

**We're working  
for fossil freedom**

# **Nuclear Fuel Supply**

Fermi Energia's fifth annual conference  
Tallinn, February 7<sup>h</sup>, 2024

**Ove Nilsson**

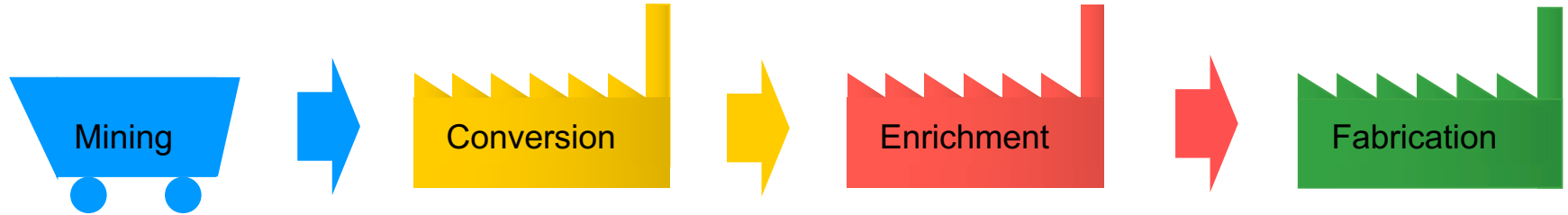
Managing Director, Vattenfall Nuclear Fuel AB

# Agenda

- Nuclear fuel front end process
- Vattenfall Nuclear Fuel AB
- Sourcing of nuclear fuel
- Market prices



# The front end process



Oxides, silicates,  
phosphates etc.



$\text{U}_3\text{O}_8$   
(Yellow cake)



$\text{UF}_6$   
(0,71%  $\text{U}^{235}$ )



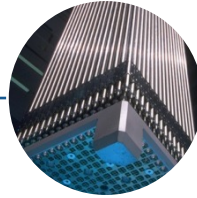
$\text{UF}_6$   
(max 5%  $\text{U}^{235}$ )

$\text{UO}_2$   
(max 5%  $\text{U}^{235}$ )



# Vattenfall Nuclear Fuel AB (VNF)

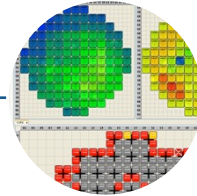
Company fully owned by the Vattenfall Group ~ 65 employees



Integrated  
Fuel Supply



Software



Engineering  
Services

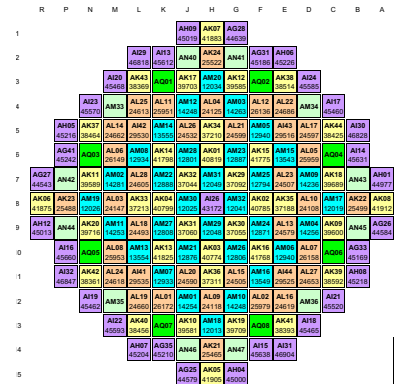
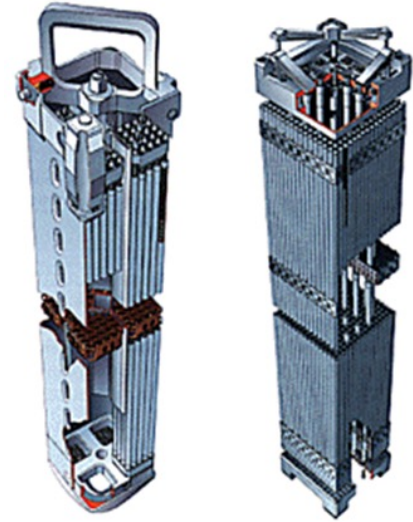
# Mission and vision

## Mission

Our mission is to provide our customers with nuclear fuel and related services with high quality in a sustainable supply chain.

## Vision

Our products and services strengthen our customers by the responsible and cost-effective manner of our operations.



