

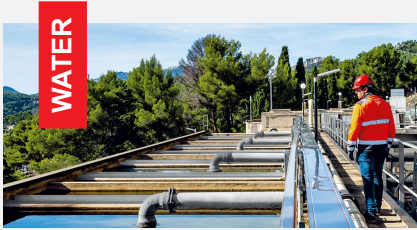
Realising the Dutch energy efficiency roadmap through a more holistic circular and digital approach

Tweede Kamer | DECEMBER 8, 2021



PURPOSE OF VEOLIA

ENABLING HUMAN PROGRESS VIA ACCESS TO KEY RESOURCES



95

MILLION PEOPLE SUPPLIED
WITH SAFE DRINKING WATER

62

MILLION PEOPLE CONNECTED TO
WASTEWATER SYSTEMS

3,362

DRINKING WATER PRODUCTION
PLANTS MANAGED

2,737

WASTEWATER TREATMENT
PLANTS MANAGED



40

MILLION PEOPLE PROVIDED
WITH COLLECTION SERVICES
ON BEHALF OF
MUNICIPALITIES

47

MILLION METRIC TONS
OF TREATED WASTE

464,948

BUSINESS CLIENTS

685

WASTE PROCESSING
FACILITIES OPERATED



43

MILLION MWH
PRODUCED

45,806

THERMAL INSTALLATIONS
MANAGED

2,137

INDUSTRIAL SITES
MANAGED

611

HEATING AND COOLING
NETWORKS MANAGED



TRANSFORMING OUR ENERGY SUPPLY & USAGE

THE ROAD TO CLIMATE NEUTRALITY

European Green Deal



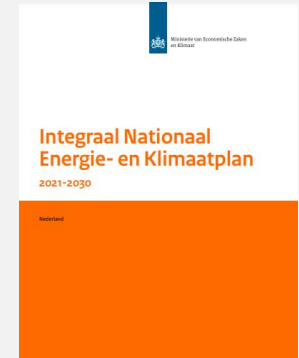
Energy efficiency Directive



KEV monitoring



INEK 2021 - 2030



The 12 sectoral roadmaps for public buildings



FOR VEOLIA THE ENERGY TRANSITION IS A KEY ASPECT OF THE ECOLOGICAL TRANSFORMATION

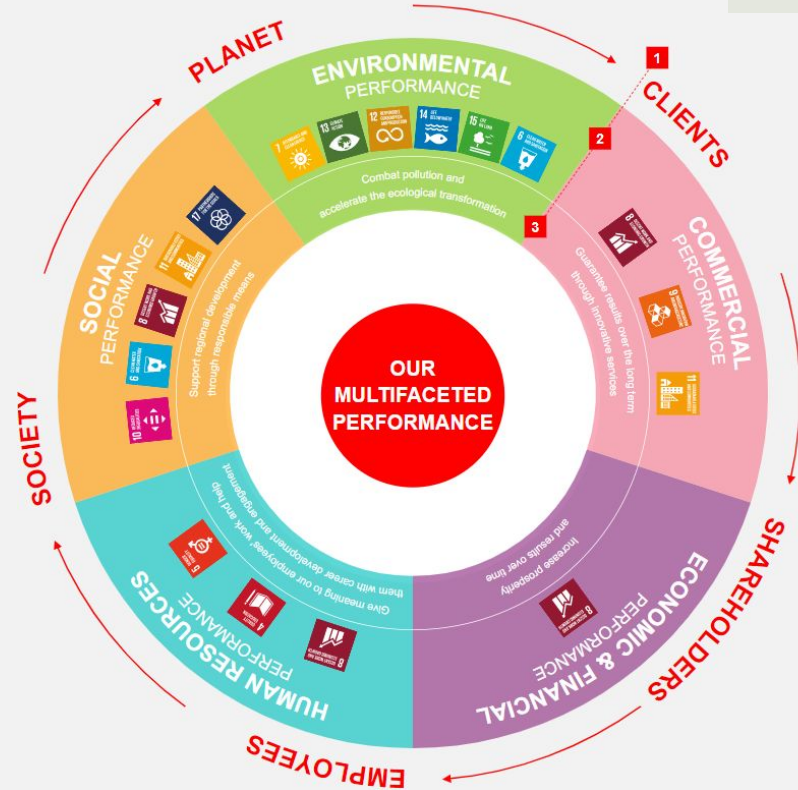


We believe in being USEFUL to be prosperous and not the reverse, by

- providing access to resources
- preserving available resources
- recovering & replenishing them

