

INNOVO Net Zero, Nil Capex for the Aluminum Industry

Commercial, Financial, and Strategic Impact Analysis
on the Industry, the First Mover and Followers

An Open Strategic Briefing for PR Agencies

1. EXECUTIVE SUMMARY

The Opportunity

The global aluminum industry produces approximately 1.1 billion tons of CO₂ equivalent annually, accounting for roughly 2–3% of all human-caused greenhouse gas emissions. Aluminum is one of the most energy-intensive materials to produce: smelting a single ton requires approximately 14,000 kilowatt-hours of electricity, and roughly 60% of the industry’s emissions come from electricity consumption, with a further 20% from process emissions (carbon anodes reacting with alumina during electrolysis). The industry faces an immense decarbonization challenge, with demand expected to nearly double by 2050 driven by the clean energy transition itself (electric vehicles, solar panels, lightweight transportation).

The Technology

Webpages and short videos:

Smoke2Value technology profitably digests CO₂ in industrial smoke emissions: [Smoke2Value](#)

The technology’s high profitability enables Net Zero, Nil Capex for emitters: [Net Zero Nil Capex](#)

INNOVO’s PR Briefing for Strategic Advisors: [PR Briefing for Strategic Advisors](#)

PR advisors and their teams have access to INNOVO’s full Data Room

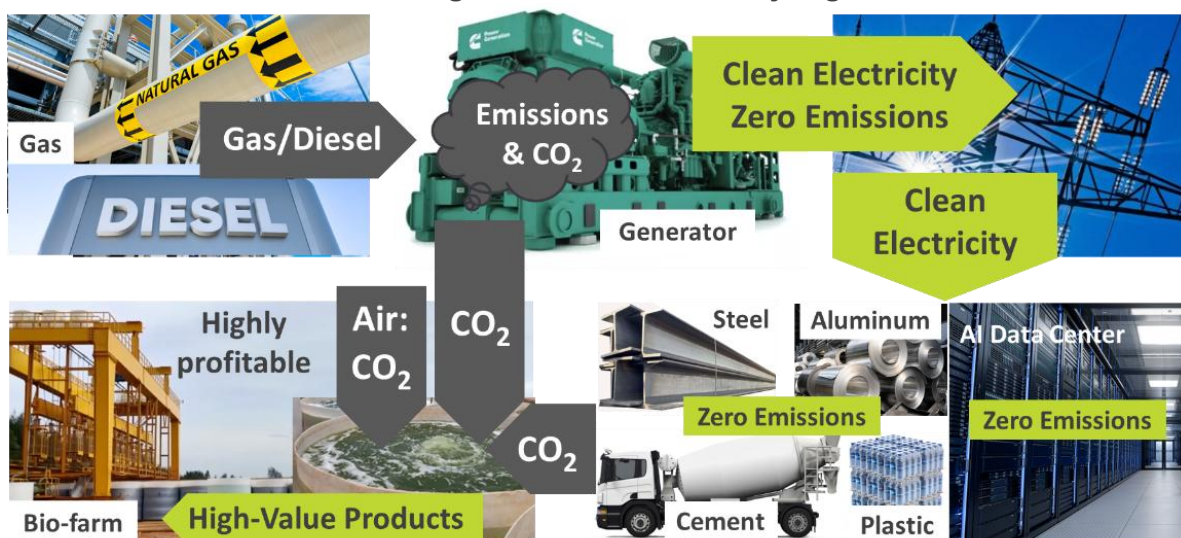
INNOVO and its Technology Partner have developed and commercially validated a Smoke2Value bio-farm technology that enables oil and gas companies to achieve net zero emissions at nil capital expenditure. This is not a theoretical solution. Five of the world’s top 10 oil and gas majors, including Shell, Chevron, and BP, completed two years of independent due diligence on an industrial-scale bio-farm and placed \$16 billion in three multi-year offtake contracts as a result.

Transformational Technology for Aluminum Decarbonization

INNOVO offers a transformational solution to the aluminum industry's most pressing challenge: achieving net-zero emissions without massive capital expenditure. Through its proven Smoke2Value algae bio-farm technology, INNOVO finances, builds, and operates carbon-negative infrastructure that profitably digests millions of tons of CO₂ emissions at no cost to emitters.

