Newgreen - Structuring green hydrogen projects and making them bankable

Developers, IPPs and Investors - Green hydrogen

June 2025

NEWGREEN

NEWGREEN - Key facts and commitments

An international expert in team and project management, specialising in green hydrogen investment, with 15GW of projects structured and made bankable, providing strategic and operational expertise to support the teams of developers, IPPs and investors

Positioning

- Experienced team-mates who work to support the teams of developers, IPPs and investors and their holdings, whether based in France or abroad.
- By working as “wingmen” in support of the teams, we increase the bandwidth of our clients and help them tackle critical issues.
- We are experts in investment and financing in energy infrastructure (RE, storage, green hydrogen), climate transition and green mobility.
- We use our technical expertise, project management skills and experience in motivating teams to bring projects to fruition.
- We provide mentoring to help our customers' teams become more agile and quicker to adapt to change.

Integration and team cohesion

- Thanks to our partnership with Maître Didier Baras (founder of LLDX, « Fencing & Management"), we have an integration and team-building tool at our disposal.
- As former coach of the French Paralympic sabre team, Didier Baras won gold with his athletes at the Beijing Games.
- All members of the project team, including us, take part in the session. At the end of each protocol (individual or team), we illustrate with examples of professional situations, so that we can apply the lessons from the fencing session directly during the missions.
- This makes it possible to create effective project teams.

They have placed their trust in us

OQ	ABO ENERGY	Gaia ENERGY	AVEL BRAZ	ECO Delta
5+5+25GW Project finance H_2 green / Solar Team creation	2.5GW Project finance H_2 green / Wind / Solar	Development JDA negotiation	Conversion from developer to IPP	Acquisition / Refinancing Operating
financeinmotion	Shell	4D	ABN·AMRO	SOCIETE GENERALE
Project finance Equity Devex	Wind energy investment (M&A)	VC/PE Energy (€450m invested)	Project fin. / M&A / misc. infra energy	Project fin. / M&A / misc. infra energy

Founding team

- Newgreen's founding team is made up of 3 experts, each with 25 years' experience with IPPs and/or infra fund investors and/or VC/PEs, in infrastructure and energy, with 3GW+ of RE and storage and 15GW+ of H2 projects backed and €450m invested in VC/PEs in energy (incl. climate transition and green mobility).
- The founding team has expertise in project development, insurance, acquisition, investment and financing, combined with solid experience in project management, operational fund management and leading teams from within.

Benoît Amouroux
Co-Founder & CEO
- +25 years development, insurance, financing and acquisition | RE & Infrastructure.
- Worked noticeably for WTW (UK), MARSH (FR), CATE (FR), AN AVEL BRAZ (UK/FR) and NTR (IE).
- Passion: Fencing

Paul Shultz
Co-Founder & MD
- +25 years M&A, financing, structuring | RE, Storage & Green Hydrogen | 25 countries.
- Worked for ABO ENERGY (DE), OQ (OM), FINANCE-IN-MOTION (DE), SGAM (FR).
- Passion : foreign cultures and languages

David Kabile, CFA
Co-Founder & MD
- +25 years M&A and Private Equity | Energy, RE, Energy transition, Hydrogen.
- Worked for 4D GLOBAL ENERGY ADVISORS (FR), SGAM (FR), DRESDNER KLEINWORT (US/BR), SANTANDER (US/BR)
- Passion : Golf

How we work

- We are committed to successfully completing missions and projects.
- We work with our customers' teams every day, according to a predefined rhythm and schedule.
- We regularly check with customers to adjust our involvement, depending on the capacity of the teams to carry out the various tasks set out in the schedule.
- For large project teams, we can mobilise several Newgreen experts.

Our commitment

- Completing investments, transactions and projects on time and target.
- Our customers' teams are more agile and quicker to adapt to change.

Countries we have worked in

Caption:
- Countries where Newgreen members have already worked on energy financing and investments

Feedback on the challenges of ensuring the bankability of an H2 production project

Making a green hydrogen project bankable means structuring the project in an integrated way to make it attractive to lenders

Feedback

- Our experience in structuring green hydrogen production projects to make them bankable - gained from over 15GW of international projects (Canada, Oman, Tunisia) - shows that a project's ability to raise debt depends directly on its financial structuring and commercial robustness.
- An integrated approach to structuring the project, negotiating the terms and conditions of the underlying commercial contracts and the debt conditions will ensure a de-risked project that can secure the expected debt.