In 2020 we,

- recycled **610,000 metric tons** of plastics
- avoided **15 million metric tons** of CO₂ eq.
- produced **14.1 million MWh** of renewable energy



TRANSLATED INTO CONCRETE COMMITMENTS ON A LOCAL LEVEL

Open transparent communication on what our targets are and the status (extract below)

- *90% reduction in Co2 emissions (2020 vs 2015)*
- *Increase recycling capacity to the equivalent of 8bn single use plastic bags*
- *Doubling our flexible power capacity from 350Mw to 700Mw*
- *Creating a flexible, digital and learning organisation*



VEOLIA KEK KLIMAATSTATEMENT

De opvolging van het Klimaatakkoord vraagt om leiderschap. KEK brengt de ambitie van young professionals en daadkracht van CEO's samen. Met elkaar spreken zij zich uit voor concrete acties.

Nu er steeds meer hernieuwbare energie beschikbaar komt, heeft het energienetwerk flexibiliteit nodig. Door het aansluiten van stroom opwekkende assets van onze industriële klanten via onze veilige digitale platformen kunnen we inspelen op de steeds groter wordende vraag van nationale TSO's en microgrids voor flexibel gebruik van het aanwezig vermogen op het net. Binnen de komende drie jaar wil Veolia Flexcity zijn gecontroleerde stroomcapaciteit van 350MW naar 700MW in Nederland brengen.

In 2020, zal Veolia Nederland haar productie van hoge kwaliteit gerecyclede plastic (secondary raw material) hebben verzeesvoudigd. Dit is het equivalent van het recyclen van 8 miljard single-use draagtasjes. Elk ton gerecycleerd plastic dat wordt gebruikt voor het produceren van nieuwe producten door brand owners bespaart 70% van de Co2 emissie vergeleken met het gebruik van virgin grondstoffen.

Door het veilig online monitoren, het terughalen en hergebruiken van afvalstromen en restwarmte kunnen we Co2 emissies van onze gedecentraliseerde energie- en waterinstallaties, die stroom, warmte en water produceren voor onze industriële klanten in Nederland met 90% reduceren in 2020 (vergeleken met 2015).

Bij Veolia geloven we in leading by example. Dit betekent voor ons een verandering in cultuur zodat wij als bedrijf toekomstbestendig worden. Een Agile manier van werken, het omarmen van digitale oplossingen en het actief promoten van reverse mentoring en open innovatie zijn hiervoor in onze ogen benodigd.

"De energietransitie behoeft een systematische verandering in de manier waarop we omgaan met de gelimiteerde grondstoffen. Het gaat niet alleen over het monitoren en reduceren van energieconsumptie. We moeten ons gedrag fundamenteel en actief veranderen. Voor Veolia is de circulaire economie wat ten grondslag ligt voor de energietransitie. We kijken naar iedere afvalstroom of bijproduct als een hernieuwbare grondstof die teruggenaaid, upcycled en hergebruikt kan worden. Alleen op deze manier kunnen wij de doelstellingen vanuit het klimaatakkoord behalen."



