Case descriptions

Portugal

Denmark

Norway

The Netherlands

Steunpunt Energietransitie - the city of Nijmegen (English)

Steunpunt Energietransitie is a citizens initiated and -based platform. It collects and distributes important information about the energy transition in the city of Nijmegen and surrounding area. It is a platform that was founded at the beginning of 2024 to coordinate and synchronize already existing citizen initiatives in six neighborhoods in Nijmegen and three neighborhoods in nearby municipalities.

The focus of the Steunpunt is on information provision about energy savings, training of energy coaches, collective buying of energy saving measures and solar panels, and implementation plans for energy solutions that move away from the use of natural gas.

The platform's main activities include:

- knowledge sharing, for example through energy cafés and workshops;
- organizing activities that foster the collaboration between citizen initiatives and the municipalities, housing corporations, local businesses;
- information provision on budgeting and financing; and
- increasing the visibility of ongoing citizen activities related to the energy transition.

Steunpunt Energietransitie - Nijmegen en omgeving (Nederlands)

Steunpunt Energietransitie is een belangrijk platform voor het verzamelen en verspreiden van informatie over de energietransitie in de stad Nijmegen en omgeving. Het is een platform dat begin 2024 is opgericht om de activiteiten van reeds bestaande burgerinitiatieven in zes wijken in Nijmegen en drie wijken in nabijgelegen gemeenten te coördineren en te synchroniseren.

De focus van het Steunpunt ligt op informatievoorziening over energiebesparing, training van energiecoaches, collectieve inkoop van energiebesparende maatregelen en zonnepanelen, en uitvoeringsplannen voor energieoplossingen die afstappen van het gebruik van aardgas.

De belangrijkste activiteiten van het platform zijn:

- kennisdeling, bijvoorbeeld via energieborrels en workshops;
- het organiseren van activiteiten die de samenwerking bevorderen tussen burgerinitiatieven en gemeenten, woningcorporaties, lokale bedrijven;
- informatievoorziening over budgettering en financiering; en
- het vergroten van de zichtbaarheid van lopende burgeractiviteiten met betrekking tot de energietransitie.

Hengstdal - city district in Nijmegen (English)

The city of Nijmegen designated Hengstdal as one of the first neighborhoods to become independent from the use of natural gas for energy provision. Since 2016, citizens have played an active role in this still ongoing process towards 'neighbourhood or district heating system based on a collective heat pump with storage.

Citizens have been involved in designing and implementing possible energy and heating system solutions, for which they have been collaborating with the municipality, distribution system operator, and housing corporation in the area. In an earlier phase, the energy system project received financial support from the Dutch national government.

In the case of Hengstdal, we study the development of alternative energy system solutions for this neighborhood. In particular, we are interested in the roles that citizens have (not) been able to take on throughout the ongoing trajectory of working towards a more energy positive district.

Hengstdal - wijk in de stad Nijmegen (Nederlands)

De gemeente Nijmegen heeft Hengstdal aangewezen als een van de eerste wijken die onafhankelijk wordt van het gebruik van aardgas voor de energievoorziening. Sinds 2016 spelen burgers een actieve rol in dit nog steeds lopende proces.

Burgers zijn betrokken geweest bij het ontwerpen en implementeren van mogelijke oplossingen voor het energie- en verwarmingssysteem in de buurt. Hiertoe hebben ze samengewerkt met de gemeente, de regionale netbeheerder en de woningcorporatie in het gebied. In een eerdere fase kreeg het energiesysteemproject financiële steun van de Nederlandse overheid in de vorm van een subsidie via het Programma Aardgasvrije Wijken (PAW).

In het geval van Hengstdal bestuderen we de ontwikkeling van alternatieve energiesysteemoplossingen voor deze buurt. In het bijzonder zijn we geïnteresseerd in de rollen die burgers (niet) hebben kunnen aannemen gedurende het doorlopende traject van werken aan een meer energiepositieve wijk.

Portugal

Torres Vedras – a city-wide Positive Energy District (English)

Located 50km north of the capital of Portugal with a population of nearly 80,000 inhabitants, of which 2,000 are in the city, Torres Vedras is the largest municipality of Lisbon district.

Torres Vedras resembles a city-wide PED with a sustainability record of being a member of the Convenant of Mayors and receiving European Green Leaf Awards. With an inclusive mobility plan and renewable energy production on the rise, Torres Vedras is committed to become a smart city that improves the quality of life and the exercise of active citizenship.

The Action Plan for Sustainability and Energy of Torres Vedras until 2050 (PASETV) emphasises the needs to tackle energy poverty, especially in socially deprived areas such as Encosta de São Vicente.

Torres Vedras – Um Distrito de Energia Positiva em toda a cidade (português)

Localizado a 50 km a norte da capital de Portugal, com uma população de quase 80.000 habitantes, dos quais 2.000 estão na cidade, Torres Vedras é o maior concelho do distrito de Lisboa.

