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Gases renovables, los grandes aliados en la **desfosilización** de la economía española

Navigating Biogas Investment: Essential Criteria and Due Diligence Insights

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What is a due diligence process?

A systematic process of assessing all aspects of a business or project before proceeding with investment or implementation. Involves evaluating technical, financial, legal, regulatory, and environmental factors. It is essential for identifying risks, ensuring compliance, and optimizing decision-making.

Why is due diligence critical for biogas plants?

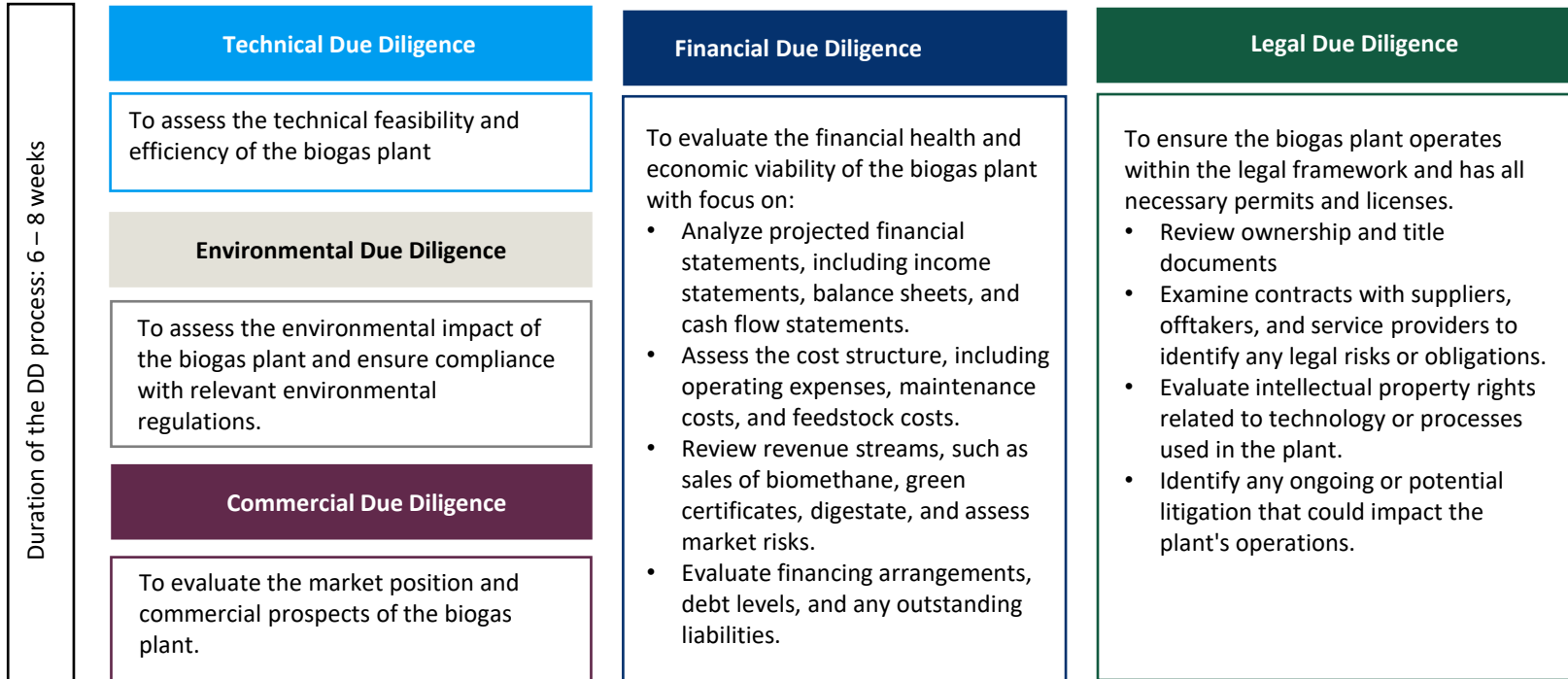
- **Investment Protection:** Ensures capital is spent wisely, reducing the risk of failure.
- **Risk Mitigation:** Identifies potential technical, financial, and regulatory risks.
- **Compliance Assurance:** Guarantees alignment with environmental, safety, and legal standards.
- **Project Viability:** Validates the feasibility of the project in terms of feedstock availability, energy yields, and market demand.
- **Sustainability Goals:** Ensures that the project contributes to long-term sustainability objectives.

