



stek

GEOthermie NEDERLAND
Geothermal projects:
project finance documentation

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Katinka van den Brink & Herman Wamelink



Agenda

1. Introduction Stek
2. Typical geothermal project financing structure
3. Documentation phase
4. Structural risks
5. Resulting financing challenges
6. Bespoke finance structuring
7. Key take aways

INTRODUCTION STEK

- Independent law firm based in Amsterdam
- Gradually expanded to around 70 attorneys
- Four main practice areas: Corporate, Finance, Dispute Resolution & Regulated Markets
- Strong sector focus on energy
- Experience with a number of geothermal projects →



AARDWARMTE
MAASDIJK



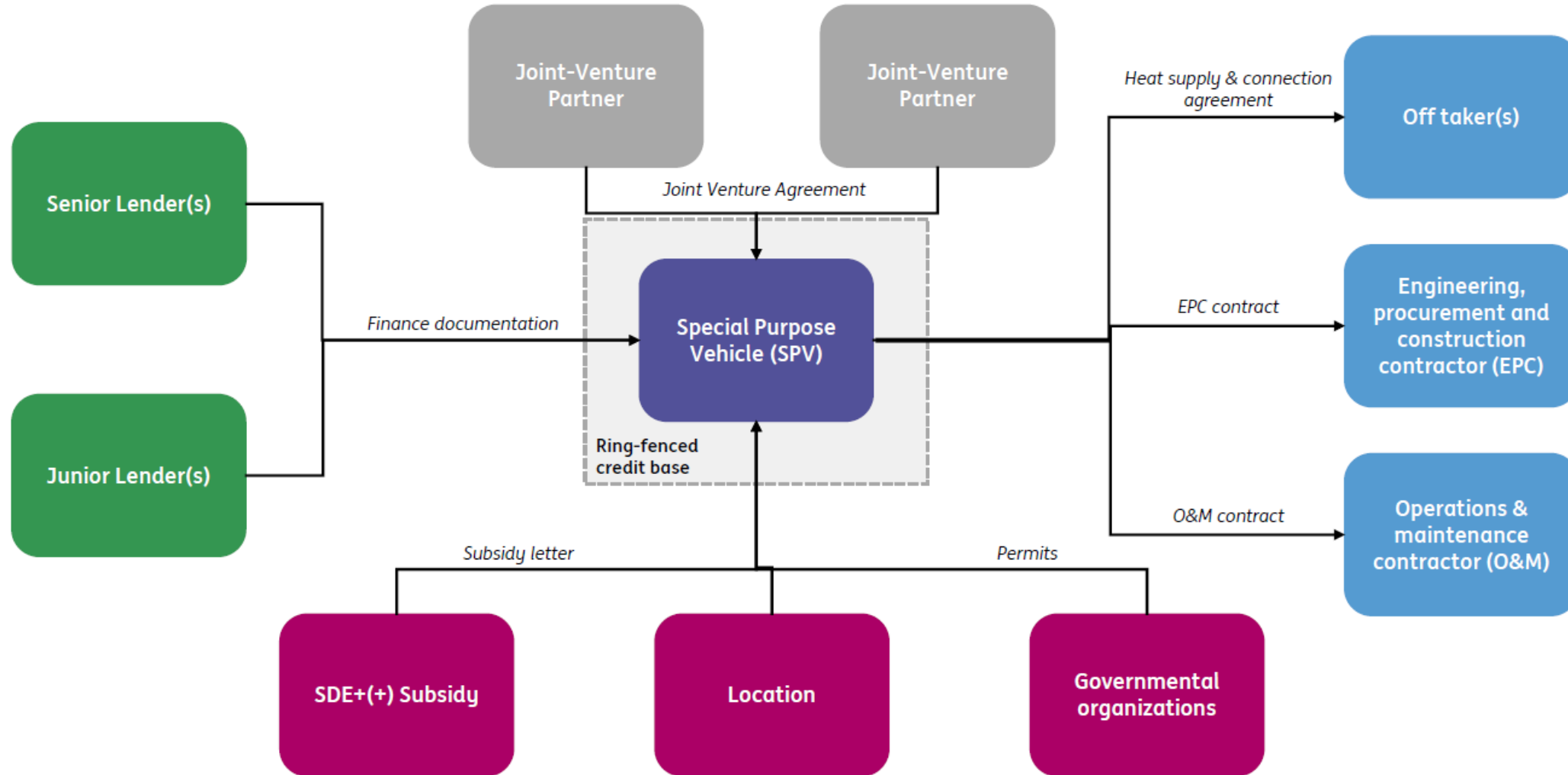
TRIAS
WESTLAND



 Wayland Energy

ecw  energy
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TYPICAL GEOTHERMAL PROJECT FINANCING STRUCTURE



