



VERDE
Verification for Decarbonization

- *Professor Erik Røsæg*
- *Institutt for privatrett, UiO*
- *erik@rosaeg.no*
- *rosaeg.no*



Hva vi vil

Partnere

- *Forskningsrådet*
- *DNV GL*
- *Equinor*
- *Klaveness*
- *UiO*
- *Silverstream Technologies*
- *Georg Scheel, Elias Settevik (MarIus 429) og meg*
- *Ingeniører og jurister*

Teknsk

- *Develop methodology for quantifying financial return from speed reduction, including fuel savings, charter rates and other expenses*
- *Financial model for alternative fuels and energy carriers*
- *Methodology for evaluating sustainability of biofuels*
- *Map applicability of hydrogen and batteries for various ship types, operations, applications. Propose methodology for evaluating emissions savings.*
- *Wind-assisted propulsion: map applicability of available technologies for various ship types and operations. Propose methodology for evaluating fuel and emissions savings.*
- *Hybrid systems: develop recommended methodology for verifying savings from hybrid systems by defining benchmark and required monitoring and modelling.*
- *Cold ironing: improve existing model estimates for power consumption in port. Develop methodology for verifying emissions savings from cold ironing.*
- *WHR: map suitability of various technologies for various ship types and operations. Develop methodology for verifying fuel and emissions savings from WHR.*
- *Recommended practice/DNV GL standard for verifying fuel and emissions savings from machinery measures.*
- *Isolate weather effects: develop methodology, building on existing ISO 19030, to establish base line for vessel performance in relation to various energy saving technologies, isolate weather effects and other factors when calculating ship efficiency.*
- *Develop requirements for CFD simulations for verifying performance of energy efficiency devices.*
- *Air lubrication: Establish methodology for verifying fuel savings from air lubrication.*

Offentlige krav

- **IMO-krav**

IMO Resolution MEPC.304(72) Initial IMO Strategy on Reduction of GHG Emissions from Ships. (2018)

- **EU-taksonomien**

Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment ...

- **Offentliggjøringsforordningen**

Regulation (EU) 2019/2088 of The European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector

Internt



- *Drift*
- *Investeringer*
- *Omdømme*
- *CO₂ og andre miljøkrav*

Kommersielt

- *Finans, f.eks. Poseidon principles*
- *Certepartier*
- *Hele verdikjeden*
- *Hvorfor er dette kommersielt viktig?*
- *Klausuler og definerte krav*
- *Stivhet i kontraktsstrukturen*
- *Håndhevelse av miljøstandarder. Penalty clauses*
- *Opprettholdelse av operasjonelle prosedyrer*

Odfjell SE NOK 850m senior unsecured sustainability-linked bond issue

Transaction summary

Main terms and conditions		Transaction highlights
Issuer:	Odfjell SE	<ul style="list-style-type: none">• Transaction announced 7 January. Three-day roadshow, presenting to approximately 50 investors through 1:1s and investor calls• Books open and closed 14 January• Approximately 110 unique orders in the book, and total book size of NOK 1,940 mill<ul style="list-style-type: none">– ~71% Norway– ~8% Sweden– ~8% Finland– ~7%USA– ~6% Denmark• Approximately 37% of the book (excluding retail) is thought to be fully or significantly dependent upon the ESG link• Broad investor interest, including from investors that have scaled back their shipping exposure over the past 12-18 months
Structure:	Senior unsecured sustainability-linked bond	
Issue amount / limit:	NOK 850 mill / NOK 1,250 mill	
Coupon:	3m NIBOR + 575bps, quarterly	
Issue price:	100% of par	
Redemption price:	100% of par if the AER performance target has been met by the Target Observation Date and Odfjell provides a viable and possible Fleet Transition Plan, otherwise 101.50%	
Maturity:	21 January 2025	
Target Observation Date:	30 June 2024	
Call:	Non-call	
Listing:	Oslo Stock Exchange and Euronext ESG Bonds	
Second opinion provider:	DNV GL	

Skatt

- Utfyllende bestemmelser om fond for miljøtiltak mv. (skatteforskr. § 8-20 A)
- Reduksjon i tonnasje-skatt på grunnlag av fartøyets miljøstandard (skatteforskr. § 8-16)
- Forskrift om miljødeklarasjon i forbindelse med miljødifferensiering for skip og flyttbare innretninger (FOR-2000-11-28-1194)