

CLEAN

Connecting Danish Cleantech

Four clusters have become one...



COPENHAGEN
CLEANTECH CLUSTER

**DANISH ENERGY
SOLUTIONS**

Part of LEAN ENERGY CLUSTER



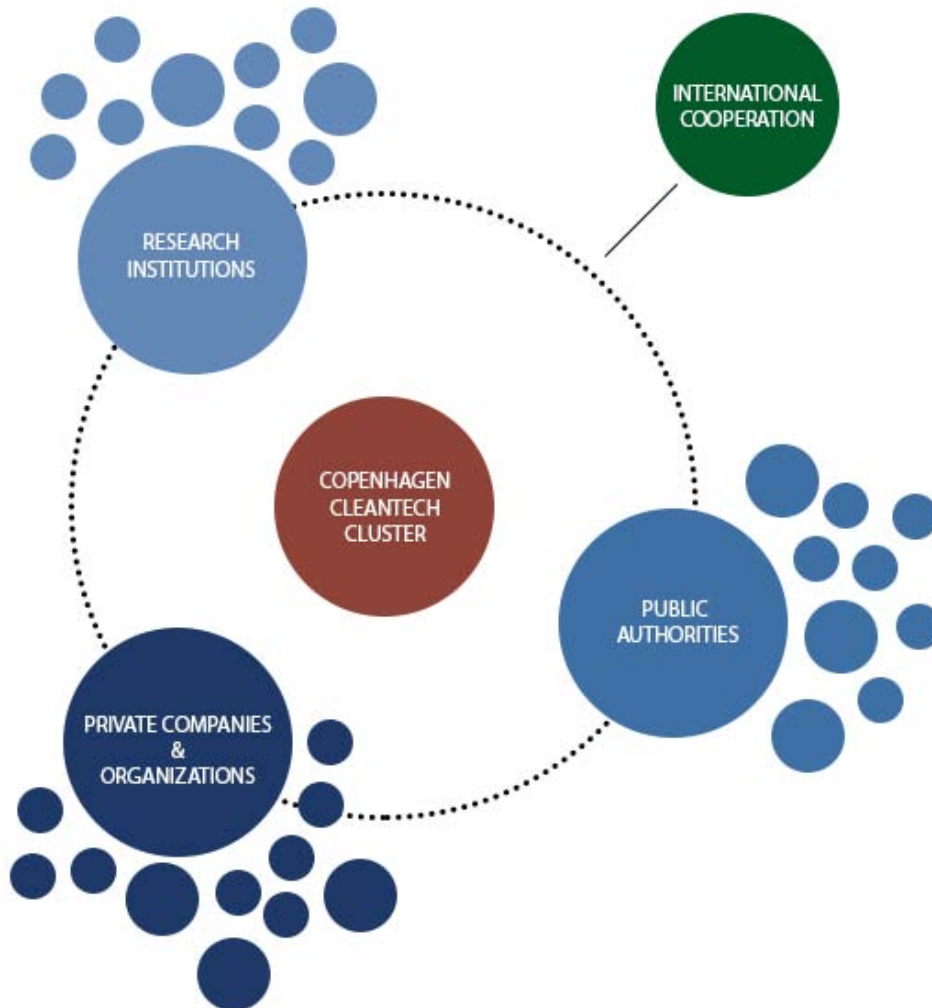
**Danish
Water Services**



- CLEAN is the result of a merger between Lean Energy Cluster, Danish Energy Solutions, Danish Water Services and Copenhagen Cleantech Cluster (9 May 2014)
- CLEAN is the focal point of developing new cleantech solutions in Denmark
- CLEAN works across traditional sectors involving private sector, public sector and universities

 **CLEAN**

What is a cluster?



