

### **Energising the Transition**



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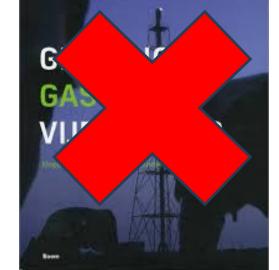
October 15, 2019



## **Dutch energy transition -**



1963



2019



### **EBN** introduction

- 100% State owned
- Non-operating company
- EBN 40-50% share in ~195 participations (Dutch O&G)
- o 100+ staff
- Hydrocarbons in the subsurface are State property by law



www.ebn.nl

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### **EBN Strategic Focus**

### EBN wants to make a significant contribution to society's climate ambitions



EBN develops solutions to optimise a sustainable and safe exploitation of existing gas fields.



#### **Return to Nature**

EBN co-ordinates the efficient decommissioning or re-use of oil and gas platforms for CCS.



EBN builds partnerships for the efficient exploitation of geothermal energy.

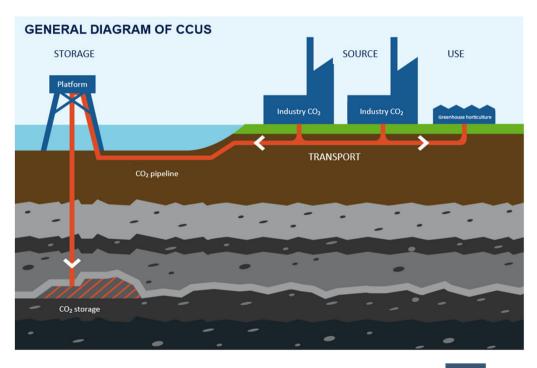
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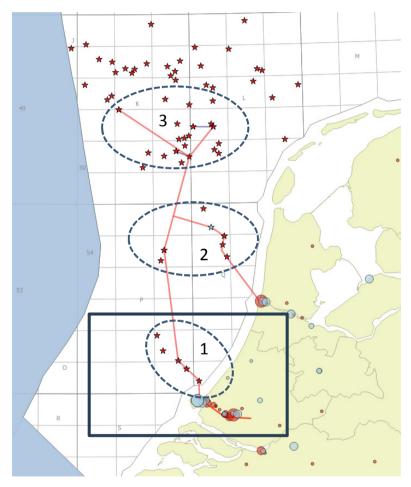


### Subsurface resources in The Netherlands



### **CCUS**

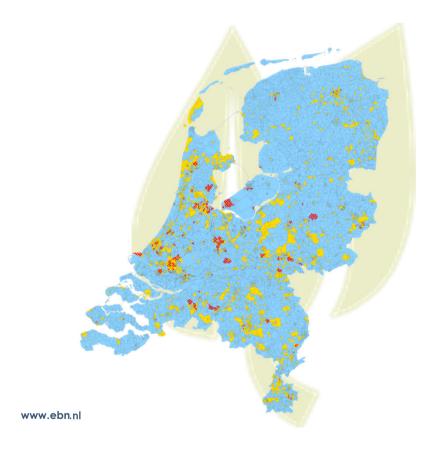




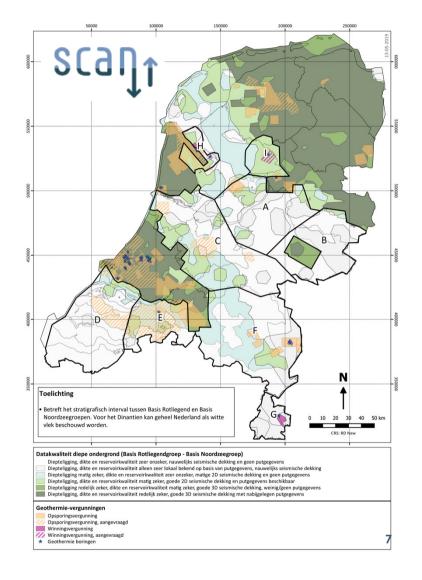
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### **Geothermal** heat



