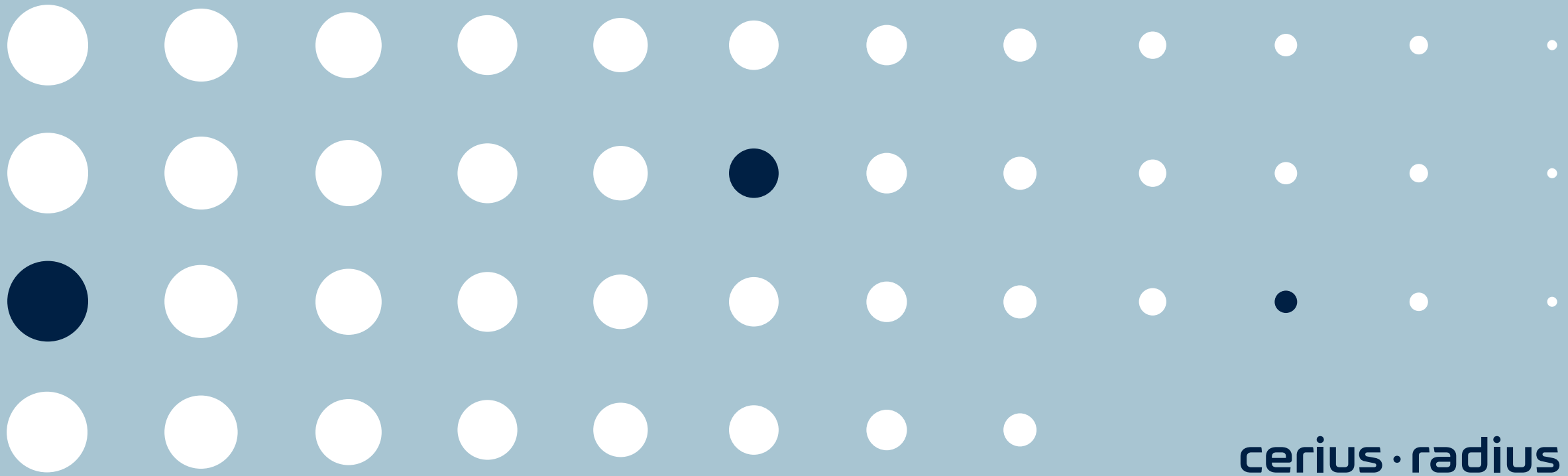
Briefly about Cerius-Radius



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Cerius-Radius
Denmark's largest DSO

We manage the electricity grids for approx. 1.5 million homes, institutions, companies and local electricity producers in Region Zealand and the Capital Region*.

We supply approximately 40 percent of the electricity supplied at the distribution level in Denmark.

Our total electricity grid assets cover

- More than 43.000 km cables and overhead lines
- 214 main stations; from 132/50 to 10 kV
- +21.000 substations; from 10 kV to 0,4 kV
- +290.000 cable cabinets, nodes in the 0,4 kV grid
- Over 1.500.000 electricity meters & customer connected

* Helsingør, Slagelse and Korsør are induvial local DSO-companies on Sealand

Electrification is accelerating

- Approx. 60,000 yearly customer
- Huge variation of scope
- Increasing complexity
- No connections can be rejected

Typical largest projects are:

- Industries
- Batteries
- District heating
- Urban development
- Charging parks for passenger cars and heavy transport
- Renewable energy plants (solar and wind)

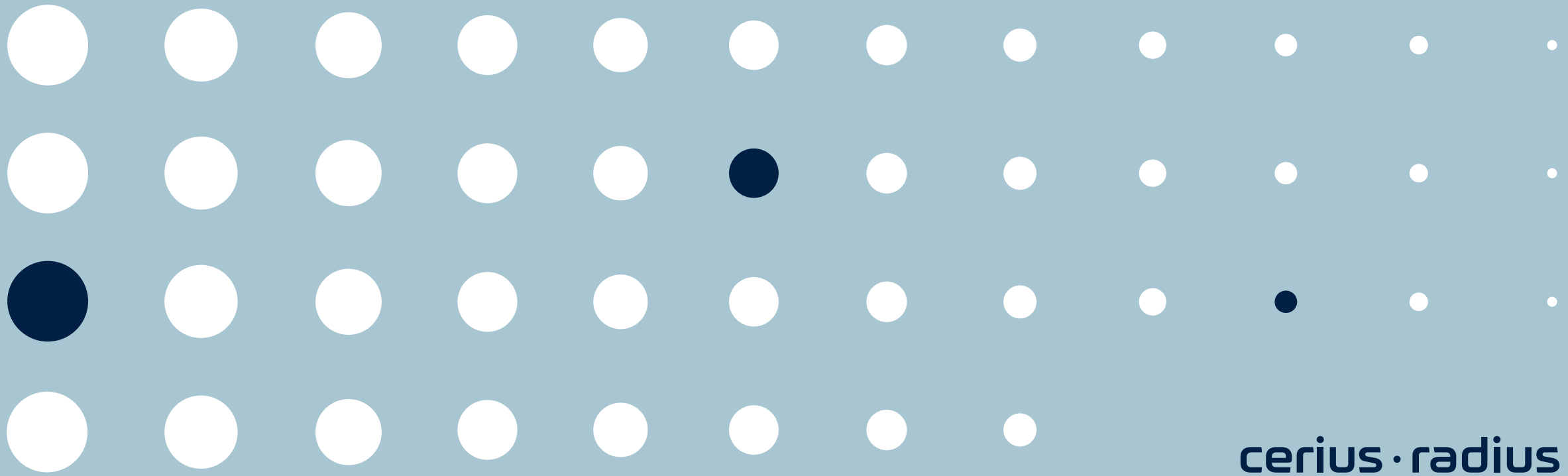
A-high	60+ MW	Large VE-plant
	40 MW	Large provincial city
	20-50 MW	Large/industrial heat pump
A-low	10 MW	Chgaring point – heavy
	4 MW	Charing point
B-high/low	0,3-2,5 MW	Depot charging
C	0,02 MW	Ordinary detached house