The Technology

Smoke2Value Algae Bio-farms Profitably Digest CO₂ in Smoke



Smoke2Value bio-farms utilize industrial-scale algae cultivation in thousands of deep tanks filled with seawater. CO₂ from industrial smoke emissions is bubbled through these tanks, where algae rapidly grow through photosynthesis in sunlight. The harvested algal biomass is refined into high-value products, particularly crude algal oil—a premium feedstock for Sustainable Aviation Fuel (SAF). Each bio-farm generates approximately \$200 profit per ton of CO₂ digested, making the technology seven times more profitable than solar energy.

The Smoke2Value bio-farm digests CO₂ emissions from gas-powered generators through algae photosynthesis, producing high-value products including crude algal oil (the feedstock for sustainable aviation fuel, or SAF), animal feed, fish feed, omega-3 oils, cosmetics, and nutraceuticals. The bio-farm generates \$200 net profit per ton of CO₂ digested, making it seven times more profitable than solar and 11 times more profitable than wind or nuclear.

Commercial Impacts

INNOVO's nil capex model eliminates the aluminum industry's most pressing commercial risks in a single deployment:

Regulatory compliance at zero cost: Aluminum is one of six sectors covered by the EU Carbon Border Adjustment Mechanism (CBAM), which entered its definitive phase on January 1, 2026. Importers of aluminum into the EU now pay a carbon tariff aligned with the EU ETS (€70–€100/ton CO₂, projected to reach €150–€200 by 2030). China has announced plans to expand its national ETS to cover aluminum. The UK CBAM (from 2027) also covers aluminum. An aluminum producer co-locating INNOVO bio-farms achieves zero-emission designation and eliminates these costs entirely.

Carbon cost elimination: For EU-based smelters, carbon costs currently run to tens of millions of euros annually. As free allowances phase out and CBAM phases in, a major smelter emitting 600,000 tons of CO₂ saves €48M–€60M annually at current EU ETS prices, rising to €90M–€120M by 2030. The total aluminum industry decarbonization cost exposure, encompassing smelting, refining, and downstream processing, is estimated at hundreds of billions of dollars over the next three decades.

Premium pricing and market share: Green aluminum commands a premium of \$100–\$250+ per ton over standard metal, driven by corporate Scope 3 purchasing commitments. Members of the World Economic Forum's First Movers Coalition have committed to purchasing deeply decarbonized aluminum (80%+ emissions reduction). Apple, BMW, Audi, and other major manufacturers are actively sourcing low-carbon aluminum. The first producer to offer genuinely zero-emission aluminum at scale will lock in long-term premium supply agreements worth hundreds of millions annually.

Customer and supply chain retention: As Scope 3 reporting obligations intensify, automotive manufacturers, aerospace companies, packaging producers, and construction firms will require zero-emission aluminum from their supply chain. Producers that cannot offer low-carbon metal will lose major OEM contracts. INNOVO enables producers to meet these requirements at nil capex.

Financial Impacts

The financial case is compelling at every level:

KEY METRIC	VALUE
Global aluminum industry CO ₂ e emissions	~1.1 billion tons per year
Contribution to global GHG emissions	2–3%
Capital expenditure to aluminum producer	\$0 (Nil Capex)
INNOVO bio-farm investment per site	\$400M–\$800M (100% INNOVO-financed)
CO ₂ digested per \$400M bio-farm annually	600,000 tons
EU ETS savings per 600K ton facility	€48M–€60M/year (current); €90M–€120M/year (2030)
CBAM tariff elimination (major exporters)	Tens of millions annually per smelter
US 45Q Production Tax Credits per bio-farm (12 years)	\$612M (\$51M per year)
Bio-farm profitability	58% IRR / 2.6-year payback

First-mover deal: INNOVO grants first-mover status to an industry leader in return for either (a) the sale of \$300M of US 45Q Tax Credits for \$200M cash, generating \$100M immediate profit, or (b) generation of \$200M cash from \$300M in Australian CO₂ tax mitigation obligations. The first mover receives the most favorable terms; subsequent buyers pay more.