DOCUMENTATION PHASE

1st month

2nd month

3rd month

Permits

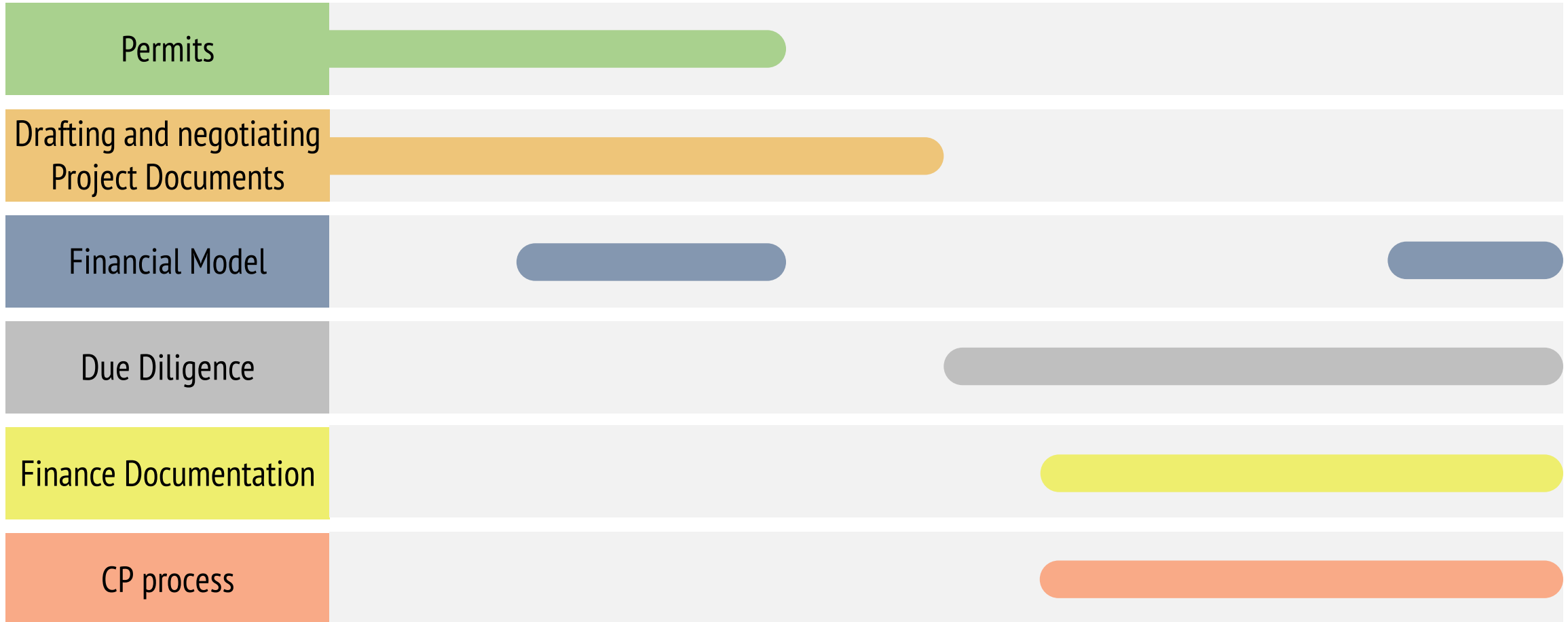
Drafting and negotiating
Project Documents