Torres Vedras assemelha-se a um PED de toda a cidade com um historial de sustentabilidade de membro do Convenant of Mayors e de receber European Green Leaf Awards. Com um plano de mobilidade inclusiva e a produção de energias renováveis em ascensão, Torres Vedras está empenhada em tornar-se uma cidade inteligente que melhore a qualidade de vida e o exercício da cidadania ativa.

O Plano de Ação para a Sustentabilidade e Energia de Torres Vedras até 2050 (PASETV) destaca a necessidade de combater a pobreza energética, especialmente em zonas socialmente desfavorecidas como a Encosta de São Vicente.

Encosta de São Vicente - Urban regeneration programme (English)

Situated in the north of Torres Vedras, Encosta de São Vicente is an isolated area by the foot of the hill and disconnected to the city by a river. Rugged terrain housed low-quality housing buildings that, in turn, concentrated layers of the population with less economic power.

On January 27, 2015, the City Council of Torres Vedras approved the proposal for the delimitation of the Urban Rehabilitation Area of Encosta de São Vicente. The intervention area of the project has 19.2 hectares and 724 residents, corresponding to 5% of the population of the city of Torres Vedras (2017).

The still rolling interventions from the municipality that contribute to PEDs in the area, referred as PEDU or ENCOSTA Progamme, are:

- retrofitting some buildings/centers/ social housing,
- greening public spaces,
- increasing accessibility for individual and public transport by walking paths.

Encosta de São Vicente - Programa de regeneração urbana (Português)

Situada a norte de Torres Vedras, a Encosta de São Vicente é uma zona isolada pelo sopé da colina e desligada à cidade por um rio. Terrenos acidentados abrigavam edifícios habitacionais de baixa qualidade que, por sua vez, concentravam camadas da população com menor poder econômico.

Em 27 de janeiro de 2015, a Câmara Municipal de Torres Vedras aprovou a proposta de delimitação da Área de Reabilitação Urbana da Encosta de São Vicente. A área de intervenção do projeto tem 19,2 hectares e 724 residentes, correspondendo a 5% da população da cidade de Torres Vedras (2017).

As intervenções ainda em curso do município que contribuem para os PEDs na área, denominadas PEDU ou Programa ENCOSTA, são:

- Remodelar alguns edifícios/centros/habitação social,
- Ecologizar os espaços públicos,
- Aumentar a acessibilidade dos transportes individuais e públicos através de percursos pedestres.

Somos Comunidade – Local citizen's engagement platform (English)

Promoted by ATV - Académico de Torres Vedras and financed by Torres Vedras City Council under the ENCOSTA Program, Somos Comunidade is a community intervention and social innovation project, located on Encosta S. Vicente, in Torres Vedras. The community social media (facebook and instagram) has a Community Newspaper and TV and provides socio-cultural activities weekly to promote civic participation and social inclusion through arts to combat loneliness and isolation among non-active seniors.

The Community Newspaper and TV are a space for sharing ideas and solutions to solve problems, listening, engaging and giving a voice to the people of this territory. Through a constructive perspective, it aims to encourage change, influence decisions and increase the impact of citizens on local Democracy. It is also a megaphone for the life stories and dreams of the inhabitants of this territory.

Somos Comunidade – Plataforma local de envolvimento dos cidadãos (Português)

Promovido pela ATV - Académico de Torres Vedras e financiado pela Câmara Municipal de Torres Vedras no âmbito do Programa ENCOSTA, o Somos Comunidade é um projeto de intervenção comunitária e inovação social, localizado na Encosta S. Vicente, em Torres Vedras. As redes sociais comunitárias (facebook e instagram) têm um Jornal e TV Comunitários e disponibilizam atividades socioculturais semanais para promover a participação cívica e a inclusão social através das artes para combater a solidão e o isolamento entre idosos não ativos.

O Jornal Comunitário e a TV são um espaço de partilha de ideias e soluções para resolver problemas, ouvindo, envolvendo e dando voz às pessoas deste território. Através de uma perspetiva construtiva, visa incentivar a mudança, influenciar as decisões e aumentar o impacto dos cidadãos na democracia local. É também um megafone para as histórias de vida e sonhos dos habitantes deste território.

Denmark

Skårup's Sustainable Energy Community (English)

Skårup's Sustainable Energy Community is an initiative in the village of Skårup in Svendborg Municipality on the Island Fyn (southern Denmark). The initiative aims to establish an energy community, which will produce and share local green energy, for example through the joint purchase and operation of solar cells. Apart climate considerations, the project should also ensure a stable energy supply at reasonable prices, and any surplus can benefit the local community in other ways.

Svendborg Municipality sees local energy communities as an opportunity to supplement and relieve - but not replace - the collective energy supply.