Total first-mover annual benefit per facility: €120M–€350M+ per year, comprising EU ETS elimination, CBAM tariff savings, green premium pricing on zero-emission aluminum, and OEM customer retention. Over 10 years, a single major smelter complex creates €1.2B–€3.5B+ in value at zero capital expenditure. A producer with multiple global smelters multiplies these benefits across the portfolio.

Follower penalty: Once the first mover is announced, all competitors become followers. They lose the green premium pricing window (2–4 years), receive less favorable 45Q terms, face OEM customer attrition, and bear ongoing escalating carbon costs. The gap widens over time and may never fully close.

Strategic Communications Opportunities for PR Agencies

A PR agency that successfully introduces a major aluminum producer to INNOVO and wins the resulting global communications mandate secures a transformational opportunity:

Category-defining global campaign: The announcement that a major aluminum producer has achieved net zero at nil capex intersects climate policy, automotive and aerospace supply chains, clean energy transition, and corporate sustainability. It guarantees sustained international media coverage. The agency leads global launch, ongoing milestone communications, executive thought leadership, investor/ESG messaging, and government affairs.

Revenue potential: INNOVO proposes a 3-way partnership model (Aluminum Producer × INNOVO × PR Agency) with communications costs funded from the value INNOVO creates. Indicative: \$5M–\$15M annual retainer, \$20M–\$50M+ campaign budgets over three years. The agency extends the partnership across INNOVO’s other target industries.

Agency positioning: This campaign establishes the agency as the definitive global leader in energy transition and industrial decarbonization communications—a positioning that generates business development leverage across every heavy-emitting sector. Work of this magnitude (genuine environmental impact combined with commercial transformation) wins major industry awards and defines agency reputations.

Dual-Track engagement model:

INNOVO operates a Dual-Track PR engagement model:

Track 1 (Paid Mandate): For agencies with no existing client conflicts, the agency wins a mandate from both the aluminum industry leader and INNOVO, covering the full global communications campaign.

Track 2 (Strategic Briefing): For agencies with existing retained relationships in the aluminum sector, the agency wins the mandate from its existing client only, avoiding any conflict of interest with INNOVO.

All information is in the public domain, and there is no requirement to notify INNOVO before approaching any client or media contact.

Contents

1. EXECUTIVE SUMMARY	2
The Opportunity	2
The Technology	2
Commercial Impacts	3
Financial Impacts	4
Strategic Communications Opportunities for PR Agencies	4
2. THE ALUMINUM INDUSTRY’S DECARBONIZATION CRISIS	8
2.1 Scale of the Problem	8
2.2 The Decarbonization Challenge	8
2.3 Escalating Carbon Costs	8
2.4 Total Industry Exposure	9
2.5 Failure of Existing Solutions	9
3. INNOVO’S SOLUTION: NET ZERO, NIL CAPEX	10
3.1 Smoke2Value Technology Overview	10
3.2 Zero Capex Business Model	10
3.3 Revenue Model	10
4. COMMERCIAL IMPACT ON THE ALUMINUM INDUSTRY	11
4.1 Immediate Regulatory Compliance	11
4.2 Premium Pricing	11
4.3 Customer Retention and Market Share	11
4.4 Stranded Asset Mitigation	11
5. FINANCIAL IMPACT: FIRST MOVER VS. FOLLOWERS	12
5.1 First-Mover Advantages	12
Priority Access to 45Q Tax Credits	12
Premium Pricing Window	12
Category-Defining Narrative	12
Investor and ESG Rating Uplift	12
5.2 Financial Case Study	12
5.3 Follower Disadvantages	13
6. STRATEGIC IMPACT ON TARGET ALUMINUM COMPANIES	14
7. STRATEGIC COMMUNICATIONS OPPORTUNITIES FOR PR AGENCIES	15
7.1 The Scale of the Communications Mandate	15
Category-Defining Global Campaign	15
Revenue Potential	15
7.2 Strategic Value Beyond Revenue	15
Industry Leadership Positioning	15
Award-Winning Work	16
7.3 The Dual-Track Engagement Model	16

8. COMPETITIVE LANDSCAPE: ALTERNATIVE DECARBONIZATION PATHWAYS	17
9. GETTING STARTED	18
9.1 Engagement Process	18
9.2 Contact	18
10. SOURCES	19
External Sources	19
INNOVO Project Knowledge	19