Non-aligned structuring: threat to ability to raise debt

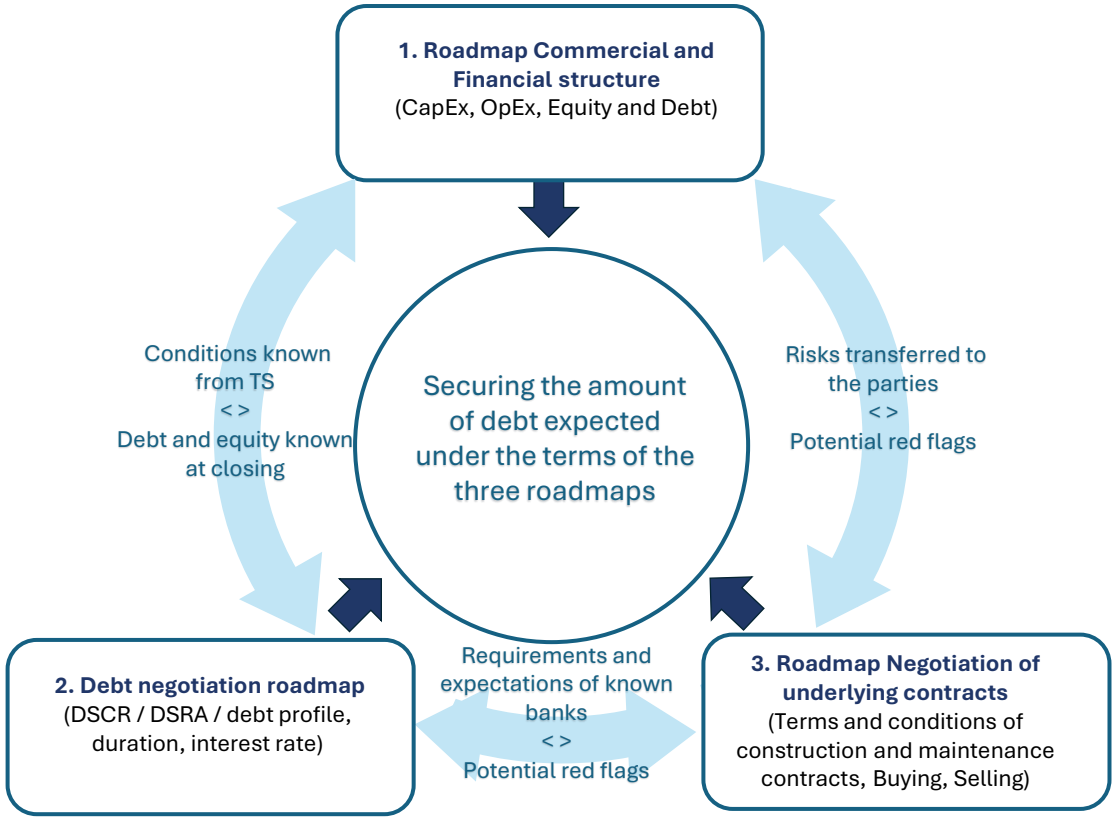
- The three raodmaps must be considered together to know the conditions of the games to avoid any misalignment and future red-flag points.
- The three roadmaps are interdependent: treating them separately will affect the project's ability to raise the planned amount of debt.
- The sponsors have to make up the difference by providing additional equity, as the project has raised less debt than initially planned, with an impact on the expected IRR.

Newgreen's added value

Leading the three roadmaps together to secure the project's ability to raise debt in interaction with all project stakeholders.

- The projects we have supported demonstrate the importance of constant consultation with all stakeholders in order to allocate risks effectively.
- Newgreen brings a strong track record of financing energy projects, across all value chains (H2, RE, BESS, *et al.*) with a deep understanding of the needs of investment and finance providers for these projects.
- What we also bring to the table: experience of working with investors to understand their needs, structuring projects to make them attractive to investors and lenders, and allocating risk as effectively as possible between counterparties.

Debt leverage and critical interdependencies



An integrated approach to roadmaps increases the agility of teams in negotiating the best debt terms for the project

Approach to analysing the bankability of a project, structuring it and negotiating to make it bankable (1/2)

Case study: e-SAF project analysis

From economic evaluation of the project to risk analysis and anticipation of red-flags with a view to negotiating the debt

Bankability study

Stage 1

Economic assessment of the project & strengths and areas for concern

Process Flow

Renewable Electricity (RFNBO)
|
Electrolysis Unit
|
Methanol Synthesis Unit <--- Biogenic CO2 intake (local source)
|
Methanol to SAF Refining
|
SAF Delivery (pipeline or truck)

Technical Configuration

Process Unit	Capacity	Annual Volume
Renewable Electricity Source	[xxx] MW	[xxx] GWh/year
Electrolyzer	[xxx] MW	[xx] kt Green H2/year
CO2 intake/capture	N/A (depends on local emitter)	[xxx] kt CO2/year
Methanol Synthesis	Reactor combining H2 + CO2	[xxx] kt MeOH/year
Methanol to SAF Refining	Full Methanol-to-Jet process	[xx] kt SAF/year
SAF Storage	[xx] days buffer	[x.x] kt SAF