ENERGY EFFICIENCY IN ACTION

CONCRETE DUTCH EXAMPLES



ENERGY EFFICIENCY IN ACTION

GLOBAL BEST IN CLASS - DANONE ESTIA, CUIJK, NL



DANONE
ONE PLANET. ONE HEALTH



- **Global benchmark** for such a production plant which is **Zero Waste**
- 2X legacy plant, but **60% less water, 25% less energy, 100% 50% less CO₂** (1112T/yr)
- Powered by **100% renewable energy**
- 10 year utility supply agreement ensures availability, reliability and energy consumption



ENERGY EFFICIENCY IN ACTION

INDUSTRIEPARK KLEEFSE WAARD (IPKW)

Industriepark Kleefse Waard



- **89% reduction in CO₂ from 2014 to 2020**
- Renewable energy supplied to industry and the local DHN of Vattenfall
- Eco-Industrial Park and R&D hub for the energy transition. Pilot studies ongoing regarding hydrogen and load balancing
- **Cooperation with local municipality and 30 other stakeholders**

CIRCULAR RE-USE OF HEAT

DISTRICT HEATING NETWORKS



DHN networks such as Ennatuurlijk are playing a vital role in the realisation of RES (Regional Energy Strategy) targets.

The Eindhoven metropolitan region target is to reduce **CO₂ emissions by 49% by 2030**

- **85,000** B2B customers
- **1,200** B2C customers
- **2020** realised CO₂ saving of **51%**
- **2030** targeted CO₂ saving is **70%**
- **2040** target is **CO₂ free**



ENERGY EFFICIENCY IN ACTION

WHEN RECOVERY MEETS REUSE IN JOURE, NL



JACOBS DOUWE EGBERTS



- 13 years outsourced utility supply contract
- DBOM of biomass boiler using **33kT of recovered spent coffee grounds** annually
- **Recovery of biogas** from WWTP for production of green steam
- **Annual CO₂ savings of 70% (or 14kT)**



HOLISTIC FUTURE FIT SOLUTIONS

REIMAGINING THE WORKPLACE



- **100% circular, zero waste renovation**
- **WELL V2 Platinum Certified**
- **45.000 square meters office space**
- Livability and people lie at the heart of this project
 - Agile and activity-based working space to stimulate interaction
 - Air and heat conditioning in zones
 - Greenery incorporated in the buildings



REAL TIME DATA IS CRITICAL TO ENABLING FIT FOR 55 THE DIGITAL TRANSFORMATION



**Big Data is
the New
Natural Resource**



DIGITAL ECOSYSTEM

TO ENABLE THE REALISATION OF THE DUTCH NCEP & FIT FOR 55



01 Ensuring the reliability and the security of the building and its equipments through real-time monitoring

02 Promote the well-being of customers and occupants

03 Constant search of performance improvement

04 A measurable and verifiable contribution to the reduction of the environmental footprint

05 Increase transparency on operations and utility uses

Data Exchanger



Indoor Air Quality



Energy Management Platform



Buildings Benchmark



Buildings Energy Optimizer



Buildings Standard Data System



Buildings Awareness



Buildings Energy Optimizer



Buildings Dashboards



Energy Management Platform



Hub



Smart Baseline



THIS DIGITAL ECOSYSTEM WE CALL THE HUBGRADE™



The Hubgrade is Veolia's smart digital solution is a combination of human expertise, AI and data that enables clients to monitor and optimise resources in an efficient manner in real time, be they

- water and energy generation and consumption
- air quality
- the re-use of residual waste streams and emission levels



