energy storage

IEA Technology Collaboration Programme

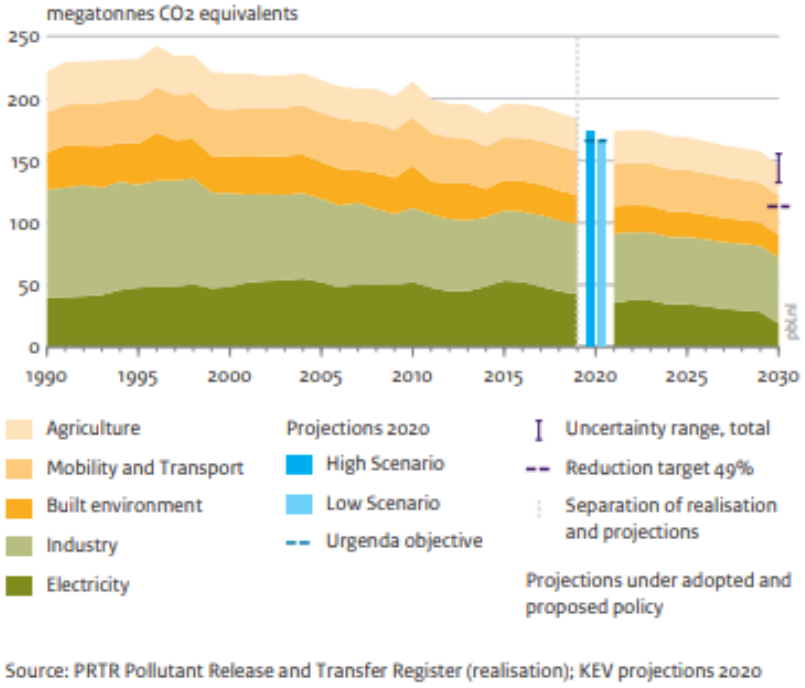
COUNTRY REPORT
Netherlands

Stan van den Broek
Netherlands Enterprise Agency

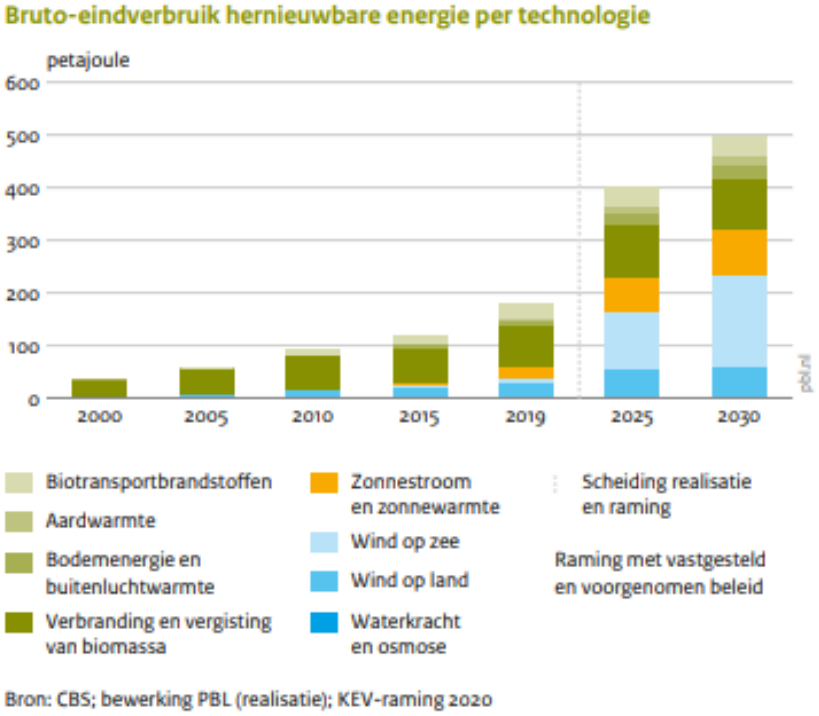
June 2021

Country Specific Information

- 17500121 inhabitants, and counting
- Climate agreement



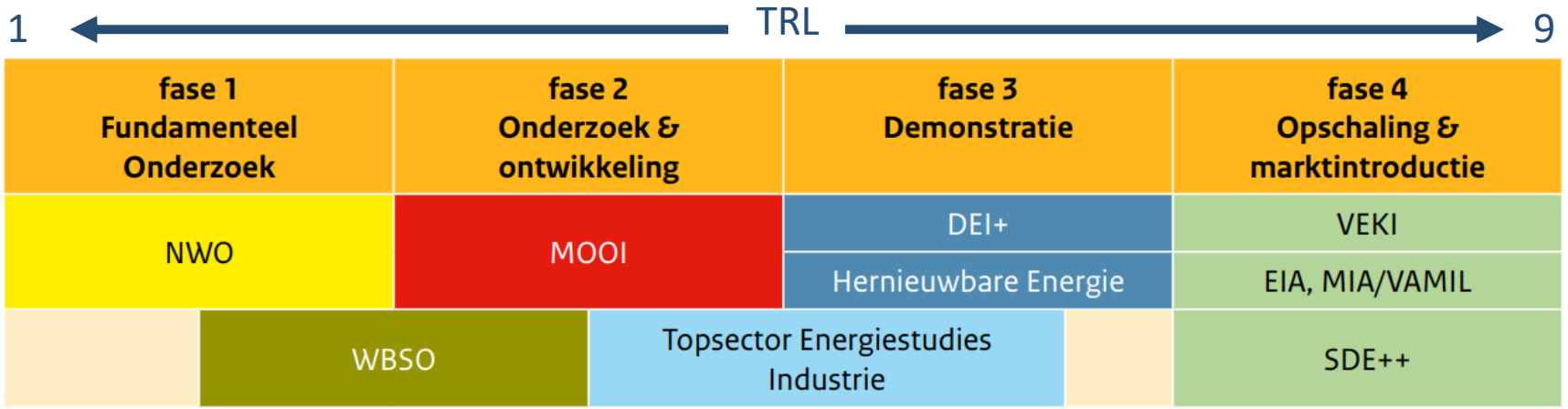
Source: PRTR Pollutant Release and Transfer Register (realisation); KEV projections 2020



Bron: CBS; bewerking PBL (realisatie); KEV-raming 2020

RDD Information

- **Mission-oriented innovation policy: 5 missions on energy & sustainability**
- **Energy storage most prominent in built environment, increasing attention from power sector and industry**
- **Ca. 125M€ public RD&D investments in electric infrastructure, storage and conversion from 2015 to 2019**



Landscape of subsidy schemes and (fiscal) incentives

Energy Storage Landscape

energy storage
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TU Delft
TNO
Energy Storage NL
POWERED BY DUTCH TECHNOLOGY
QuinteQ energy storage
ecovat
Greener power solutions

TU/e

Knowledge

Companies

KEMA Laboratories THE NETHERLANDS DNV·GL
LEYDENJAR TECHNOLOGIES
ALFEN POWER TO ADAPT
ATEPS
elestor
WAGENINGEN UR
UNIVERSITY OF TWENTE.
alliander
ENEXIS NETBEHEER
bodem energie nl

TSO/DSO

Trade associations

STEDIN.NET

Govt/PPP

TKI URBAN ENERGY
Topsector Energy

TenneT
Netherlands Enterprise Agency

Policies & Market

- Energy research & innovation instruments, up to 15M€ grant per project