2. THE ALUMINUM INDUSTRY'S DECARBONIZATION CRISIS

2.1 Scale of the Problem

The global aluminum industry is responsible for approximately 1.1 billion tons of CO₂ equivalent emissions annually, making it one of the most carbon-intensive materials sectors on earth. Aluminum accounts for roughly 2–3% of global greenhouse gas emissions. Direct CO₂ emissions from the sector reached approximately 270 million tons in 2022, and when indirect emissions from electricity consumption are included, that figure jumps to around 1 billion tons. Demand for aluminum is expected to nearly double by 2050, driven by electric vehicles, renewable energy infrastructure, lightweight transportation, and packaging.

The industry's emissions intensity decreased by 13.6% from 2019 to 2023, but to align with the International Aluminium Institute's 1.5°C scenario, the industry needs to reduce emissions intensity by 30% by 2030 and 97% by 2050. The current pace of reduction is wholly insufficient.

2.2 The Decarbonization Challenge

Aluminum production is uniquely energy-intensive. Smelting a single ton of primary aluminum requires approximately 13,000–15,000 kWh of electricity. In coal-dominated grids (common in China, which produces ~60% of global aluminum), electricity alone can add 9–14 tons of CO₂ per ton of aluminum produced. Roughly 60% of the sector's total emissions come from electricity consumption, with 20% from process emissions (carbon anodes reacting with alumina during the Hall-Héroult electrolysis process), and the remainder from alumina refining, transportation, and other operations.

The process emissions from smelting are particularly challenging: carbon anodes chemically react with the oxygen in alumina to produce CO₂ as a byproduct of the electrolysis. This is a fundamental part of the Hall-Héroult process that has been used since 1886. Inert anodes, which would eliminate process emissions by removing carbon from the reaction (emitting only oxygen), remain at demonstration stage (Technology Readiness Level 7) and are not expected to reach commercial scale before 2027–2030 at the earliest.

2.3 Escalating Carbon Costs

The financial pressure on aluminum producers is intensifying rapidly through multiple regulatory mechanisms:

EU Emissions Trading System (EU ETS): Carbon prices in the EU ETS are €70–€100 per ton of CO₂, projected to rise to €150–€200 by 2030. EU primary aluminum production emitted 2.75 million tons of CO₂ in 2022. As free allowances phase out, the full cost progressively hits smelters' bottom lines. A major smelter emitting 600,000 tons annually faces €48M–€60M in carbon costs at current prices.

EU Carbon Border Adjustment Mechanism (CBAM): As of January 1, 2026, CBAM entered its definitive phase covering aluminum. Importers of aluminum into the EU now pay a carbon tariff aligned with the EU ETS. For major non-EU exporters (Middle East, India, China), the aggregate annual CBAM exposure runs to hundreds of millions of euros. CBAM covers both direct and indirect emissions, making aluminum one of the most heavily impacted sectors.

Emerging global carbon pricing: China has announced plans to expand its national ETS to cover aluminum. India, Turkey, Brazil, and other major producing nations are developing carbon pricing mechanisms. The UK will implement its own CBAM from 2027, also covering aluminum. The direction of travel is clear: carbon costs for aluminum will rise globally.

2.4 Total Industry Exposure

The aluminum industry faces enormous cumulative decarbonization costs over the coming decades. The World Economic Forum estimates that the net-zero transition requires \$9.2 trillion in annual investment globally, with heavy-emitting industries such as aluminum requiring substantial shares. Industry-wide, the shift to renewable electricity, inert anodes, and CCS could cost hundreds of billions of dollars, with no guarantee of achieving net zero at current technology readiness levels.

2.5 Failure of Existing Solutions

Despite significant effort, no commercially proven solution exists to fully decarbonize aluminum smelting at scale. Inert anodes (the most promising breakthrough) remain at the demonstration stage. CCS is considered economically suboptimal for smelting due to the low CO₂ concentration in flue gases. Hydrogen-based alumina refining is at feasibility study stage. Renewable electricity adoption has progressed (39% of smelting power), but 61% of the smelting power mix remains fossil-fuel-based globally. The industry's own assessment is that it needs to reduce emissions intensity by 97% by 2050 to align with 1.5°C—a target that current technologies cannot achieve at scale.