Behind the future energy community is a working group with representatives from Skårup Local Council, Svendborg Municipality and the municipal utility. The working group has held meetings with several schools, associations and companies that have shown an interest in contributing locally to the green transition. In addition, several open citizen meetings have been held with the residents of Skårup, who have also been positive about the project.

The energy community in Skårup was formally established in July 2024. In addition to the collaboration with Svendborg Municipality, the project also benefits from advice from EBO Consult.

Skårups Bæredygtige Energifællesskab (Danish)

Skårups Bæredygtige Energifællesskab er et initiativ i Svendborg Kommune i landsbyen Skårup. Initiativet sigter mod at etablere et energifællesskab, som skal producere og

dele lokal grøn energi, for eksempel gennem fælles indkøb og drift af solceller. Ud over klimahensyn skal projektet også sikre en stabil energiforsyning til rimelige priser, og et eventuelt overskud kan komme lokalsamfundet til gavn på anden vis.

Svendborg Kommune ser energifællesskaber som en mulighed for at supplere og aflaste – men ikke erstatte – den kollektive energiforsyning.

Bag det kommende energifællesskab står en arbejdsgruppe med repræsentanter fra Skårup Lokalråd, Svendborg Kommune og det kommunale selskab Svendborg VE. Arbejdsgruppen har holdt møder med flere skoler, foreninger og virksomheder, som har vist interesse for at bidrage lokalt til den grønne omstilling. Desuden har der været afholdt en række åbne borgermøder med beboerne i Skårup, som ligeledes har været positive overfor projektet.

Energifællesskabet i Skårup er formelt blevet stiftet i juli 2024. Ud over samarbejdet med Svendborg Kommune nyder projektet også godt af rådgivning fra EBO Consult.

The Thy Model (English)

The Thy model has been developed by Thisted Municipality in Northern Denmark. It represents a new approach to the engagement of citizens and local communities in the green energy transition. The approach is a result of many years of stagnation in the installation of renewable energy in the municipality and numerous protests from local citizens. The model is built around three cornerstones:

1. A division of Thisted Municipality into areas, which determines where energy plants can be established.

2. Criteria that serve as benchmarks for the municipal council when they have to decide on and prioritize between new renewable energy projects. The criteria have been created on the basis of a broad questionnaire survey sent out to 32,000 citizens in the municipality, which resulted in more than 4,000 responses. The five criteria are

- local ownership
- compensation of neighbours
- forest, nature and recreational facilities
- landscape
- local support

3. Formation of energy associations, which should be a voice for the local communities. The purpose of an energy association is to give the local community a common, democratic voice. It should strengthen the local community's negotiating position and make it easier to negotiate based on local interests and perspectives. An energy association can also own or co-own local energy plants.

(Source: https://www.thisted.dk/politik-demokrati-and-indflydelse/thy-til-groen-omstilling/vedvarende-energi)

Thymodellen (Danish)

Thymodellen er udviklet af Thisted Kommune. Den er udtryk for en ny tilgang til inddragelse af borgere og lokalsamfund i den grønne energiomstilling. Modellen er udsprunget af mange års stilstand i opsætningen af vedvarende energi i kommunen og talrige protester fra lokale borgere. Modellen er bygget op om tre hjørnesten:

1. En inddeling af Thisted Kommune i områder, som sætter rammerne for, hvor man overhovedet kan etablere energianlæg

2. Kriterier, der fungerer som pejlemærker for kommunalbestyrelsen, når de skal prioritere nye vedvarende energiprojekter. Kriterierne er blevet til på baggrund af en bred spørgeskemaundersøgelse, sendt ud til 32.000 borger i kommunen. Kriterierne bygger på mere end 4000 besvarelser. Kriterierne er

- Lokalt ejerskab
- Kompensations af naboer
- Skov, natur og rekreative faciliteter
- Landskab
- Lokal opbakning

3. Dannelse af energiforeninger, som skal være en stemme for lokalsamfundene. Ideen med en energiforening er give lokalsamfundet en fælles, demokratisk stemme. Det skal styrker lokalsamfundets forhandlingsposition og gøre det nemmere at forhandle ud fra lokale interesser og perspektiver. En energiforening kan også eje eller være medejer af lokale energianlæg.

(Kilde: https://www.thisted.dk/politik-demokrati-and-indflydelse/thy-til-groen-omstilling/vedvarende-energi)

Norway

Circular Kaupanes – An Industrial Cycle for the Future (English)

Imagine an positive energy industrial area where energy and resources never go to waste. Where waste from one company becomes a valuable resource for another. Where CO_2 emissions are reduced, energy costs are cut, and new jobs are created – all through a circular mindset.

This is the vision behind Circular Kaupanes, a groundbreaking project where industry, research, and energy utilization go hand in hand to create a greener and more efficient business community.