Benefits of comprehensive due diligence

- **Improved Decision Making:** Provides a clear understanding of risks and opportunities.
- **Increased Investor Confidence:** Thorough due diligence attracts investors and financiers.
- **Project Efficiency & Safety:** Identifies flaws in the design or operation, improving overall project success.
- **Reduced Costs:** Helps avoid costly mistakes and ensures resource optimization.
- **Sustainable Growth:** Aligns the project with long-term energy and environmental goals.



The due diligence process for a biogas plant involves a **comprehensive assessment of all aspects of the project to ensure that it is viable, financially sound, and compliant with legal and regulatory requirements.**



Target Review

Overall assessment of status and technical solution of biogas plants. Based on Ramboll's experience too often projects lack of information or clarity that can jeopardize the transaction.

Examples for some key areas/topics	Most projects – poor practices	Top performers – best practices
Feedstock mix and yield	Uncertainty of composition and quality: assumptions not backed by data, lack of certainty. → Low certainty on yield and therefore revenue	Details on composition, well known to the Target, source of the numbers, representative sampling and multiple data points. → Higher certainty on yield and therefore revenue
Technical solution	No details on design, sizing, lack of engineering documentation, generic information available and too high level. → Increased technical risk due to lack of data; low confidence on designer/developer/owner.	Detailed information, including design assumptions and philosophy, redundancies, complete engineering documentation. → Gives confidence on design, engineering team and company procedures.
Mass and energy balance	Does not consider actual plant design and conditions (uses BMP); no details on digestate conditions – no details on other byproducts.	Considers HRT, and others – as well as variations, detailed granularity of consumptions.
O&M strategy and organisation	Lack of information on responsibilities and O&M approach; e.g. single value for OPEX.	Responsibilities defined; details on manpower and contracted services, etc.
Review of the technical inputs in the Financial Model	Few details that cannot be assessed/benchmarked.	Granular inputs including main concepts that allow a more accurate assessment.

Site visits

- Provide firsthand insights into the plant's operational conditions, equipment status, safety and overall efficiency.
- Allow for direct observation of key processes, maintenance practices, and safety systems, which cannot be fully captured through documents alone.
- Potential risks and operational challenges can be identified, ensuring a more accurate assessment of the plant's performance and long-term viability.



The areas listed are some of the key items of Ramboll's typical technical due diligence scope. It does not represent an extensive list of contents. 



Target Review

Ramboll has worked in sellers/buyers/lenders DD, based on our experience here are some examples of good and bad practices:

Examples for some key areas/topics	Most projects – poor practices	Top performers – best practices
Feedstock	Few feedstock agreements available, typically only provided on a fresh matter basis, not taking total solids, volatile solids into account. → High uncertainty on pricing and feedstock quality	All feedstock agreements available, with a proper pricing structure based on the quality → Low uncertainty on pricing and feedstock quality
Offtake	Uncertainty on paramount parameters for off-take, such as pricing of gas: <ul style="list-style-type: none"> - Per m³ instead of Nm³ - Per m³ of delivered gas instead of per m³ delivered CH₄ - Per kWh, but unspecified whether it is lower or higher heat value 	Clear definition of pricing of biomethane and bio-CO ₂ regarding the quality of gas and pricing parameters.
Digestate	Few off-take agreements for digestate available, with few details. Optimistic price of valorised digestate in upside scenario – without details on composition.	Complete list with long-term off-take agreements. Value linked to the composition.

Market Review

Feedstock

- Verify feedstock prices and potential development
- Develop feedstock catchment areas to assess current and upcoming local feedstock availability

Offtake

- Verify prices for electricity, heat, biomethane, bioLNG, liquified CO₂ and their potential development
- Analysis of funding schemes and certainty of their continuation and future subsidy levels

Digestate

- Verifying digestate prices and removal costs in the light of local fertiliser regulations
- Benchmarking prices for higher-value fertiliser products from digestate

Business Case

The findings and analyses from the target and market review are used to feed into the buy-side business case.