3. INNOVO’S SOLUTION: NET ZERO, NIL CAPEX

3.1 Smoke2Value Technology Overview

INNOVO’s Smoke2Value bio-farms use industrial-scale algae cultivation in thousands of deep tanks filled with seawater. CO₂ from industrial emissions is captured and bubbled through these tanks. Algae rapidly grow through photosynthesis in sunlight, consuming the CO₂ and converting it into biomass. The harvested algal biomass is then refined into high-value commercial products.

Critically, the bio-farms do not produce biogas to generate power. They digest CO₂ emissions from gas-powered generators, enabling those generators to produce clean electricity with zero net emissions.

For the aluminum industry specifically, INNOVO bio-farms can be co-located adjacent to smelters and alumina refineries. The bio-farm captures CO₂ from the facility’s emissions sources, including both the process emissions from carbon anode consumption during electrolysis and the combustion emissions from refining and power generation. For smelters powered by gas-fired generators, the bio-farm digests the generators’ CO₂ emissions, enabling zero-emission electricity production. This addresses both the electricity-related emissions (60% of the total) and the process emissions (20%) in a single integrated solution.

3.2 Zero Capex Business Model

The INNOVO value proposition to aluminum producers is straightforward:

WHAT INNOVO INVESTS	WHAT THE ALUMINUM PRODUCER PROVIDES
\$400M–\$800M per bio-farm (100% financed by INNOVO)	Access to CO ₂ emissions from the smelter, refinery, and associated operations
Engineering, construction, and commissioning	Site access for bio-farm co-location (approx. 205 acres per \$400M farm)
Ongoing operations and maintenance	Basic utilities (seawater access, grid connection)
Technology risk (INNOVO bears 100%)	\$0 capital expenditure

3.3 Revenue Model

INNOVO’s bio-farms generate approximately \$200 profit per ton of CO₂ digested through the sale of high-value commercial products: crude algal oil (SAF feedstock at \$1,100/ton), crude algal cake (animal feed at \$250/ton), omega-3 oils (\$80,000/ton), and US 45Q Production Tax Credits (\$612M per bio-farm over 12 years). The technology has been validated through \$16 billion in offtake contracts held by INNOVO’s technology partner, following due diligence by five of the world’s top 10 oil and gas majors. With a project IRR of 58% and a payback period of 2.6 years, INNOVO’s bio-farms are seven times more profitable than solar energy.

4. COMMERCIAL IMPACT ON THE ALUMINUM INDUSTRY

4.1 Immediate Regulatory Compliance

CBAM Elimination: An aluminum producer using INNOVO bio-farms achieves zero-emission designation and eliminates CBAM tariffs entirely for exports to the EU. For major Middle Eastern, Indian, or Chinese exporters, this could represent savings of tens to hundreds of millions of euros annually as CBAM fully phases in.

EU ETS Cost Elimination: EU-based smelters with co-located bio-farms eliminate their ETS liability entirely. At current prices of €80–€100 per ton, a 600,000-ton CO₂ facility saves €48M–€60M annually. As prices rise toward €150–€200 by 2030, savings per facility could reach €90M–€120M per year.

IFRS S2 and CSRD Compliance: Zero-emission aluminum production dramatically simplifies climate-related financial disclosures under IFRS S2 and the EU Corporate Sustainability Reporting Directive, reducing transition risk exposure and improving ESG ratings.

4.2 Premium Pricing

Green aluminum already commands a premium of \$100–\$250+ per ton over standard metal. Members of the WEF First Movers Coalition have committed to directing at least 10% of primary aluminum purchases by 2030 to deeply decarbonized aluminum (80%+ emissions reduction). Apple, BMW, Audi, and other major manufacturers are actively sourcing low-carbon aluminum for their products. For a smelter producing 500,000 tons of primary aluminum annually, a \$150/ton green premium represents \$75 million in additional revenue per year. The first producer to offer genuinely zero-emission aluminum at scale locks in these contracts while competitors are still planning.

4.3 Customer Retention and Market Share

Automotive, aerospace, packaging, and electronics manufacturers face intensifying Scope 3 reporting obligations. They will increasingly require zero-emission aluminum from their supply chain. BMW has committed to using only low-carbon aluminum in body panels by 2030. Apple sources low-carbon aluminum for all MacBook, iPad, and Apple Watch enclosures. Producers that cannot offer verified low-carbon metal will lose these tier-one OEM contracts to competitors who can.