LKT - A new model that enables local pooled electricity customers to collaborate



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Background for LKT - And why not sooner

- Expanding renewable energy is essential to reduce CO_2 emissions
  – but how can **apartment residents participate**?
- Previous legislation offered little or **no incentive for local involvement** in renewable energy projects
- New provisions now allow grid companies to apply **local price differentiation** to encourage efficient use of the network
- The **methodology was approved** by the Danish Utility Regulator in summer 2025

* Med en ændring i elforsyningslovens § 73

The purpose of the LKT – Why do we do it?

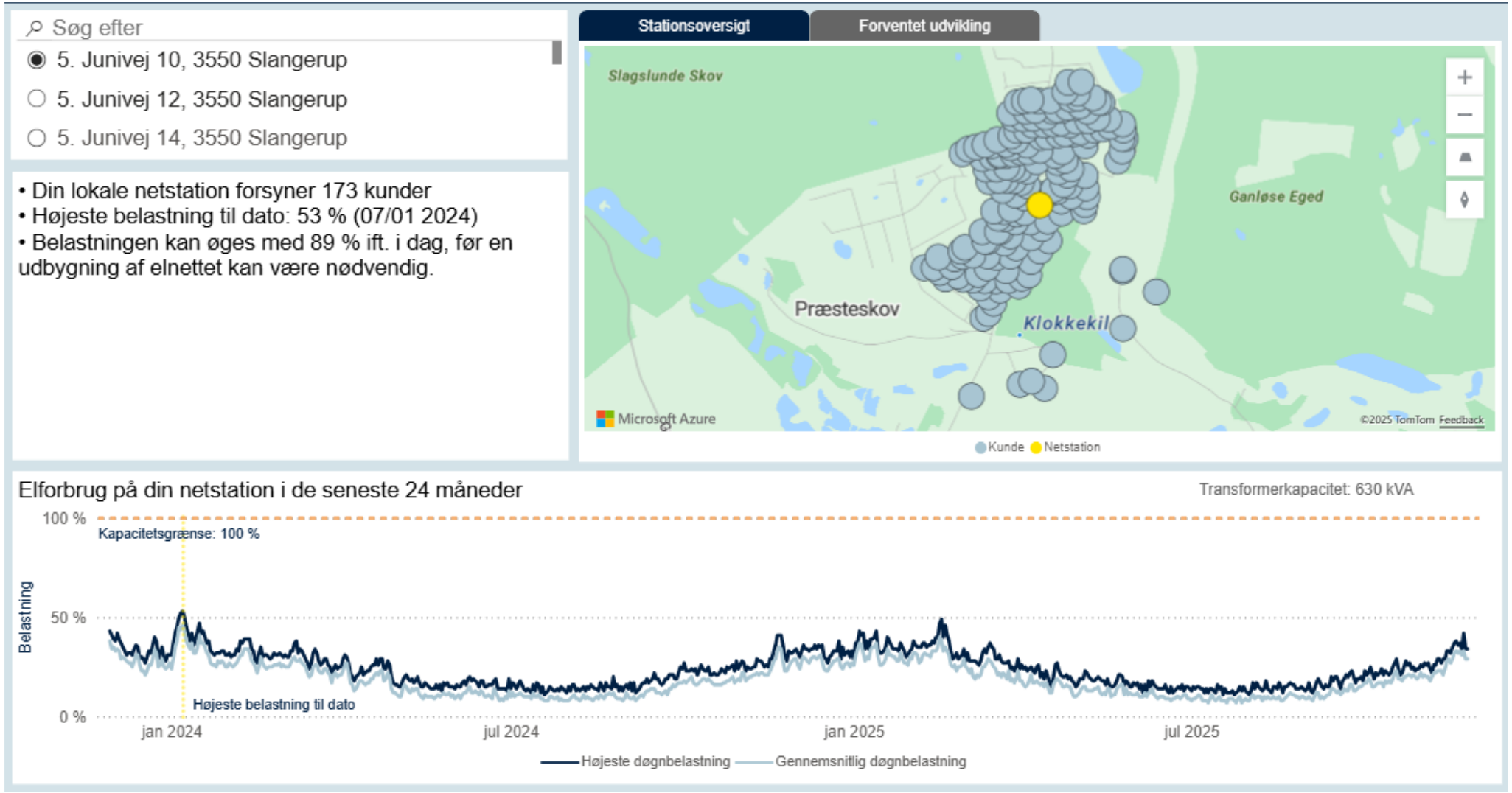
- We **incentivize local groups** to align consumption and production for better grid efficiency
- Tariffs must reflect **actual costs**, so each group pays for what they create
- Our model offers tariffs that encourage **optimal grid utilization** and smart energy placement
- Goal: **Lower peak** loads, reduce grid expansion needs - delivering economic and green benefits