CAPEX hypothesis - Base vs High Case

Item	Description	Base Case (MC)	High Case
Land acquisition	[x] ha	[x]	[xx]
Electrolysis	[xxx] MW electrolyzer	[xxx]	[xxx]
CO2 capture	Post-combustion (biogenic source)	[xx]	[xx]
Methanol synthesis	H2 + CO2 to methanol ([xxx] kt/y)	[xx]	[xx]
Methanol to Jet refining	Full MTJ unit	[xxx]	[xxx]
Storage	Methanol + SAF tanks	[xx]	[xx]
Infrastructure & utilities	Water, waste, grid connections	[xx]	[xx]
Water supply system	Pre-treatment & buffer storage	[xx]	[xx]
Total CAPEX		**€[XXX]m**	**€[XXX]m**

OPEX hypothesis

Item	Description	Base Case (€m/year)	High Case (€m/year)
Purchase of Green electricity	@[xx]€/MWh	[xx]	[xx]
Electrolyzer operation	Power + maintenance + parts	[xx]	[xx]
CO2 capture operation	Energy, chemicals, maintenance	[xx]	[xx]
Methanol synthesis operation	Energy, catalyst replacement	[xx]	[xx]
Methanol to SAF refining operation	Process energy, consumables	[xx]	[xx]
Storage & logistics	Storage operations, safety, transport to CDG	[xx]	[xx]
Fixed site costs	Staffing, insurance, services	[xx]	[xx]
Total OPEX		**€[xx]m/year**	**€[xx]m/year**

Key Points

Strengths

- Full strategic control over the entire value chain (H2 production, CO2 capture, methanol synthesis, SAF refining).
- Strong local industrial footprint — attractive for regional and national industrial policy (job creation, ecosystem development).
- More attractive for direct public funding (ADEME, EU), given its complete industrial scope in France.

Challenges

- Higher CAPEX due to integration of all units on-site.
- Complex coordination between units, increasing construction and operational risk.
- RFNBO compliance is fully on Sponsor — the whole chain must be certified.
- Dependence on a single CO2 supplier (Rhône CO2) increases supply risk.
- EPC Contractor risks and support.
- Weaker economics than strategy may limit investor preference for other projects with better margins.

> Validate sponsors' requirements

Stage 2

Risk analysis & identification of red-flags & mitigation solutions

Risk Category	Description	Severity	Key bankability elements to monitor
CAPEX overrun	Risk of cost overruns during construction	High (multi-tech site)	Independent cost review by Technical Advisor, Clear managemetn through EPC terms
Timing risk	Synchronization between units	Moderate (single site)	Integrated timeline validated by Lender's Advisor
CO2 supply risk	Securing 147 kt/y of biogenic CO2	Very critical (single source dependency)	Dual sourcing + rock-solid CO2 contract
CO2 supplier maturity	Industrial and financial robustness of CO2 supplier	Fragile (Rhône CO2 still developing)	Full Technical and Financial Due Diligence, Engagement with Lender requirements on CO2
CO2 logistics	Secure continuous flow of CO2	Medium	Logistics audit and backup plan
RFNBO compliance	Certification of entire value chain	Critical	Continuous third-party audit from FID to operations
Electricity price risk	Power price volatility for electrolysis	High (France >70 €/MWh)	Long-term PPA required before FID
SAF market risk	Green premium volatility	High	Long-term offtake with premium-indexed price
Methanol import performance risk	Import logistics risk	None	Port logistics audit
FX risk	Currency risk on offshore procurement	None	Should be managed through commercial contracts through pricing structure
Contractual complexity	Number of critical contracts	High (full chain in France)	Consolidated commercial contracts reviewed by Legal Advisor
Insurance	Construction & operational coverage	Standard	Insurance package validated in Due Diligence, Newgreen can recommend on these
SAF offtake	Securing sales of [xx] kt/y of SAF	Key (emerging market)	Binding offtake with creditworthy buyers through contract or ongoing tender process, purely merchant probably unbankable today
Project governance	Multi-site coordination	Simple	Formal governance including lenders
Strategic flexibility	Ability to switch suppliers if needed	Low (fully integrated)	Flexible contracts allowing supply shifts
Local acceptability	Community relations	Positive (jobs created)	Structured local consultation process