4.4 Stranded Asset Mitigation

Without a viable decarbonization pathway, aluminum smelters in carbon-priced jurisdictions face progressive value erosion. INNOVO's bio-farms extend the economic life of existing smelter complexes by neutralizing their emissions, transforming potential stranded assets into long-term productive capacity at zero cost to the producer. This is particularly significant for smelters powered by gas-fired generation, where the bio-farm simultaneously decarbonizes both the power supply and the smelting process.

5. FINANCIAL IMPACT: FIRST MOVER VS. FOLLOWERS

5.1 First-Mover Advantages

The first aluminum producer to partner with INNOVO secures a cascade of compounding financial advantages:

Priority Access to 45Q Tax Credits

In the US, each \$400M Smoke2Value bio-farm generates \$612M in Section 45Q Production Tax Credits over 12 years. INNOVO grants first-mover status in return for either (a) the sale of \$300M of US 45Q Tax Credits for \$200M cash, generating \$100M immediate profit, or (b) generation of \$200M cash from \$300M in Australian CO₂ tax mitigation obligations. The first mover gets the best deal; subsequent buyers receive less favorable terms.

Premium Pricing Window

The first aluminum producer to offer genuinely zero-emission metal has a window of 2–4 years before competitors can replicate at scale. During this period, the first mover commands premium pricing from ESG-conscious OEMs, wins long-term supply agreements with automotive and aerospace manufacturers, and secures government procurement contracts requiring low-carbon materials.

Category-Defining Narrative

The first mover defines the narrative for the entire aluminum industry. As the company that proved aluminum can achieve net zero at nil capex, the first mover’s brand becomes synonymous with sustainable metal production. Every competitor’s subsequent announcement will be measured against the first mover’s benchmark.

Investor and ESG Rating Uplift

Aluminum companies face increasing ESG scrutiny. The first mover to demonstrate a zero-capex pathway to net zero will see immediate benefits: lower cost of capital, higher ESG ratings, inclusion in sustainability indices, and improved access to sustainability-linked financing. Smelters powered by fossil fuels face particular scrutiny; INNOVO transforms their narrative overnight.

5.2 Financial Case Study

FINANCIAL METRIC	ANNUAL VALUE
EU ETS cost elimination (at €80–€100/ton)	€48M–€60M
CBAM tariff elimination (for EU exporters)	Tens of millions

Green premium on zero-emission aluminum (\$150/ton on 500K tons)	\$75M
45Q Tax Credit profit (first-mover: \$100M on \$200M)	~\$100M (one-time)
OEM customer retention value	\$50M–\$150M
TOTAL ANNUAL BENEFIT (excl. one-time 45Q)	€120M–€350M+
10-YEAR VALUE CREATION (zero capex)	€1.2B–€3.5B+

5.3 Follower Disadvantages

Once the first mover is announced, all competitors become followers:

- Followers compete in a market that the first mover has already shaped. Green premium benchmarks, OEM expectations, and industry narratives are set by the first mover.
- Followers lose the premium pricing window. By the time followers deploy bio-farms or alternative solutions, zero-emission aluminum is no longer novel, and pricing premiums erode.
- Followers receive less favorable 45Q Tax Credit terms. INNOVO's negotiating position strengthens after the first-mover deal.
- Followers face OEM customer attrition. Automotive and aerospace manufacturers with net-zero procurement mandates shift volumes to the first mover during the lag.
- Followers bear ongoing escalating carbon costs. Every quarter of delay means additional millions in EU ETS, CBAM tariffs, and competitive disadvantage.

The gap between first mover and followers widens over time. A 2–3 year head start in a rapidly tightening regulatory environment creates compounding advantages that followers may never fully close.