Financial Model

Due Diligence

Finance Documentation

CP process



DOCUMENTATION PHASE

- Documentation phase can be lengthy – Financial Close will only be reached if all CPs are satisfied
- Finance documents, project documents, irrevocable permits & subsidies to be in place
- Due diligence:
 - Technical DD
 - Legal DD
 - Insurance advice
 - Financial advice (financial model, prepared/diligenced by an external expert party)
- Legal DD specifics:
 - Large number of project documents with variety of contract terms (i.e. not one EPC Agreement)
 - Adaptation to the market: difficulty to obtain a fixed price, security and penalty structure
 - Permits
 - Structuring / ownership

TYPICAL PROJECT FINANCING STRUCTURE

Cashflow

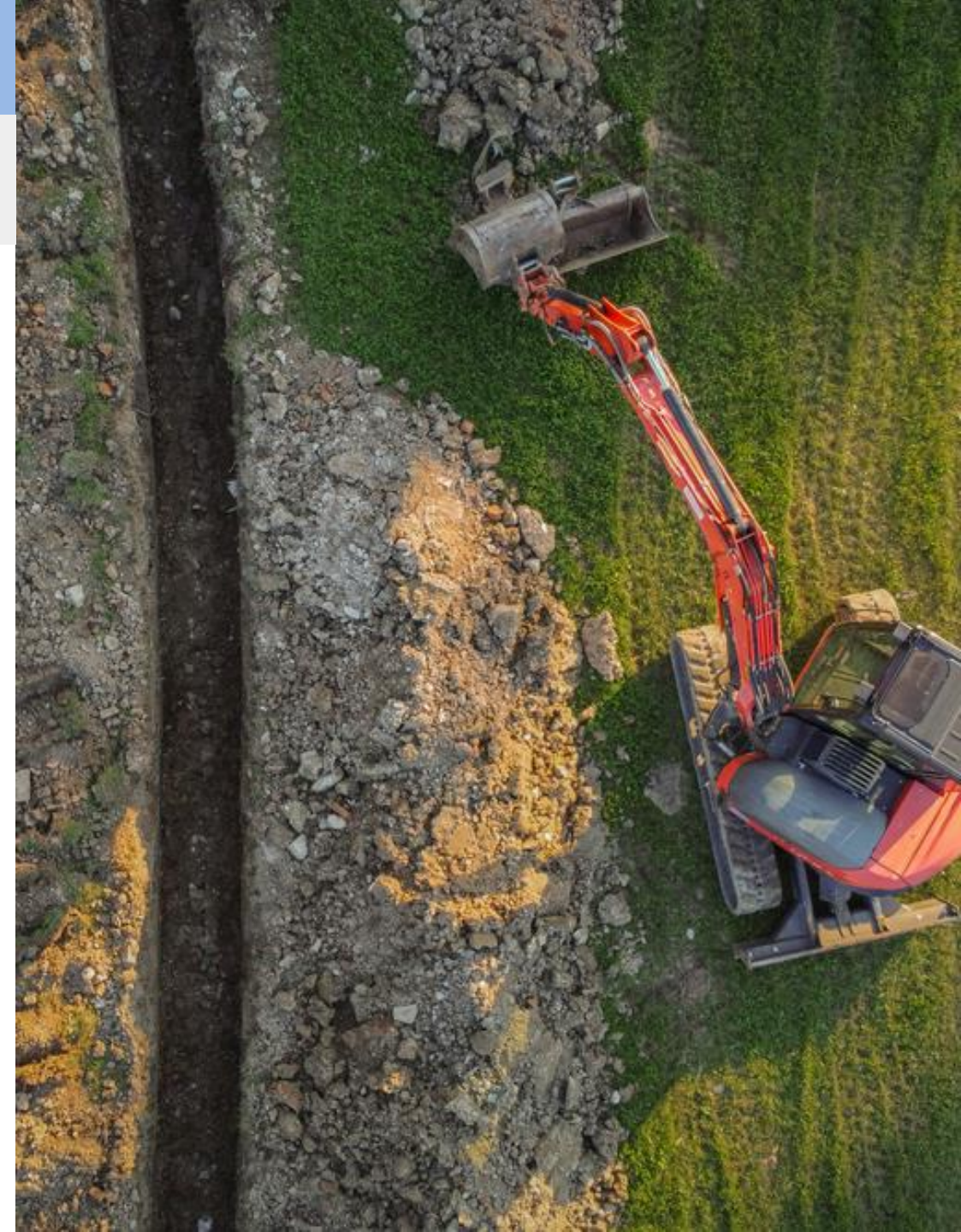
- Cashflow is 'fixed' on financial close on the basis of signed project documents
- Project costs are based on long term fixed price contracts with penalties on performance/timing
- Revenue is based on long term fixed price contracts (and subsidy)