# VNF current customers

## Ringhals

R1 (BWR): Closed in 2019

R2 (PWR): Closed in 2020

R3 (PWR)

R4 (PWR)

## Forsmark

F1 (BWR)

F2 (BWR)

F3 (BWR)

**LOI Fermi Energia**

## Barsebäck

B1 (BWR) - Closed

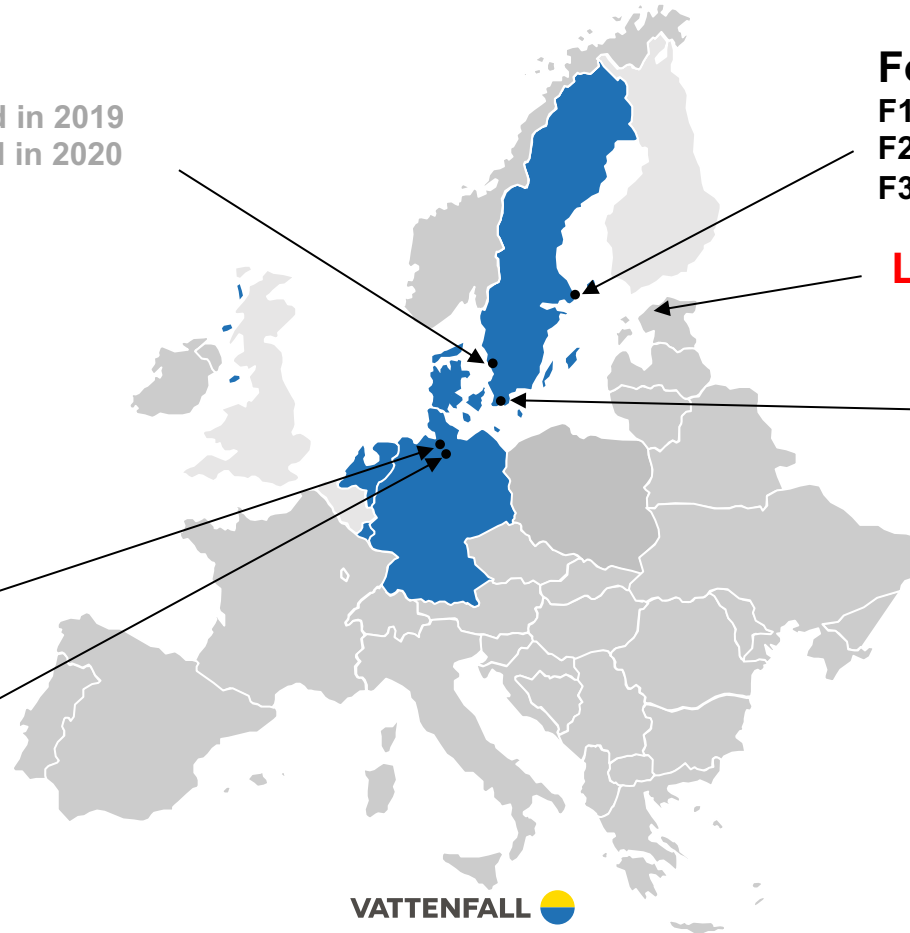