What is industrial symbiosis?

In nature, there is no waste – everything is reused in an eternal cycle. Circular Kaupanes is built on the same principle. We are establishing a system where surplus energy, heat, and by-products from one company can be utilized by another. This creates a network of cooperating companies that reduce waste, save energy, and cut emissions.

How does it work?

Today, several companies in Kaupanes emit large amounts of heat energy and CO_2. This is unused potential that could instead be stored, converted and distributed to other actors in the area. Here are some examples of how we create a circular energy hub:

- Excess heat from industry can heat water in a land-based fish farm
- Biogas from organic waste can be used as fuel for electricity and heat production
- Hydrogen and solar power can provide clean energy for both businesses and the transport sector

All of this happens locally, which relieves the load on the power grid, reduces transport emissions and ensures a more stable energy supply.

Why is this important?

Industry is responsible for a large part of global CO_2 emissions, but at the same time it is absolutely crucial for society. Instead of phasing out industrial activity, we need to find smarter ways to operate it. Circular Kaupanes shows that we can:

- Reduce CO_2 emissions by at least 10 tons per year – and potentially much more in the long term.
- Save energy through sharing and reuse.
- Create new jobs by attracting companies that want to be part of a green industrial cluster.
- Be a model for others – the experiences from here can be used nationally and internationally.

From idea to reality

Circular Kaupanes is not just a vision – it is underway! The project has received support from Innovation Norway and partners from industry and research. The plan is to expand in several phases, where each new investment creates even greater benefits for the environment and the economy.

By exploiting the energy systems of the future and industrial symbioses, we show that sustainable industry is not only possible – it is profitable.

Welcome to Circular Kaupanes – one step closer to a world where waste becomes a resource, and industry becomes part of the solution!

Sirkulære Kaupanes – Et Industrielt Kretsløp for Fremtiden (Norsk)

Tenk deg et industriområde der energi og ressurser aldri går til spille. Der avfall fra én bedrift blir til en verdifull ressurs for en annen. Der CO_2-utslipp reduseres, energikostnader kuttes, og nye arbeidsplasser skapes – alt ved hjelp av en sirkulær tankegang.

Dette er visjonen bak Sirkulære Kaupanes, et banebrytende prosjekt hvor industri, forskning og energiutnyttelse går hånd i hånd for å skape et grønnere og mer effektivt næringsliv.

Hva er industriell symbiose?

I naturen finnes det ikke avfall – alt gjenbrukes i et evig kretsløp. Sirkulære Kaupanes bygger på samme prinsipp. Vi etablerer et system der overskuddsenergi, varme og biprodukter fra én bedrift kan utnyttes av en annen. Dette skaper et nettverk av samarbeidende bedrifter som reduserer avfall, sparer energi og kutter utslipp.

Hvordan fungerer det?

I dag slipper flere bedrifter på Kaupanes ut store mengder varmeenergi og CO_2. Dette er ubrukt potensial som i stedet kan lagres, konverteres og distribueres til andre aktører i området. Her er noen eksempler på hvordan vi skaper en sirkulær energihub:

- Overskuddsvarme fra industrien kan varme opp vann i et landbasert oppdrettsanlegg
- Biogass fra organisk avfall kan brukes som brensel for strøm- og varmeproduksjon
- Hydrogen og solkraft kan gi ren energi til både bedrifter og transportsektoren

Alt dette skjer lokalt, noe som avlaster strømnettet, reduserer transportutslipp og sikrer en mer stabil energiforsyning.

Hvorfor er dette viktig?

Industrien står for en stor del av de globale CO_2-utslippene, men samtidig er den helt avgjørende for samfunnet. I stedet for å fase ut industriell aktivitet, må vi finne smartere måter å drive den på. Sirkulære Kaupanes viser at vi kan:

- Redusere CO_2-utslipp med minst 10 tonn per år – og potensielt mye mer på sikt.
- Spare energi gjennom deling og gjenbruk.
- Skape nye arbeidsplasser ved å tiltrekke bedrifter som ønsker å være en del av en grønn industriklynge.
- Være en modell for andre – erfaringene herfra kan brukes nasjonalt og internasjonalt.

Fra idé til realitet

Sirkulære Kaupanes er ikke bare en visjon – det er i gang! Prosjektet har fått støtte fra Innovasjon Norge og samarbeidspartnere fra industri og forskning. Planen er å bygge ut i flere faser, der hver nye investering skaper enda større gevinst for miljøet og økonomien.

Ved å utnytte fremtidens energisystemer og industrielle symbioser, viser vi at bærekraftig industri ikke bare er mulig – det er lønnsomt.

Velkommen til Sirkulære Kaupanes – et skritt nærmere en verden der avfall blir en ressurs, og industri blir en del av løsningen!