Criteria for the tarif

LKT is an optional tariff and only as C-level customer.
The following criteria must be met:

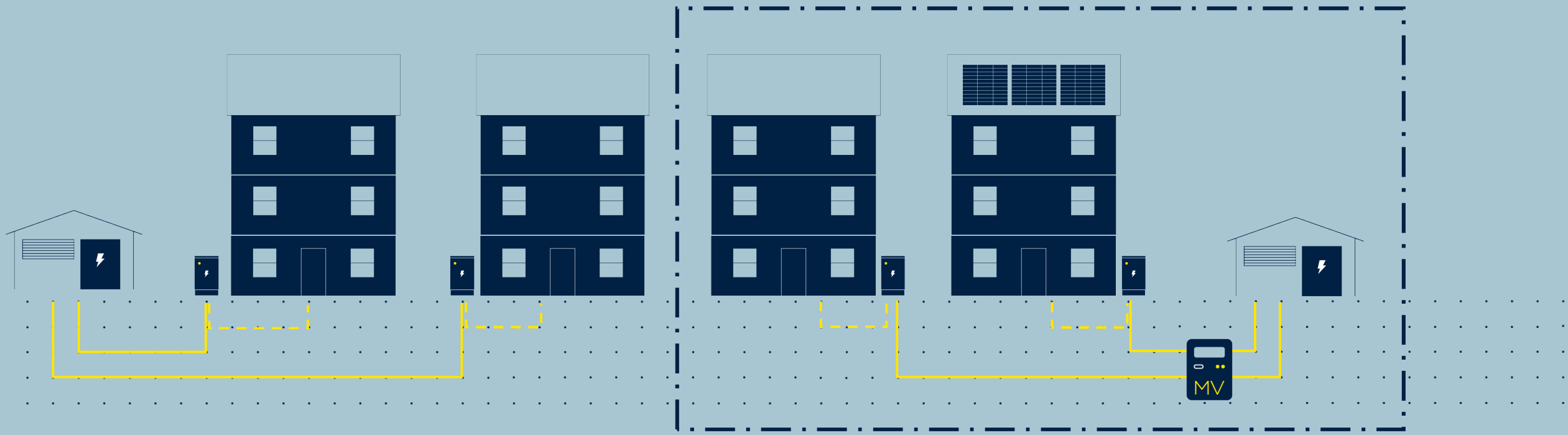
- The collaboration must consist of at least **two customers**, each with its own meter number
- The customers in the association must be connected to the **same 10/0.4 kV substation** in the distribution network on the low-voltage side
- **Electricity production of at least 25 kW** must be included in the association
- The association must constitute a legal entity with an **established CVR number**

Who can you join a local association with?



Dit lokale elforbrug - Radius Elnet

Who can use the product?
- Physics is crucial



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Price structure

Subscriptions

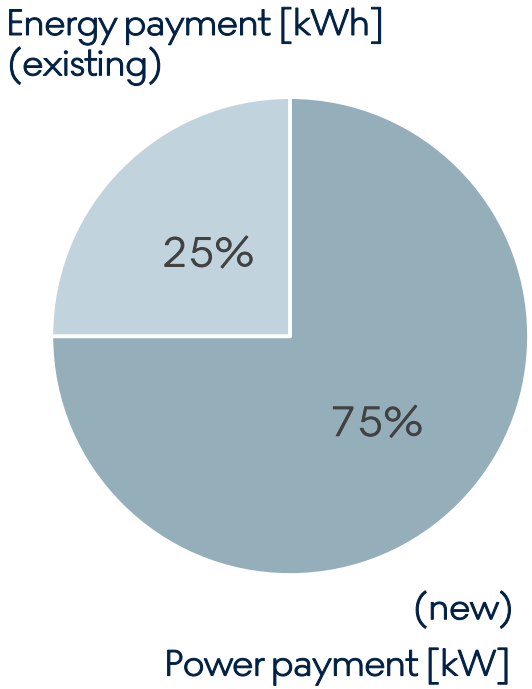
- The individual electricity meters are retained (for electricity, taxes, etc.)
  - meter subscription continues
- Separate subscription for associations on the common virtual meter.