Category	Description	Importance	Proposed Mitigation
CO2 and methanol Supply Risk	Secure biogenic CO2 supply for 15+ years in line with RFNBO requirements	Critical	Diversify sources, pre-sign long-term contracts, and set up buffer storage
RFNBO Certification Risk	Full process compliance, from capture to SAF delivery, with evolving EU rules	Critical	Continuous compliance monitoring and external audits
Construction Risk	Coordination between renewable plant, electrolysis, CO2 capture, and refining units	High	Independent technical advisor (LTA), full-scope EPC wrap if possible
Technology Risk	Scale-up of Methanol-to-Jet process (limited references at this scale)	Medium	Select proven technology providers and structure performance guarantees
Power Price Volatility	Electricity cost for electrolyzer (if grid-connected)	Medium	Long-term PPA or own dedicated renewable plant
Offtake Risk	Securing long-term SAF purchase agreements at attractive prices	Critical	Pre-secure offtake with tier-1 airlines under binding contracts
Permitting & Regulatory Risk	Permits for industrial site, environmental approvals, local opposition	Medium	Early engagement with authorities, community dialogue
Financing Complexity	Multi-country CAPEX (in Option 2), hybrid financing (debt, equity, grants)	Medium	Develop clear financial structure with identified tranches and aligned lenders

Topic	What lenders want to see	Recommended action
Primary CO2 source	Minimum 2 diversified sources	Identify and pre-secure 2 suppliers
CO2 contract	15-year take-or-pay with penalties	Negotiate firm contract with strong penalty clause
Supplier Due Diligence	Technical, financial, ESG audit	Lender's Technical Advisor to conduct review
CO2 buffer storage	On-site storage for 30 days	Mandatory
RFNBO compliance	Biogenic proof + full traceability	Certification system in place from day 1

> Identify the points to be negotiated with stakeholders

Approach to analysing the bankability of a project, structuring it and negotiating to make it bankable (2/2)

Case study: e-SAF project analysis

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Step 3

Approach to financing conditions and definition of profitability parameters

e-SAF project

Term Sheet indicative

Metric	Project H2
Initial CAPEX	€[xxx]m
Annual Production (SAF)	[xx] kt
Sales Price (SAF)	[x,xxx] €/t
Annual Revenue	€[xxx]m/year
OPEX per ton	[xxx] €/t
Annual OPEX	€[xx]m/year
Annual Free Cashflow	€[xxx]m/year
Equity IRR	[X.X]%
Payback Period	[x] years
Location	Full integration in Fos-sur-Mer
CO2 Supply	Captured locally (biogenic)
RFNBO Certification Complexity	High (full chain in France)

> Validate the requirements of debt and equity providers

Step 4

Negotiate the terms and conditions of the underlying contracts

EPC
O&M
Supply
Offtake

with analysis of counterparties, guarantees, commitments, damages and penalties.

> Consider points 1 & 2

Step 5

Negotiating the terms of the debt and successfully completing the SDs

DSCR/DSRA/Durée/ISDA Swap

> Financial closing

Track record for hydrogen / green ammonia / renewable energy projects

Main hydrogen / green ammonia projects structured and prepared for debt raising :

2.7 GW | Oman

Hyport - 2.7 GW, Duqm, Oman
Sponsors: OQ, Démé (Belgium)
News: BP recently acquired a 49% stake in the project: https://www.offshore-energy.biz/bp-to-acquire-49-stake-in-hyport-duqm-green-hydrogen-project-in-oman/

25GW | Oman

Green Energy Oman (GEO) - 25 GW, Duqm, Oman
Sponsors: OQ, Enertech (Kuwait), ICE (Hong Kong)
News: Shell recently took a 33% stake in the project: https://www.geo.om

5GW | Oman

H2Oman, 5GW, Salalah, Oman,
Sponsors: OQ, Air Products, Acwa Power, PIF (Saudi Arabia)
Latest news: project currently on hold, although a consortium has been set up to finance it

5GW | Newfoundland, Canada

Toqluqtu'k Wind and Hydrogen Project, 5 GW, Newfoundland, Canada
Sponsors : ABO Energy, Braya
News : https://www.aboenergy.com/ca/company/projects/toqlukutik-project/

Var Tunisia, South Africa, Argentina

Other H2 projects with ABO Energy in Tunisia (2.5-5.5 GW, with RWE and Snam), Germany, South Africa and Argentina.
https://www.aboenergy.com/en/development-construction/green-hydrogen.html

Fundraising for start-ups

Fundraising for H2 start-ups in Germany and France, and for projects and companies in the renewable energy and BESS sectors.

H2 Ecosystem

Established relationships with sponsors, project finance banks and investment funds focused on the green hydrogen/ammonia sector

Green electricity / PPA

Experience in green electricity and PPA: Gaia Energy, 900 MW, An Avel Braz, 150 MW, NTR and numerous solar and wind projects across Europe.

Risks and Insurance

Experience in analysing and structuring insurance for energy projects and their financing, as a risk advisor (Marsh and WTW), analysing insurance for projects in the context of raising capital (OQ)

Refining & petrochemicals

Experience in traditional refining and petrochemicals: IES refinery in Mantua; IPLOM refinery in Genoa; Shell refineries in France, Germany and Japan. Refining, petrochemicals and LNG in Oman, Qatar, Saudi Arabia and the UAE.

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