HUBGRADE

LEVERAGING OUR SCALE & EXPERTISE TO TACKLE A GLOBAL CHALLENGE



8500 connected
sites or contracts

Benefits: - **10%** of
energy consumption

Million of data points

**2 million smart
sensors** in France
alone

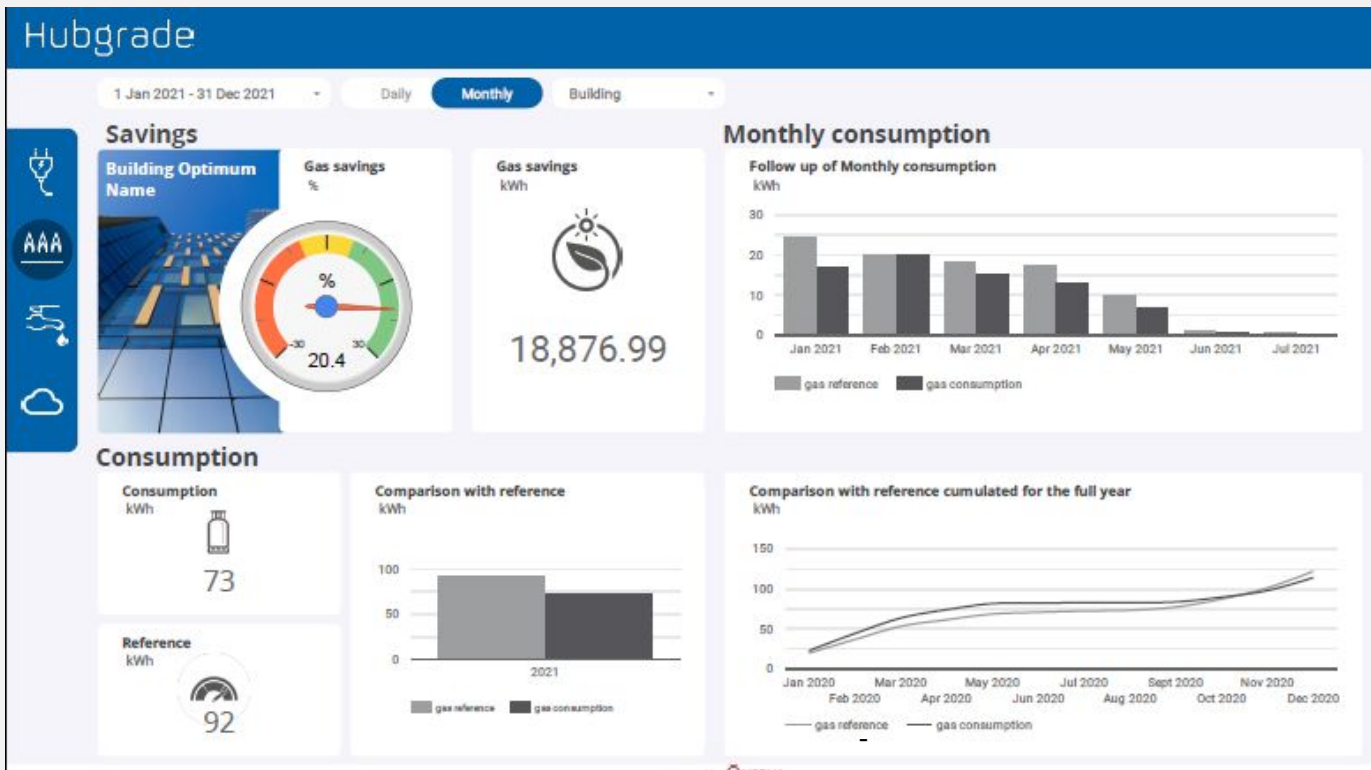
**31 HUBGRADE
centers**
located across the
globe

124 connected
data scientists
> 300 experts
being part of the
community

+ than 650 completed
environmental **studies**
+ 200 visits of
HUBGRADE **centers**
per year