Energy payment [kWh]

- 25% is still charged using the normal time-differentiated C-tariffs

Power payment [kW]

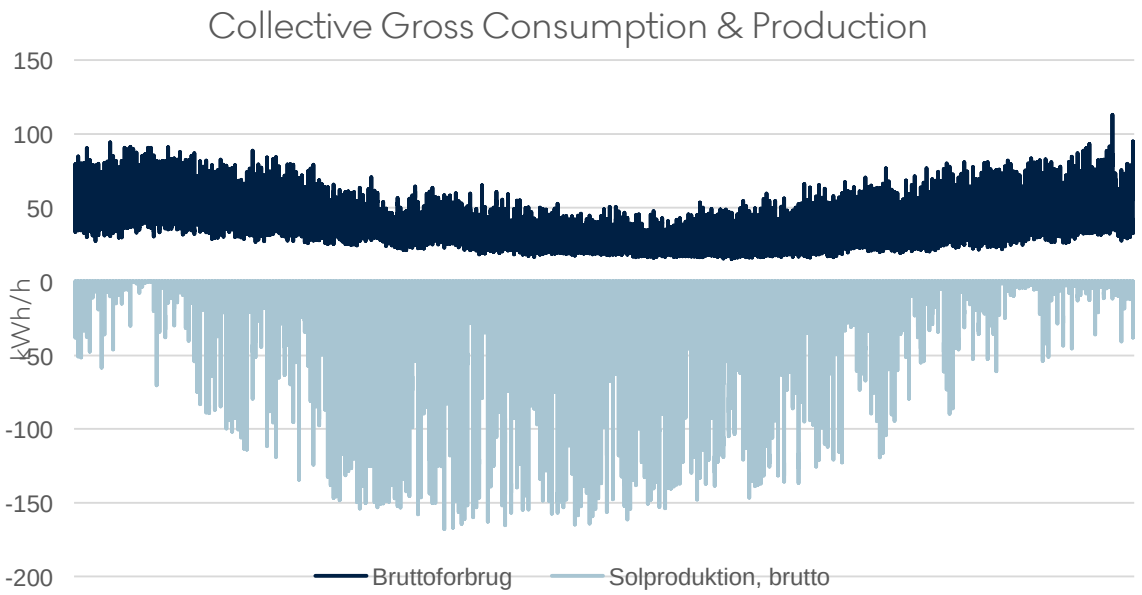
- Power payment is introduced with inspiration from high-voltage customers
- 75% of the current payment is put on power.
  Provides incentives to reduce the association's peak load
- Net consumption and production (simultaneity)

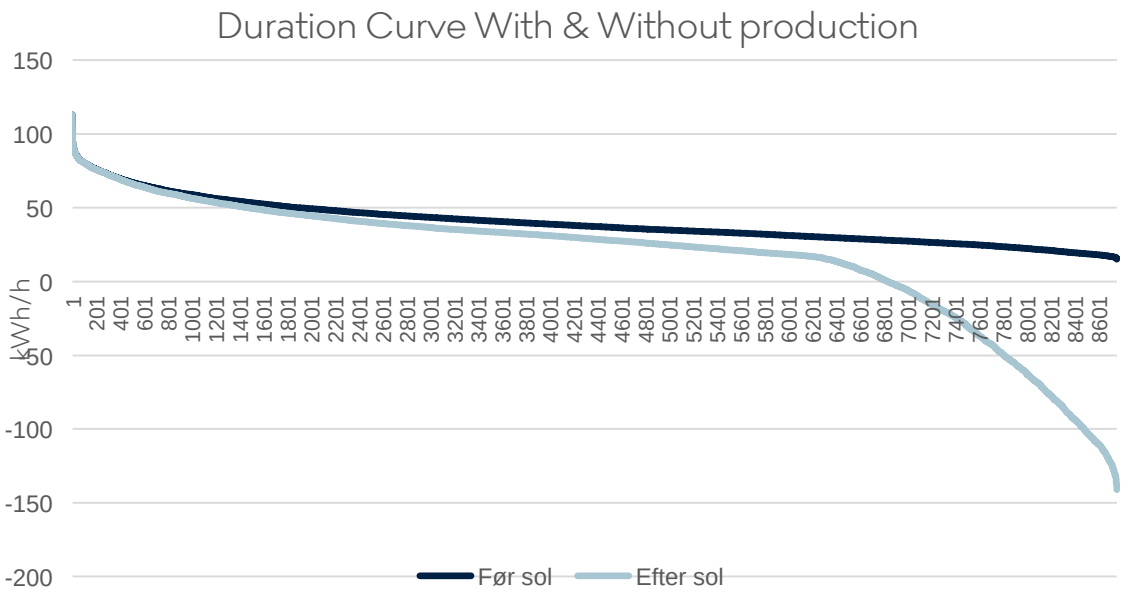


What is power payment?

- In practice, the effect is calculated via an **hourly measurement** of consumption.
- Every month, a bill is sent based on measurement data for the current 12 months. The **10 hourly measurements** in the period with the highest kilowatt-hour consumption for the virtual meter point are selected for an average calculation.
- This average electricity consumption measured in **kWh is used as an expression of the highest power draw in kW** during the period in question.
- This methodology has already been implemented for all our high-voltage customers (B-high, A-low and A-high).