EDD Approach

EDD can vary from Environmental Screening, site selection, review and gap analysis of existing documentation (i.e., project, environmental impact study, CAPEX/OPEX, etc.) and a red flag report, to a complete Environmental Site Assessment including site visit and a review of Environmental Regulatory Compliance assessment

Environmental Permitting

- Environmental aspects are regulated at regional level
- Permitting process involves different competent administrations (e.g., regional environmental agency, municipal authority, health authority, water managing bodies...)
- Realistic timeframes vary in different regions and municipalities
- Fluent and live communication with local authorities and stakeholders is key for the efficiency of the permitting process

Social Response

- Claims by third parties associated to odours at locations near to residential areas
- Positive impact can be perceived by stakeholders in rural areas with problems associated to the availability of fertilizers
- Communication and engagement plan to be implemented in early stage of the projects

Overlapping with Technical Due Diligence

Technical design to take into consideration

- Environmental requirements on water supply, wastewater discharge, digestate management, environmental nuisance
- Municipal urban planning (e.g., distance to residential areas, existence of cattle trucks, impact on existing utilities networks, etc.)



Where to focus on a DD process?

Although not one model fits all due to the variety of transactions – greenfield/brownfield, single asset/portfolio, in one or more markets, different feedstock types – there are some focus elements that will make the best out of a DD process.

If you sell your plant/portfolio/pipeline or seek investment

- **Completeness of Virtual Data Room:** Insufficient information will put the transaction at risk. Ensure that a complete package is put together to show the strength of the project and the team, and to enable the investor and its advisors a correct analysis.
- **Avoid conflicting information:** Clearly present the information and share updated data, a project evolves with time, but it needs to be communicated.
- **Reasonable assumptions in Business Case:** Helps facilitating the process and negotiations, increasing the likelihood of a successful deal.

If you invest/acquire or lend.

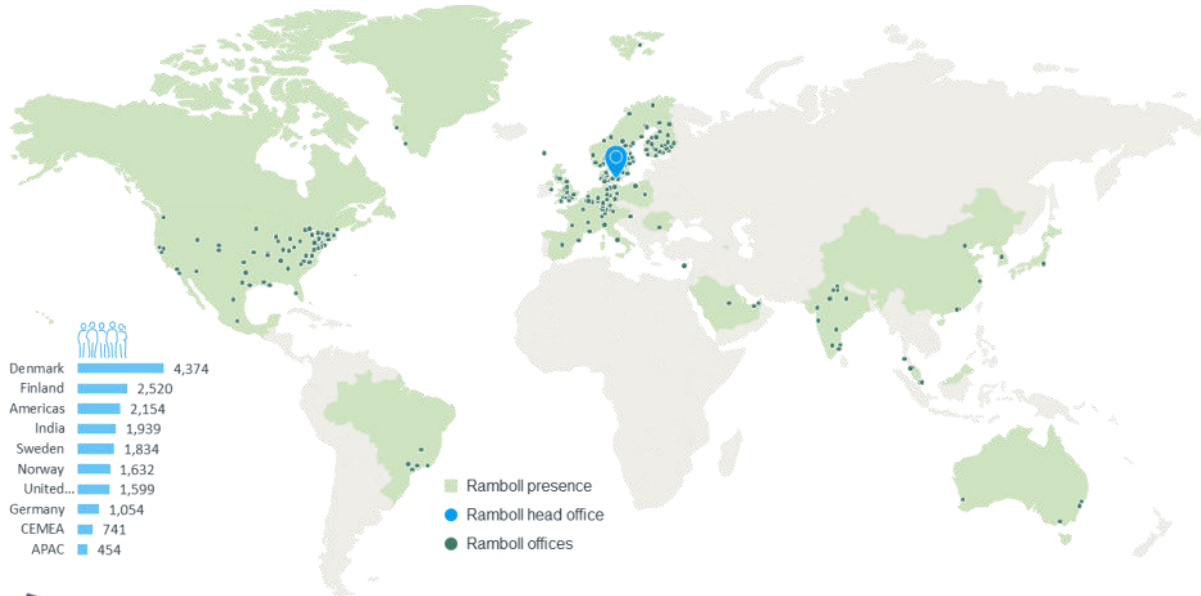
- **Find the right team:** that understand the market, the players and has experience.
- **Dedicate sufficient resources:** It is a time sensitive project, that requires efforts from all parts – information received needs to be assessed and decisions made.
- **Think about the integration and/or development pipeline:** assess synergies with other projects/portfolios, define a strategy; this can allow to mitigate some of the flags raised during the DD process.