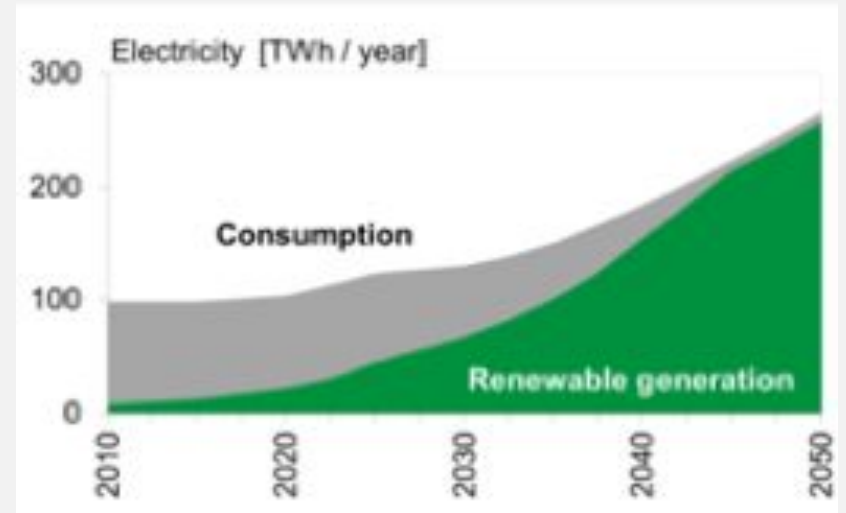
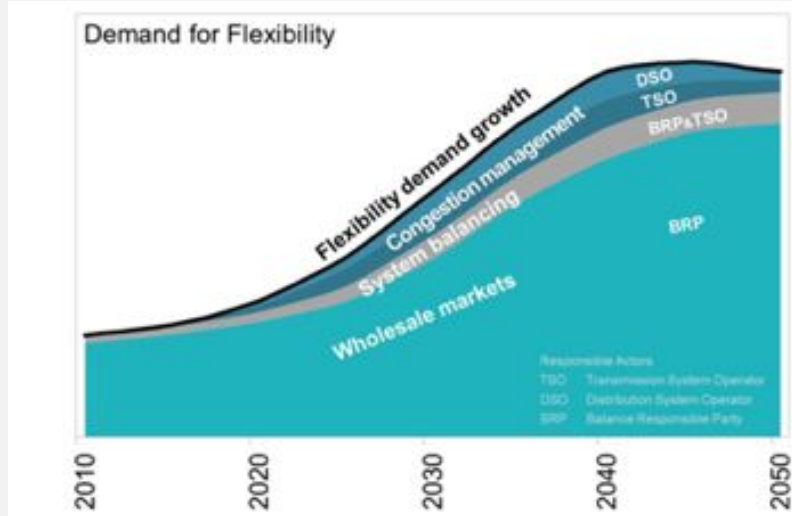


ON A PRACTICAL LEVEL HOW THIS TRANSLATES



EMPOWERING THE ENERGY TRANSITION

ELECTRICITY DEMAND INCREASING

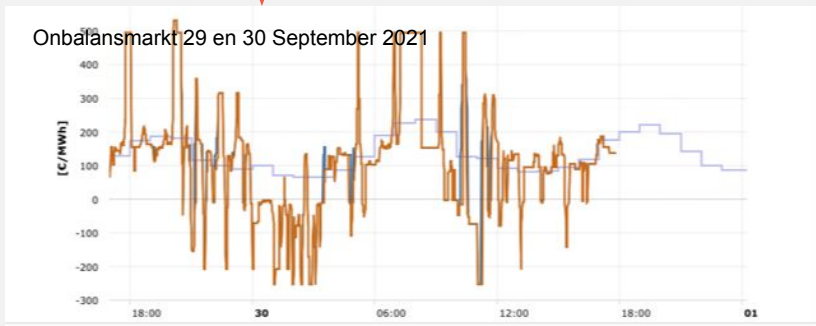


The energy transition will increase the demand for electricity & greater flexibility



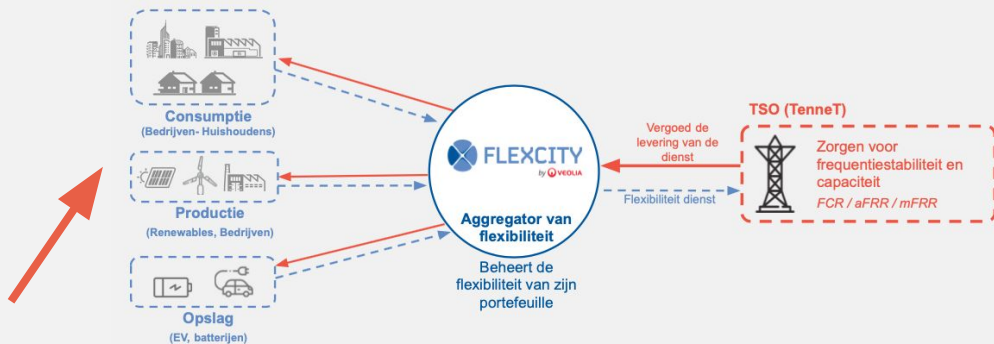
EMPOWERING THE ENERGY TRANSITION

WHY THE NEED FOR ENERGY FLEXIBILITY



Energolia
STEMMING Tennet roept opnieuw zeldzame Alert-situatie uit

Verkeerde inschatting door producenten en leveranciers noopt Tennet tot ingrijpen