Example
- Consumption and production together, one year





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Tak for opmærksomheden

Cerius and Radius want openness and dialogue about the grid companies' tasks and development

Follow the work on our websites: Cerius & Radius

Jimmy S. Bjaaland, Business Development Markedsdialog@cerius-radius.dk

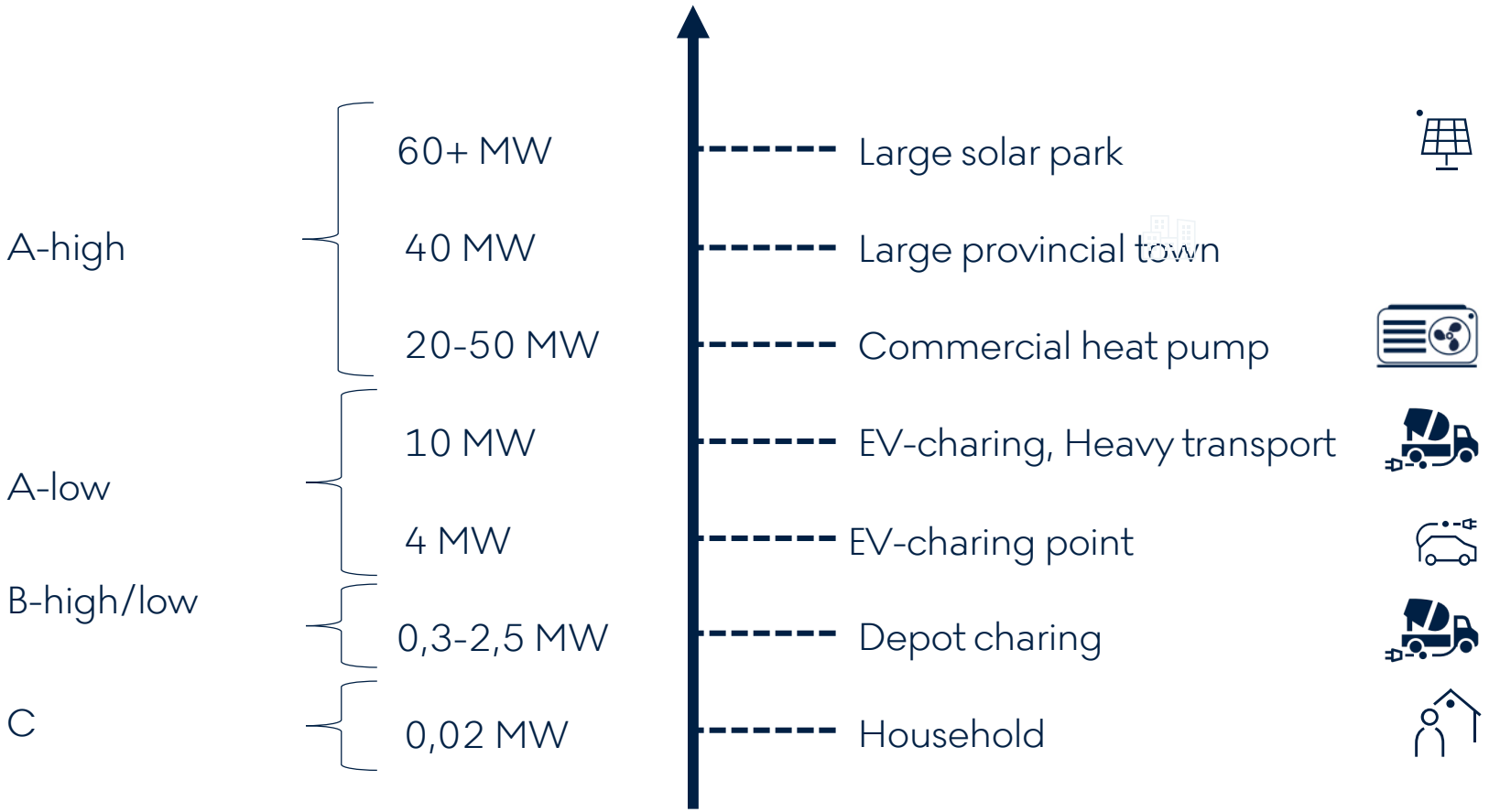
Appendix

Electrification is accelerating

- Processing of approx. 60,000 customer cases per year
- Great variation in scope and complexity
- All customer

The biggest cases are typically:

- Industries
- Batteries
- Charging parks for passenger cars and heavy transport
- Urban development
- Renewable energy plants (solar and wind)
- District heating



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Associations of network users - When is there an advantage to simultaneity?