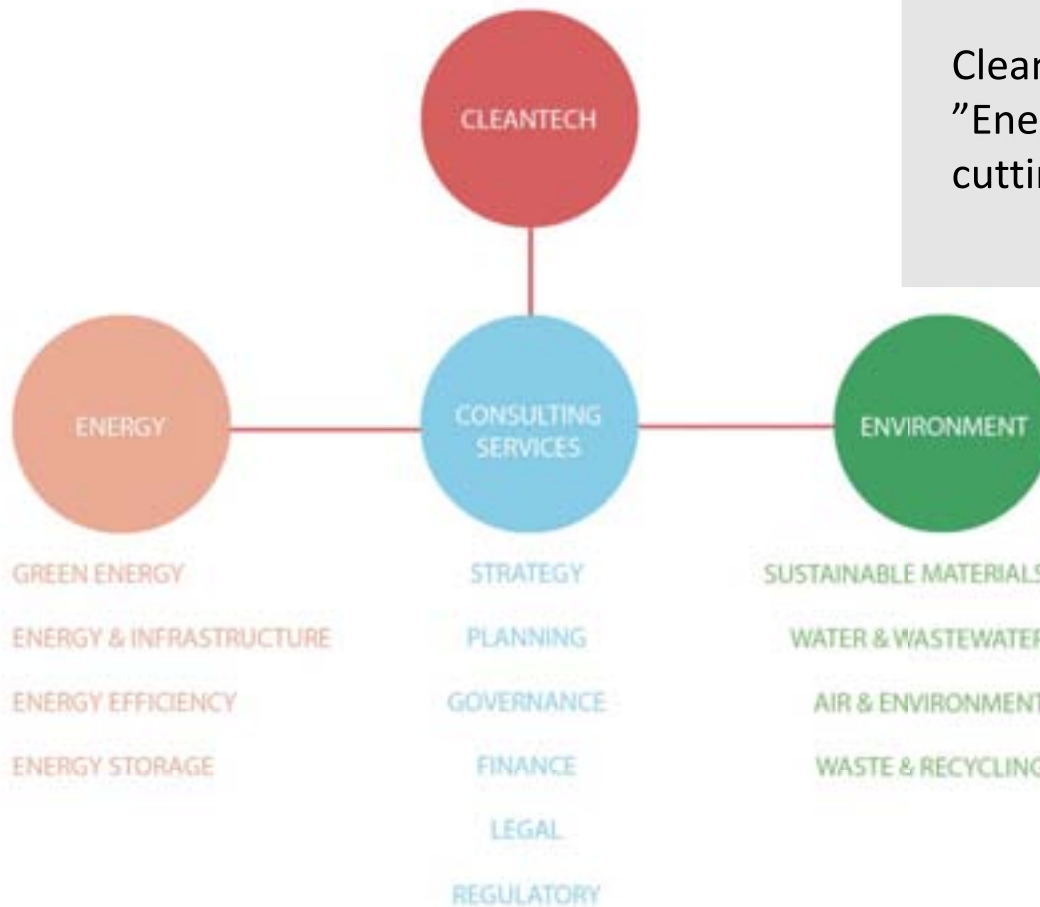
Triple helix clusters combine the skills and expertise of academia, public institutions and private companies within a specific field of business.

- Support growth of member companies by strengthening trade relationships.
- Generate new business opportunities by actively driving innovation projects.
- Easing access to new knowledge for member companies.
- Help startups build their network.
- Grants access global markets through international cooperation
- Acts as a point of entry for foreign companies.