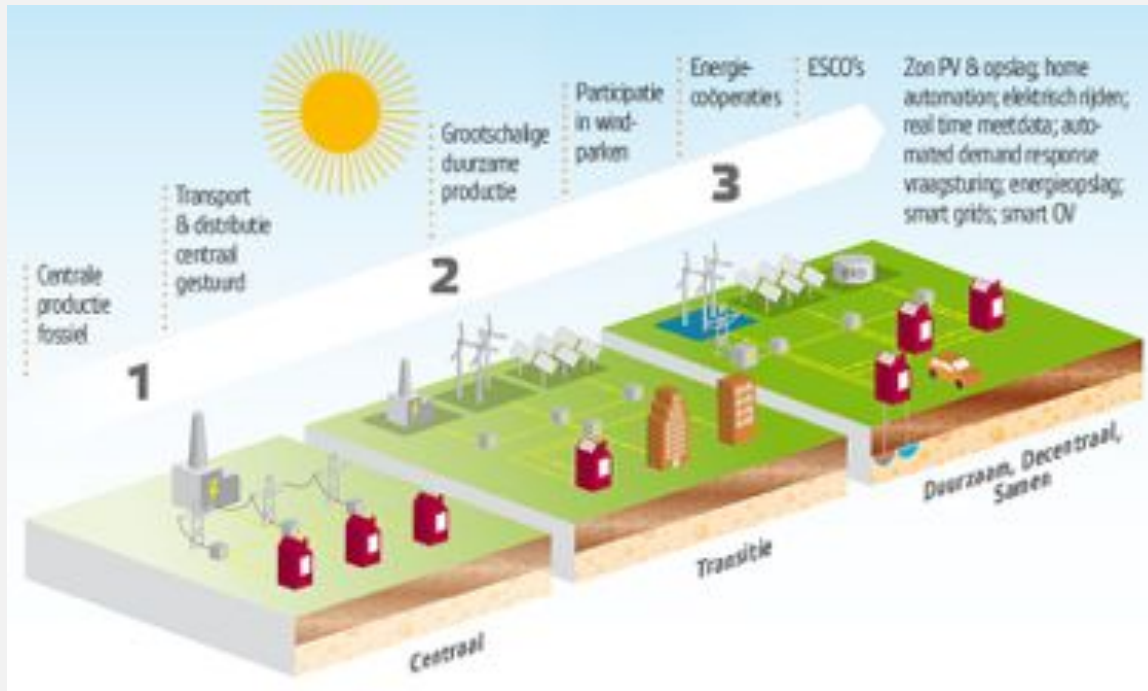


> 1 GW
 Ons flexibel vermogen - een virtuele energiecentrale

> 10 000 assets
 Van 2 kW tot 120 MW

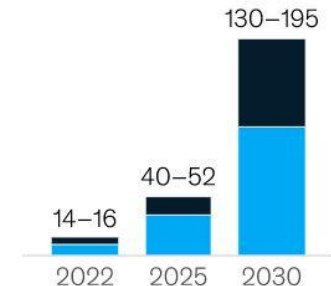
EMPOWERING THE ENERGY TRANSITION TOGETHER

POSSIBLE ROLE OF PUBLIC BUILDINGS



- 14 million BEVs in EU today
- By 2030 eest is 30 m
- By 2030, all traffic through city of **Amsterdam must produce zero emissions.**
- Globally, **only 3%** of power capacity is being stored. Needs to **triple by 2050** to limit global warming to below 2°C.

Power demand, TWh



FINAL THOUGHTS



Resourcing the world  **VEOLIA**

**#weare
RESOURCERS**