B2 (BWR) - Closed

## Brunsbüttel

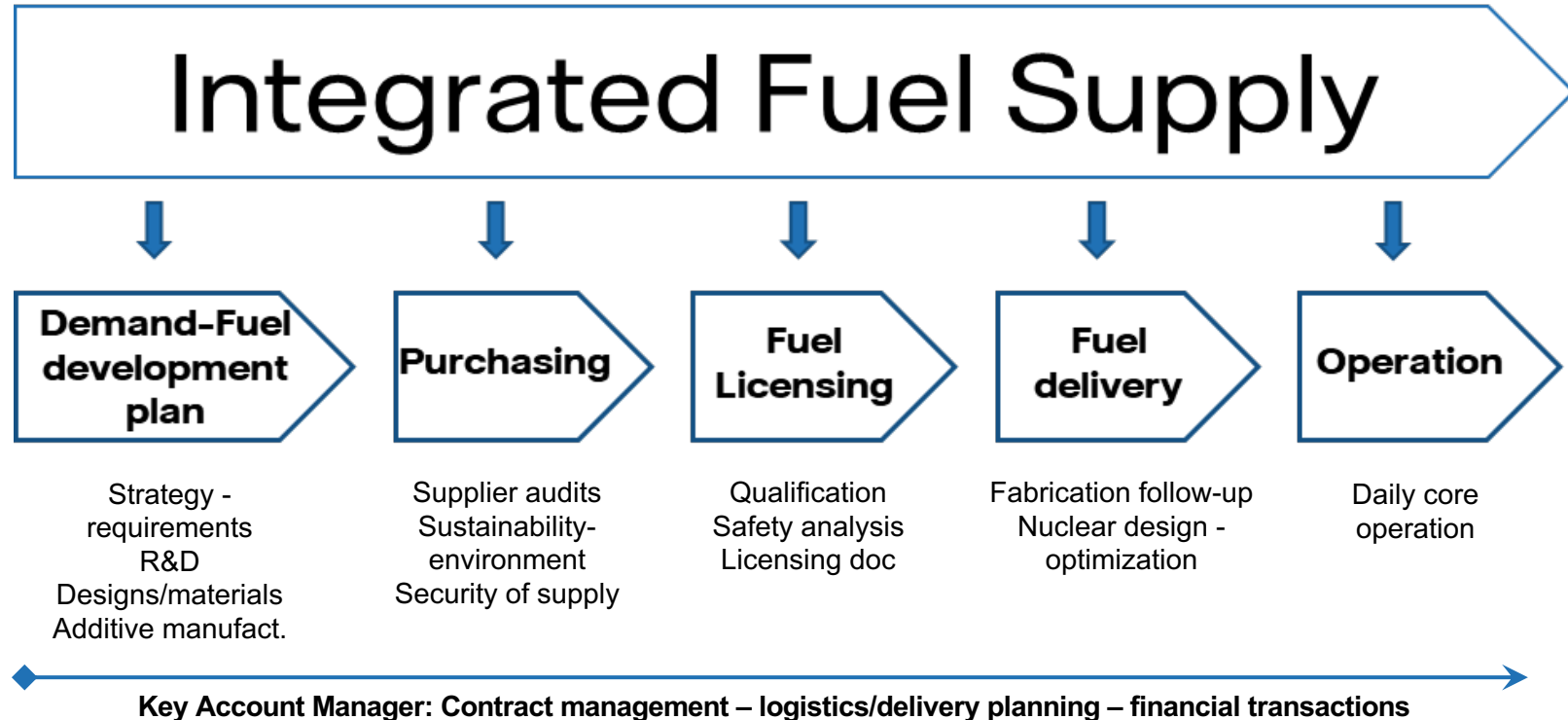
KKB (BWR) - Closed

## Krümmel

KKK (BWR) - Closed

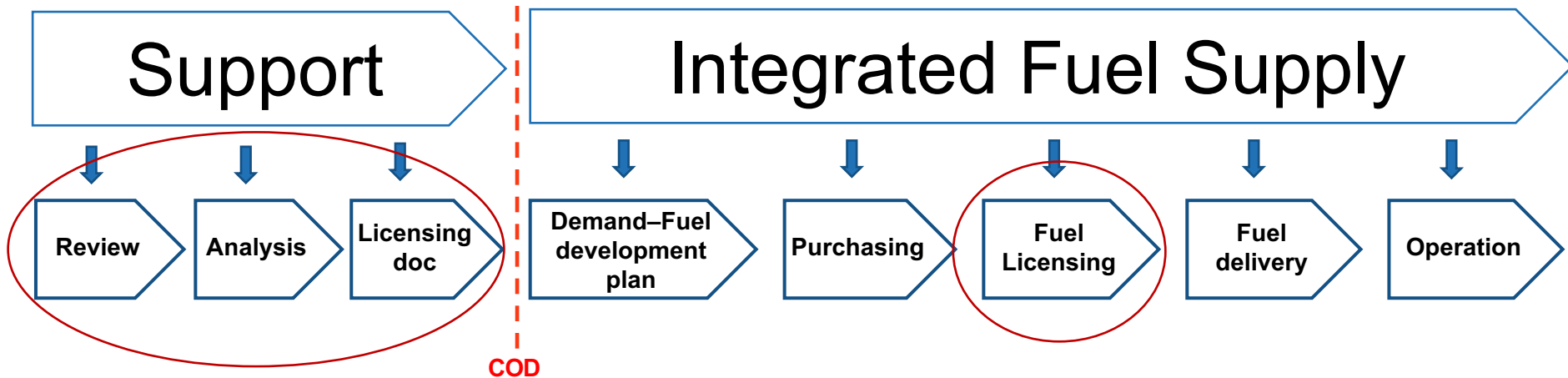


# VNF Service portfolio - operation



# VNF Service portfolio – new build

- Provide support