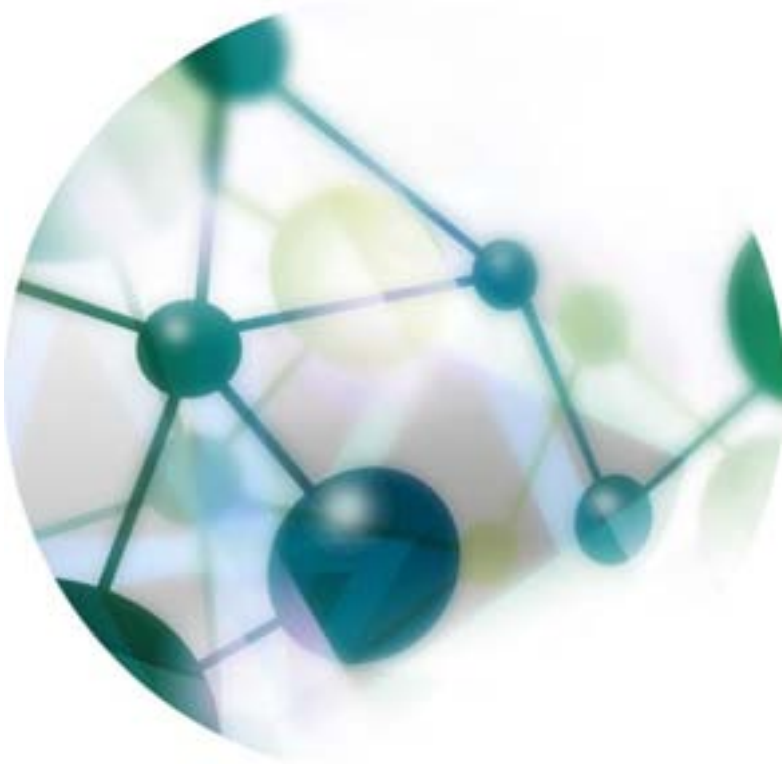
What is cleantech?

CLEAN can work with all cleantech-related technologies and services

Cleantech can roughly be categorized in "Energy" and "Environment" with a cross-cutting service category including water.



Green growth and job creation



- **Strengthen innovation** and technology development – also in SME's
- Develop and **implement new solutions** to address societal challenges related to climate change and environment
- Increase **internationalization** by supporting export and concrete integrated solutions enhancing business opportunities across boarder
- Activities within **education, research, entrepreneurship** and **test- and demonstration**

International Cleantech Network



ICN SUMMIT 2014

Creating Smarter Solutions

20-23 May 2014 | Copenhagen



Our aim is to enhance growth and employment



Vision

We want to develop technologies, products and systems, ensuring a modern welfare society that operates with the lowest energy consumption possible.

We bring together private and public companies who are able to see opportunities in innovation, product development and export of complete solutions.

We have developed a platform – a competence center that Danish companies can use in connection with innovation, market analysis, branding and export.

We support the export of total solution-based projects through:

- Project Development
- Partnerships
- Project Financing
- Export Promotion



Our role as a cluster

CLEAN is developing projects with focus on energy efficiency in the energy and environmental sectors.

- Identify and initiate projects and partnerships
- Facilitate partnerships and projects within the focus areas
- Develop projects together with committed companies, partners and clients
- Coordinate the internal work between partners and keep contact to the client in connection to projects and financial solutions
- Negotiate concrete financial solutions and agreements with financial institutions



On going project



Mongolia: Refurbishment of Darkhan District heating, supply to 100,000 inhabitants.

Project sum: approx. 150 million DKK

Partnership: Danfoss, ABB, Kamstrup, Logstor, Desmi, OE3i, COWI

Status: FS finished and waiting for State Guaranty

Myanmar: NRW for Yankin District in Yangon

Project sum: Approx. 30 mio DKK

Partnership: VCS Denmark, Grontmij

Status: FS will be presented August 2014 for YCDC

On going projects



ESCO Fæøerne:

Initial project sum: 20 mio DKK for consulting services and test project

Partnership: Consortium in progress

Status: Demoproject for 8-10 buildings end of 2014



Export promotion to Myanmar:

Project sum: 0,6 million DKK

Partnership: Expected 15 companies

Status: Expected approval from DE in June

On going projects



Vietnam: NRW project in Hanoi

Project sum: 35million DKK (Danida 18, MUDP 2, commercial 16)