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## **Energy storage**

# Storage tanks **Surface electric Aquifers** Mine galleys, Tunnels **Saltcaverns**

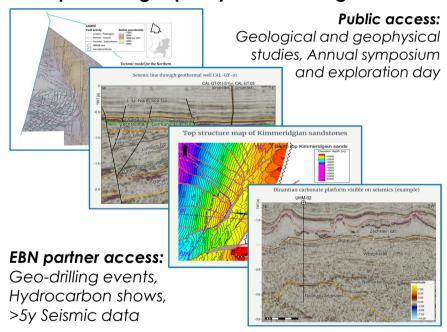
**Empty oil**gasfields

Lakes/Islands

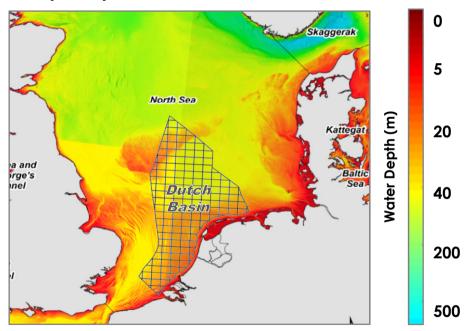
Source TNO

### **Exploration in the Southern North Sea**

#### Examples of high quality data sharing



#### Bathymetry of the Southern North Sea



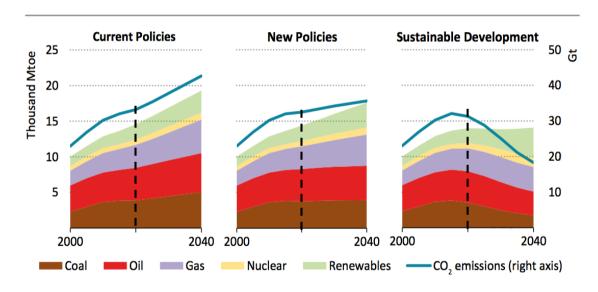
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## Impact of the energy transition on subsurface data needs and quality

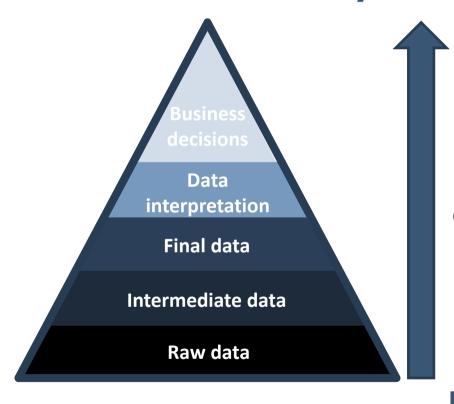
- Increase of the world energy demand in all scenarios
- Increase of the diversity of subsurface usage and subsurface users
- ⇒ The NL NDR is required for future energy needs and should deliver easy access to more, better and richer subsurface data!



World primary energy demand by fuel and energy-related  ${\rm CO_2}$  emissions by scenario. Source: IEA World Energy Outlook 2017

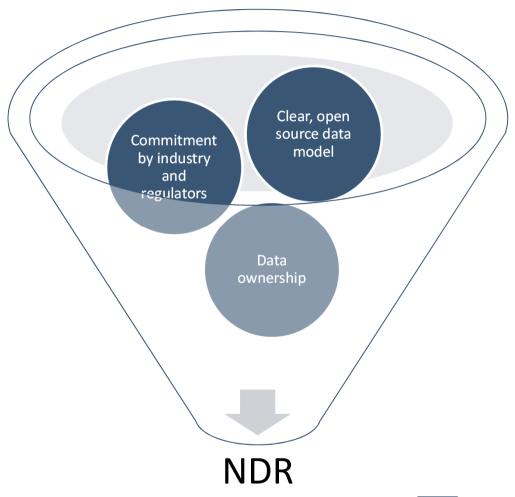
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### The data maturity hierarchy



Increasing data value

- Data demand and data value has changed throughout time
- Need to access the full maturity scale to make high quality decisions
- Innovative use of data & algorithms necessary to gain new insights
- NDRs should provide a solid data starting position and support this shift in data access demands





### Key enablers

Higher efficiency of

- Data gap and quality analysis
- Data loading (I/O) and sharing of large datasets
- Single, national corporate data warehouse, rather than several individual (company proprietary) storage locations



### Getting ready for the future!

Leverage the subsurface value for Energising the Transition

- Acknowledge the important role of NDRs as enabler for the Energy Transition
- Collaborate across industries and national boundaries
- Jointly identify success factors for efficient NDRs
- Share best practices
- & be aware that the future might need other data supply then now foreseen

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# energising the transition