services and the full value chain i.e. Integrated Fuel Supply
- Circled items can initially be provided as engineering services



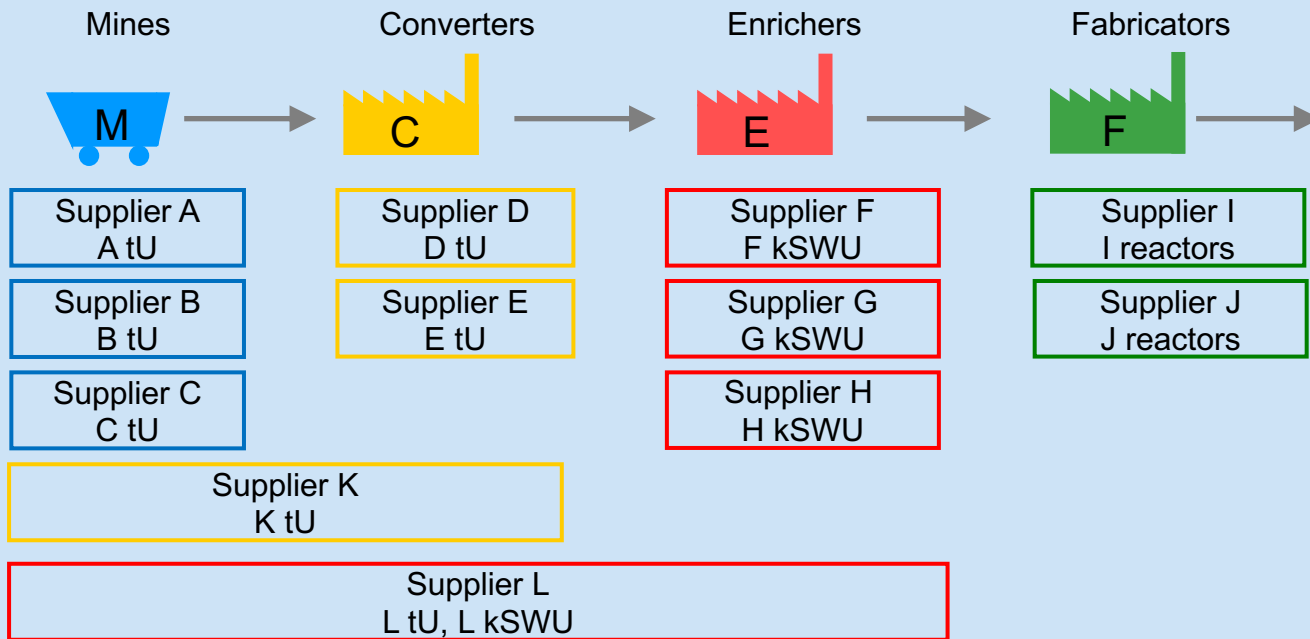
The first part can be provided both during licensing and during the lifetime of the plant