Partnership: Envidan, VCS Denmark and local partners

Status: Waiting for a State guaranty



USA: Bridgeport waste heat from incineration plant to district heating

Initial project sum: 5 mio DKK for consulting services

Total project sum 180 mio DKK

Partnership: ABB, Logstor, Damgaard, Niras, Danfoss, DESMI, Oe3i, Kamstrup

Status: MoU proposed, (RFP) initial offer for consulting delivered



On going projects



Ukraine: Energy optimization of 10 pumping stations
Project sum: 14 million DKK (EPC)
Partnership: ABB, Desmi, Danfoss, Oe3i, Kamstrup
Status: Contract negation started, process stopped because of political situation

Denmark: Baseline model for energy efficiency and on-line monitoring.
Development project for Middelfart - first ESCO project for WWTP in Europe
Project sum: approx. 3 million DKK
Partnership: Envidan, PICCA, DHI, Grontmij, Danfoss,
Status: Expected to finish the development project November 2014 and the project will be tendered as an ESCO beginning 2015
Potential: More than 60% of all WWTP in Europe are in the range of 30-60.000 PE (Middelfart 50.000 PE)

On going projects



Poland: Energy optimization in pharma industry, Polfa Lublin

Project sum: 1,6 million DKK

Partnership: SE Big Blue, Solia, Danfoss, Green Light

Status: Waiting for Polfa Lublin to agree



Myanmar: Energy optimization in the brewery sector

Initial project sum: 1 mio DKK (Danida)

Partnership: Grundfos, Alektia, Danfoss, VCS Denmark

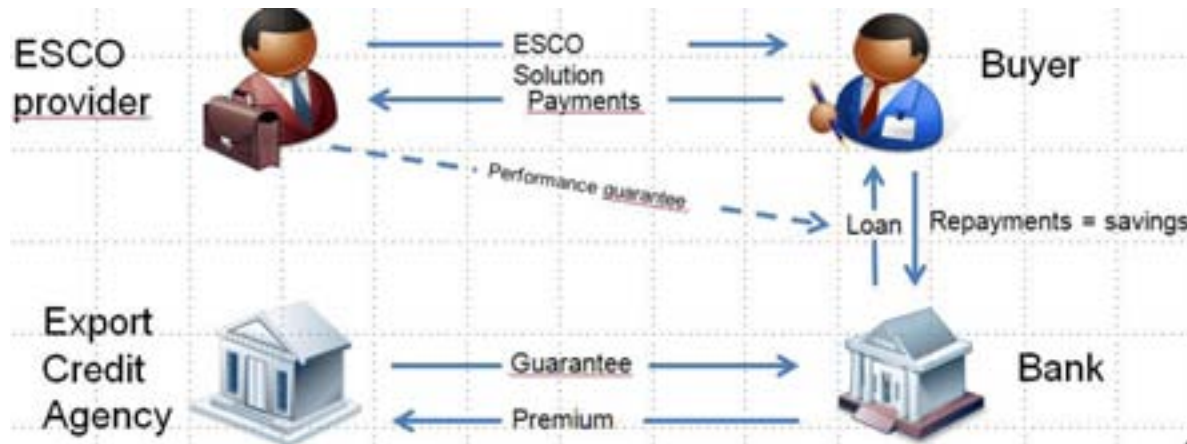
Status: Expected start July 1, 2014



Financing

CLEAN makes financial advisory and project development services at competitive rates:
These include:

- Energy efficiency and environmental project development management
- Deal structuring
- Debt instrument and/or equity investment arrangement



Financing Models

When both customer and supplier “take a small risk” the bank loan can be covered 100% with an EKF guarantee.

Payment from the customer: 15%

Supplier gives credit of: 15%

Commercial bank loans guaranteed by EKF providing the remaining 70%

The loan is repayable by regular installments, supply and conditions vary

The credit can also be connected to an EPC model

We work with several financial institutions – Danish and International financing institutions.