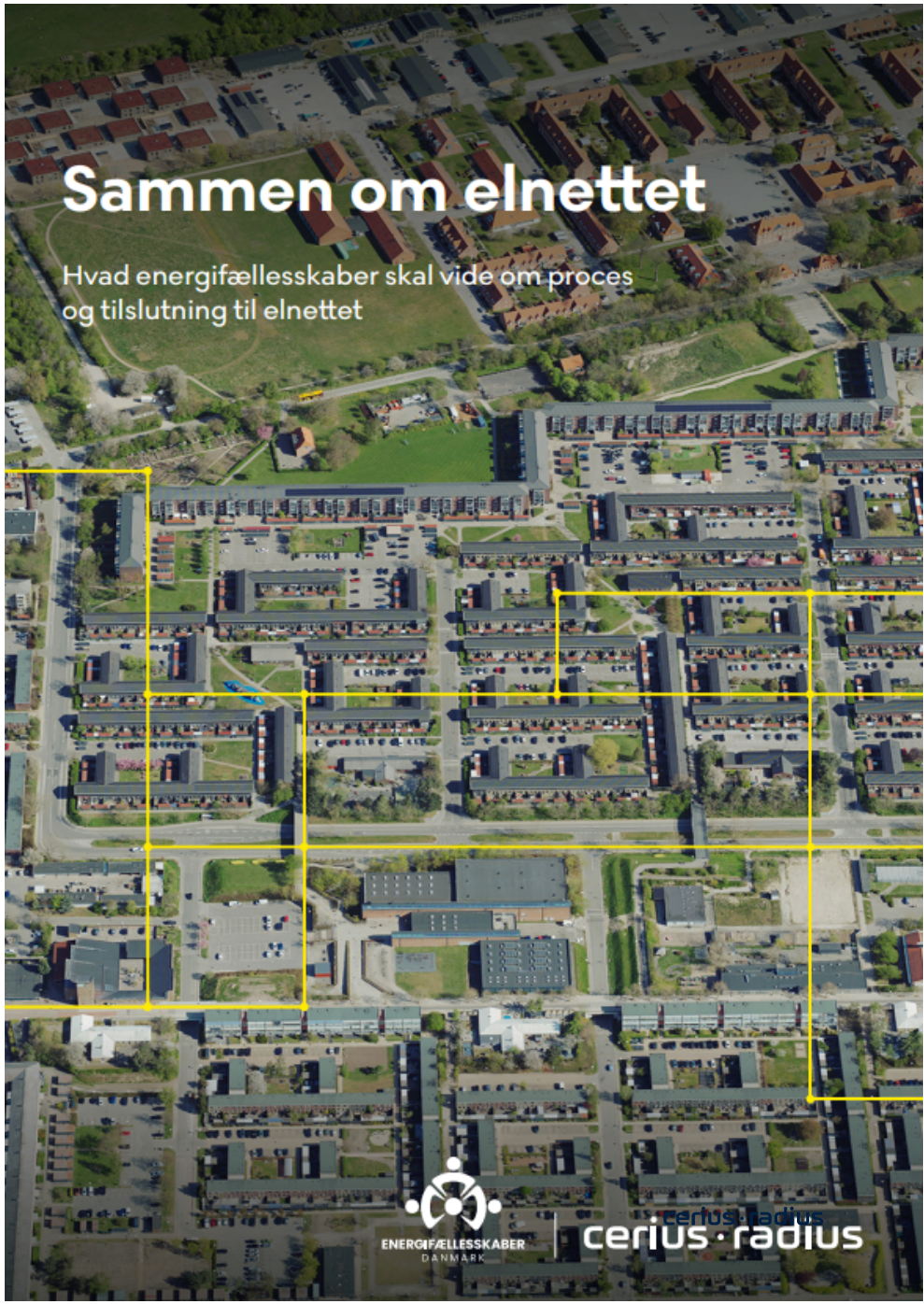
- Tariff classification must reflect **advantages** that arise when **consumption and production** balance each other out local
- There is **potential** - but requires sustained at the same time
- **Arbitrary** and not continuous simultaneity between consumption and production **does not save anything** for the grid companies (or at least not as much as the customer can save by avoiding paying consumption tariffs!)
- A tariff classification based on a **kWh payment** encourages **net neutralization**, where any immediate concurrency is rewarded
- Does not necessarily give rise to savings for DSO in either the short or long term.
- **Reducing maximum power** draw can in turn provide cost savings

Hvad er ansøgningsprocessen?

1. Mindst to elnetkunder	Min. to elnetkunder skal med hver deres aftagenummer. Ingen øvre grænse
2. Samme netstation	Bekræft forsyning fra samme netstation
3. Mindst 25 kW elproduktion	Minimum 25 kW elproduktion fra f.eks. solceller. Batterier er ikke elproduktion
4. Opret juridisk enhed	Der skal oprettes en forening eller anden juridisk enhed med CVR-nummer
5. ansøgningsformular	Udfyld og indsend ansøgningsformularen på vores hjemmeside
6. Behandling af ansøgning	Vi vurderer jeres ansøgning
7. Godkendelse	Hvis vi kan godkende ansøgningen, opretter vi et fælles virtuelt målepunkt for sammenslutningen
8. Vælg elleverandør	Sammenslutningen skal vælge elleverandør til det virtuelle målepunkt

Is the model only for Energy Communities?

- Any association of electricity grid customers that meets the criteria can make use of the model.
- Read more about Energy Communities in our folder: Sammen-om-elnettet_2025.pdf,
  The leaflet has been prepared together with Energy Communities Denmark



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Greenlab as an Energy Community - Microgrids, Flexibility and Green Symbiosis