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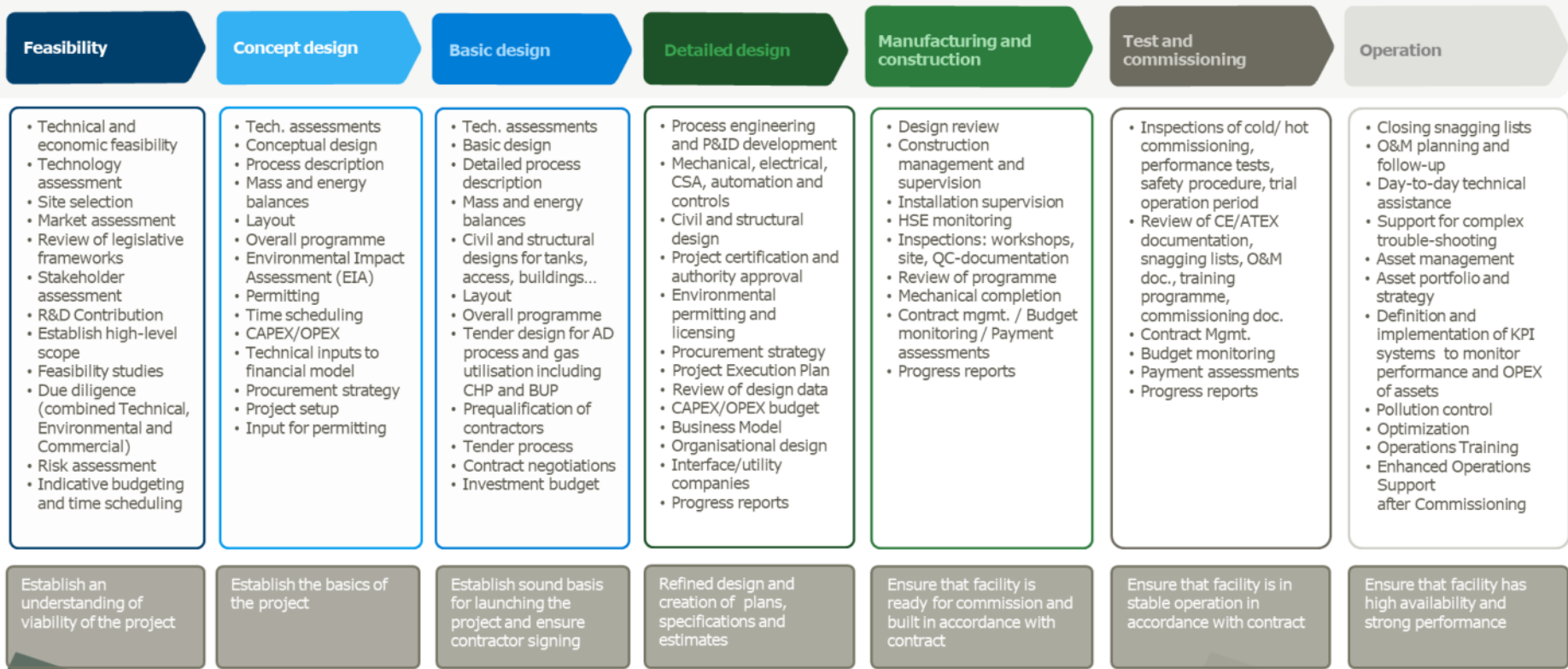
CONGRESO INTERNACIONAL
BIOENERGÍA

9 Services provided for AD throughout all phases of the project

PROJECT LIFECYCLE

TECHNICAL AND COMMERCIAL SERVICES

GOAL



Note: The simplified project lifecycle presents a non-exhaustive list of services

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