The second part is mainly from startup and forward



# Contract structure - example

## VNF Suppliers

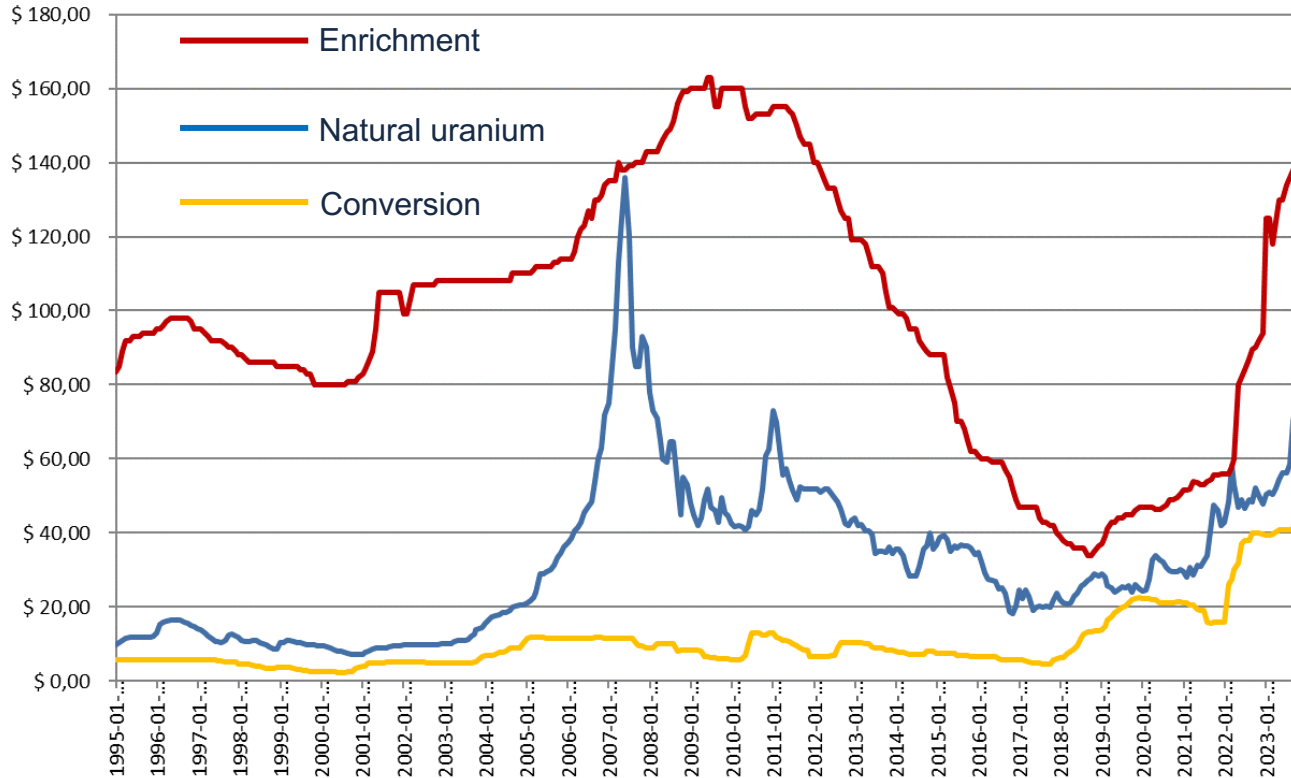


## VNF Customers

### Reactors



# Market prices



## Current uncertainties:

- Will there be sanctions?
- Investment fund speculation?
- When will new production capacity come online?



Increased focus on  
security of supply ->  
long term contracts

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**Thank you!**  
**Questions?**