Debt structuring

- Investors provide their funds on an 'equity first' basis
- Bank debt is based on a maximum gearing (bank debt as a % of total project costs) and a minimum DSCR (cashflow to debt service)
- Repayments are often sculpted to match the income streams

STRUCTURAL RISKS

- **Geological risk:** uncertain whether bankable capacity will be found
 - Capacity uncertainty impacts planning for project costs (both for the well and the network)
 - Capacity uncertainty also impacts planning for off-takers
- **Drilling risk:** uncertain what the drilling costs will be
- **Permitting framework** (new): requiring separate permits for exploration, drilling and operation of the well
- **Regulatory:** uncertainty on ownership of heat network – mandatory public ownership? Role of EBN?





RESULTING FINANCING CHALLENGES

- Uncertain drilling outcome & related costs → uncertainty on bankability
- Not all project documents are entered into pre-financial close
- Not all project costs are fixed pre-financial close
- Not all project cash flows are fixed pre-financial close
- Not all permits are obtained pre-financial close
- Interdependency well and network → separate ownership and separate financings?
- **How can this be made to work?**

BESPOKE FINANCING STRUCTURE

Addressing the geological risk and drilling risk:

To be structured as equity risk

- Or (RNES) insurance
- Or guarantee from the drilling company

Equity to fund contingencies

- Impact 'funding shortfall'
- With equity true up?

Debt quantum conditional on well capacity

- For the well borrower and (if a separate financing also) for the network borrower
- Amount to be drawn dependent on well capacity
- Lenders have a say on continuation of drilling on the basis of a well test (GO / No GO)
- Lenders have a say on capex once the well capacity is known – both for the well and network

BESPOKE FINANCING STRUCTURE

Addressing uncertainty on project documents and permits:

Restrictions on termination rights in key contract documents

- Also in contacts between the well and network – what if the well borrower can no longer fulfil its payment obligations under the heat transport agreement?
- What if the heat that can be transported by the network is less than the geothermal power?

Documentation

- Off-take contacts to be flexible: whereas off-taker is bound to pay for supply, no obligation for the SPV to supply (minimum) capacity
- Project documents signed after Financial Close to be satisfactory to the lender (based on a pre-agreed format)
- Obtaining remaining project documents as a drawdown condition

Permitting framework

- Obtaining remaining permits (and subsidies) as a drawdown condition

BESPOKE FINANCING STRUCTURE

Required security structure:

Day 1 security package as a CP for Financial Close

- Share security SPV
- Mortgage over the installation/network
- Security over receivables, movables, bank accounts
- Guarantees from project parties

Step in rights / direct agreements

- May not be available for all contracts, most important contracts to be determined

Security over the relevant part of the network as a condition subsequent



BESPOKE FINANCING STRUCTURE

Mitigation of interdependency risks in separate financings for the well and network:

Continued alignment of the financiers of the well and the network:

- Restrictions on transfer by the financiers
- Restrictions on refinancing by the borrower

Continued alignment of the investors of the well and the network:

- Change of control linked to investors in both the well and network

Cross-over information undertakings:

- As long as financiers are the same – information provided under either the well or network financing is available

KEY TAKE AWAYS

- 1) Documentation phase can be lengthy
- 2) Availability of debt dependent on well capacity
- 3) Not all project documents and permits available at Financial Close
- 4) Remaining uncertainties to be addressed as a drawdown condition
- 5) Interdependency risks well and network to be addressed



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Contact us!

Katinka van den Brink



katinka.vandenbrink@stek.com

+31 6 1872 0338

+31 20 530 5267

Herman Wamelink



herman.wamelink@stek.com

+31 6 1375 6471

+31 20 530 5214



stek

Thank you for your attention!

+31 20 530 52 00 | Leidseplein 29 | 1017 PS Amsterdam
www.stek.com