Mathias Damgaard Mørch, Greenlab Skive


GreenLab
Green & circular industrial park – Technology enabler – International research platform
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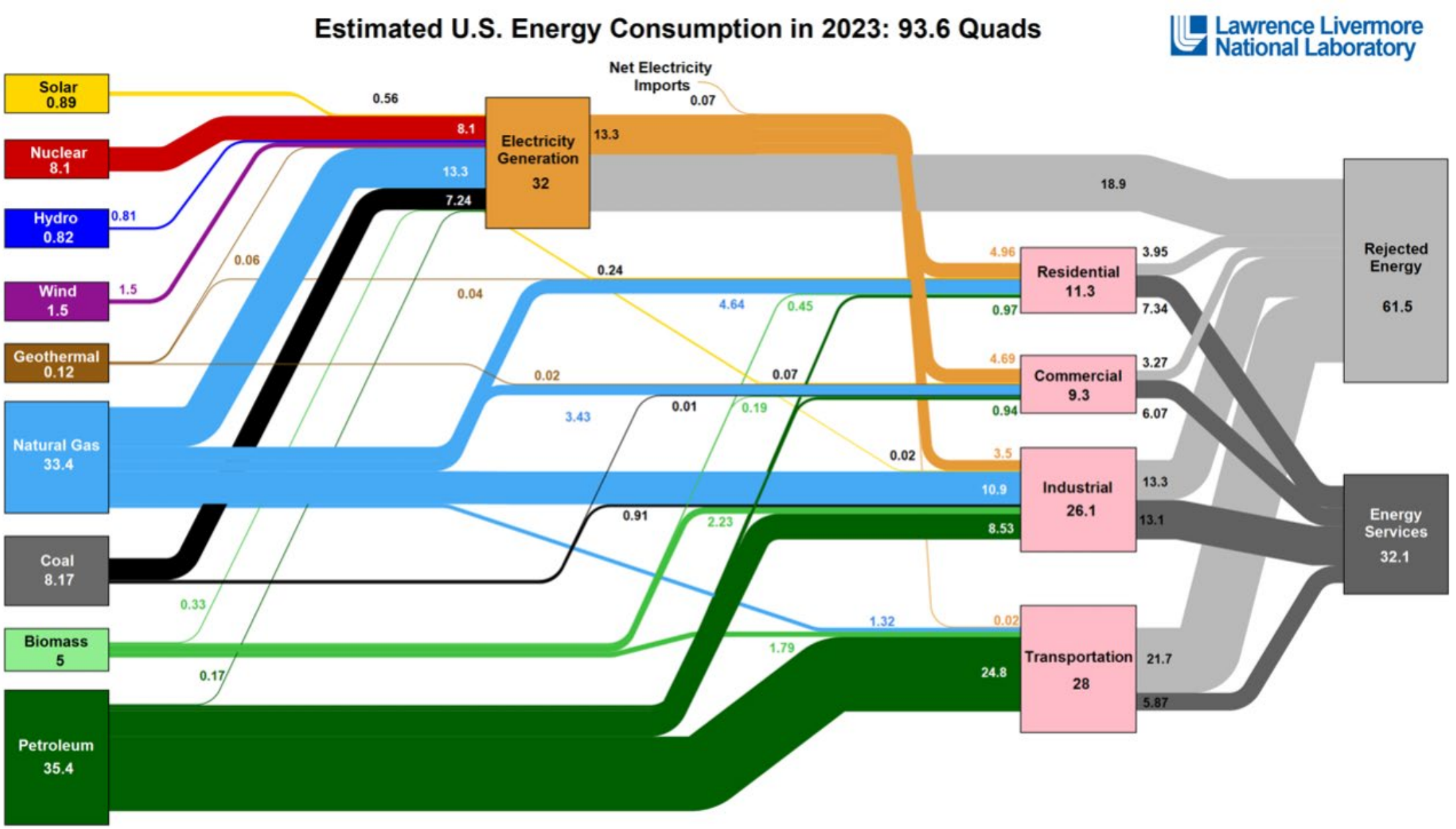
GreenLab Research and Education

Mathias Mørch

Educational Manager,
research project lead.

MADM@GreenLab.dk



Why Industrial Symbiosis?

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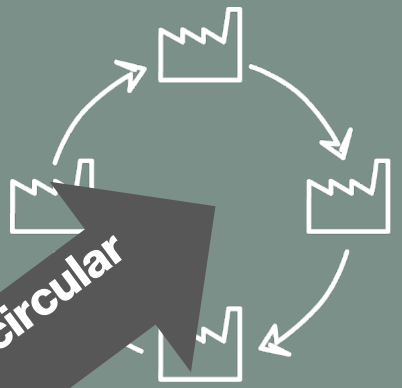
What problem needs adressing?

Green and circular industrial clusters

- a model for sustainable growth

Optimisation of energy throu
co-location (micro gri



How do we imagine circular industry?

Circular economy and clustering (sector coupling)

A replicable model designed to scale-up and globalise

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Becoming circular with green energy as foundation....

GENERATE

We generate sustainable energy for our partners

STORE

The green energy is stored in all its forms: Electricity, heat, gas and electrofuels

SHARE

The SymbiosisNet™ is an intelligent grid of energy and data that will let our companies share their surplus energy

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FROM CONCEPT TO
REALITY...
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GreenLab Skive site map

- Planned
- Available
- In operation
- Reserved

Current area

Chapter 1 - 60 hectares


GreenLab Skive site map
Planned
Available
In operation
Reserved
Expansion area
Chapter 2 - 70 hectares


GreenLab Skive site map
Planned
Available
In operation
Reserved
thyssenkrupp
nucera
GreenLab
Eurowind
Energy
ORGANIC
FUEL TECHNOLOGY
Stiesdal
Vestjyllands Andel
Sammen om praktisk innovation
GREENLAB skive
Biogas
NETSELSKABET
N1
QUANTAFUEL
nomi 4s
RESSOURCE CENTER