6. STRATEGIC IMPACT ON TARGET ALUMINUM COMPANIES

INNOVO's value proposition is relevant to the major global aluminum producers:

COMPANY	REVENUE	KEY METRIC	STRATEGIC DRIVER
Rio Tinto (Alcan)	\$54B+ (group)	Major primary producer	Elysis JV with Alcoa; Australian operations; hydrogen feasibility studies
Alcoa	\$10B+	Major US smelter	US-based; strong 45Q eligibility; Elysis JV partner; ESG leadership ambitions
Norsk Hydro	\$18B+	5M+ tons/year	Sustainability leader; HalZero tech in development; 70%+ renewable power
Rusal	\$13B+	~6M tons/year	INNOVO does not operate in Russia
Hindalco (Novelis)	\$23B+	India leader	Largest flat-rolled aluminum producer; rapid Indian market growth
Emirates Global Aluminium	\$7B+	2.7M tons/year	Largest industrial company in UAE outside oil/gas; major EU exporter; CBAM-exposed

7. STRATEGIC COMMUNICATIONS OPPORTUNITIES FOR PR AGENCIES

A PR agency that successfully introduces a major aluminum producer to INNOVO and wins the resulting global communications mandate would secure one of the most significant retainer opportunities in the aluminum sector.

7.1 The Scale of the Communications Mandate

Category-Defining Global Campaign

The announcement that a major aluminum producer has achieved net zero at nil capex is a category-defining story intersecting the automotive supply chain, aerospace, clean energy transition, and ESG investing. It guarantees sustained media coverage across financial, trade, and mainstream outlets.

- Global launch campaign: Coordinated announcement across financial, trade, and mainstream media in multiple markets.
- Ongoing narrative management: Multi-year program covering construction milestones, regulatory approvals, and expansion announcements.
- Executive positioning: CEO thought leadership at COP, World Economic Forum, International Aluminium Institute conferences, and tier-one business media.
- Investor communications: ESG-focused messaging for capital markets, including sustainability-linked bond issuances.
- Government affairs: Positioning the partnership as a model for aluminum industry decarbonization policy.

Revenue Potential

INNOVO proposes a 3-way partnership model (Aluminum Producer × INNOVO × PR Agency) where communications costs are funded from the financial value INNOVO creates. Indicative mandate value: \$5M–\$15M annual retainer for global communications, with \$20M–\$50M+ in campaign budgets over the first three years. The agency that proves the model in aluminum gains a strong position to extend the partnership across INNOVO's other target industries.

7.2 Strategic Value Beyond Revenue

Industry Leadership Positioning

The agency that leads this campaign establishes itself as the definitive leader in energy transition and industrial decarbonization communications. This positioning generates business development leverage far beyond the aluminum mandate, opening doors to sustainability-focused work across every heavy-emitting sector.

Award-Winning Work

A campaign combining genuine environmental impact with commercial transformation is precisely the type of work that wins major industry awards (Cannes Lions, PRWeek Awards, SABRE Awards) and defines agency reputations for a generation.

7.3 The Dual-Track Engagement Model

INNOVO operates a Dual-Track PR engagement model designed to align with professional standards and eliminate conflicts of interest:

Track 1 – Paid Mandate: For agencies with no existing client conflicts in the aluminum sector, the agency wins a mandate from both the industry leader partner and INNOVO, covering the full global communications campaign including launch, ongoing narrative management, and executive positioning.

Track 2 – Strategic Briefing: For agencies with existing retained relationships in the aluminum sector, the agency wins the communications mandate from its existing client only. This avoids any conflict of interest with INNOVO. The agency's commercial opportunity comes from the transformational campaign it delivers for its own client.

In both tracks, all information in this briefing is in the public domain. There is no requirement to notify INNOVO before approaching any client or media contact.

8. COMPETITIVE LANDSCAPE: ALTERNATIVE DECARBONIZATION PATHWAYS

Understanding the limitations of alternative approaches reinforces the uniqueness of INNOVO’s value proposition:

TECHNOLOGY	CAPEX REQUIRED	KEY LIMITATION	INNOVO ADVANTAGE
Inert anodes (Elysis/HalZero)	Very high; TRL 7	Demonstration stage only; not expected at commercial scale before 2027–2030; requires cell redesign	Commercial-ready now; 18–24 month deployment
Renewable electricity	Very high grid investment	Only addresses ~60% of emissions (electricity); does not touch process emissions from anodes	Addresses all emissions including process emissions
CCS on smelter pots	High; low CO ₂ concentration	Economically suboptimal due to dilute flue gas; requires geological storage infrastructure	Nil capex; produces revenue products; no storage needed
Hydrogen for alumina refining	High; feasibility stage	Not yet proven at commercial scale; depends on green hydrogen supply	No fuel switching required; works with existing infrastructure
Recycling (secondary aluminum)	Moderate	Only addresses new demand; quality limitations for high-spec applications; supply constrained	Addresses primary production emissions at source

INNOVO’s Smoke2Value bio-farm is the only commercially available technology that addresses 100% of aluminum production emissions, including the process emissions from carbon anode consumption, at nil capital expenditure to the producer, while generating revenue rather than costs.