- Energy implementation / roll-out instruments have some room for storage
- Barriers / work in progress: network tariff structure, net metering, double taxation, state aid regulations limit grants for demonstration phase
- Need for flexibility (and storage) is growing, due to target in Climate Agreement of appr. 75% renewable electricity in 2030 in mix.
- There are no storage-specific market statistics available at this point in time, but fun fact: of the 3500 operational ATES, 3000 are in the Netherlands.

Tennet: impact op stroomnet moet ook criterium zijn bij keuzes over warmte

Liander meldt nieuwe knelpunten in Noordwest-Nederland, Tennet en Enexis in zuiden

Top 3 cases/projects

Ecovat

- (Semi-)underground seasonal TES
- Up to 98.000 m^3, 8 GWh
- Pilots, feasibility

GIGA Storage

- 12 MW battery
- Shared grid connection wind farm
- Limiting curtailment, optimizing e-sales

Flexinet

- Hybrid (e/h) storage
- Development hardware, IT and integration
- Micro-balancing energy system
- 2 Living labs

Other Relevant Information

- Market report electricity storage coming Q3
- Business case report on small-scale heat storage (in Dutch, link)
- Factsheet large and small-scale heat storage (in Dutch, link)
- Various other factsheets / informative web pages via websites Energy Storage NL, TKI Urban Energy, TNO
- National Action Plan Energy Storage (in Dutch, link)

The Energy Storage TCP

Country reports are an informative contribution of the ExCo delegates of the ES TCP member countries.

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