GreenLab Skive site map

Planned Infrastructure

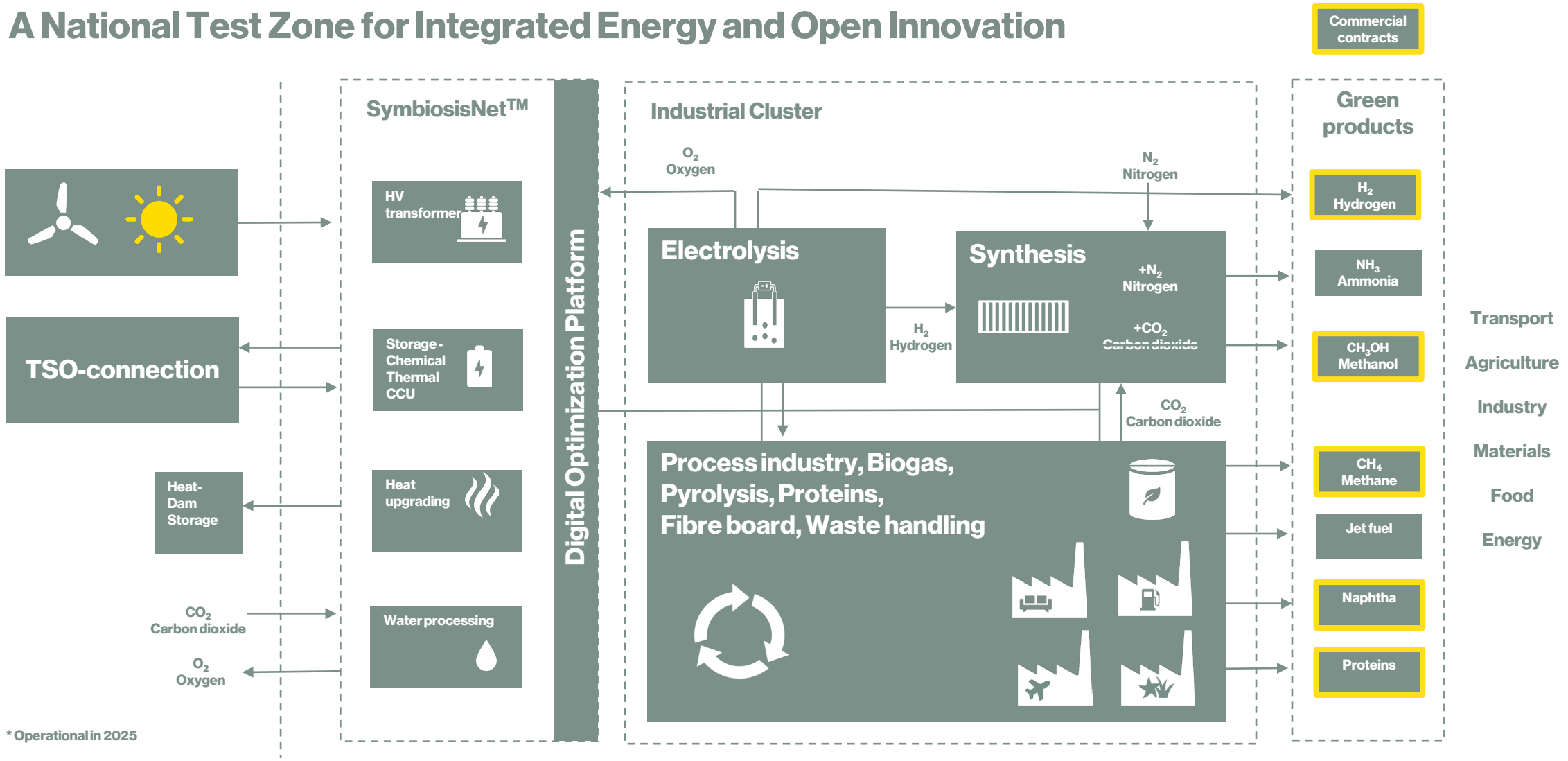
- Renewable Energy
- Purified water
- Hydrogen
- Heat

Current Infrastructure

- Renewable Energy
- Purified water
- Hydrogen
- Heat

GreenLab Skive Energy Park – SymbiosisNet™*

A National Test Zone for Integrated Energy and Open Innovation



* Operational in 2025

GreenLab

Green and circular industrial cluster

a model for electrifying industry and sustainable growth

+3 bDKK

Investments in the industrial cluster

+100

in our research community

110

New FTE

8

Innovative sitepartners

2027

GreenLab's new Innovation Center is ready

+10.000

visits annually

+9.000

Local hotel stays

86%

Green electricity usage in the industrial cluster

200MW

Transformerstation with prebuilt capacity

84MW

Solar and wind

21

Mission-driven research projects solving real-life challenges in the green transition of industry

76%

of citizens in Skive value GreenLab as important for the development of Skive Municipality

GreenLab Innovation Center

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DESIGN PROPOSAL


LET'S CREATE
A POWER SHIFT
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See you next time for Advanced Energy Storage 2026