9. GETTING STARTED

9.1 Engagement Process

INNOVO proposes a straightforward three-phase engagement:

Phase 1 – Executive Briefing (Weeks 1–2): Confidential briefing for the aluminum producer’s CEO and senior leadership on the INNOVO value proposition, financial model, and first-mover partnership structure.

Phase 2 – Site Assessment (Weeks 3–5): Technical feasibility assessment of the aluminum producer’s priority smelter(s) and refinery operations, including CO₂ concentration and composition in flue gases, available land for bio-farm co-location (~205 acres per \$400M farm), proximity to seawater, and local solar irradiance.

Phase 3 – Commercial Structuring (Weeks 6–8): Negotiation of partnership terms including the 45Q Tax Credit sale structure, emissions elimination timeline, regulatory compliance pathway, and communications launch planning with the PR agency.

9.2 Contact

PR Agency Enquiries: public.relations@innovo-network.com

Website: innovo-net-zero.com/pr-briefing

All information in this briefing is in the public domain. There is no requirement to notify INNOVO before approaching any client or media contact.

10. SOURCES

External Sources

¹ World Economic Forum, “3 Ways the Aluminium Industry Can Decarbonize Faster,” September 2024 (1.1 Bt CO₂e/year; 2% global GHG; First Movers Coalition commitments).

² WEF / Accenture, “Net-Zero Industry Tracker 2024 – Aluminium,” 2024 (13.6% intensity reduction 2019–2023; 61% fossil fuel smelting power; 97% reduction needed by 2050).

³ IEA, “Aluminium – Tracking Clean Energy Progress,” 2024 (~270 Mt direct CO₂ in 2022; ~1 Gt including indirect; 60% of Chinese production).

⁴ NRDC, “Decarbonizing Aluminum,” November 2024 (inert anodes TRL 7; Elysis demonstration by 2027; process emissions from Hall-Héroult).

⁵ CSIS, “Decarbonizing Aluminum: Rolling Out a More Sustainable Sector,” August 2025 (Apple/Elysis JV; 77% emissions cut needed by 2050).

⁶ European Commission JRC, “Mitigating Aluminium Industry Emissions,” July 2024 (ICM for alumina refining; inert anodes as potential game-changer).

⁷ European Commission, “Carbon Border Adjustment Mechanism,” January 2026 (CBAM definitive phase; covers aluminum).

⁸ CleanTechnica, “Why China’s Aluminum Industry May Have Reached Peak CO₂,” February 2026 (44M tons primary; 60% global output; hydro relocation).

⁹ Statista, “Capacity of Biggest Global Cement Producers 2024” and Global Cement Top 100 (company revenue and capacity data).

INNOVO Project Knowledge

¹⁰ INNOVO Net Zero Nil Capex for the Oil & Gas Industry v2025-12-19 MK (\$200 profit/ton CO₂; technology overview).

¹¹ Multi-Industry Data Room Structures v2026-1-14 MK (aluminum CBAM exposure; co-location model; heavy industries data room).

¹² INNOVO Smoke2Value Biofarm Carbon Accounting Report v2025-12-22 MK (100% Scope 1 neutralization; net carbon negative).

¹³ About INNOVO & its Smoke2Value Technology v2026-1-2 MK RdM (\$16B offtake contracts; product streams).

¹⁴ INNOVO’s Sale of US 45Q Production Tax Credits v2026-1-25 MK (\$612M per bio-farm; first-mover deal structure).

¹⁵ Summary of Webpage & Video – Profitable Net Zero Oil & Gas v2026-2-26 MK (first mover vs. follower; PR briefing model; Dual-Track).

¹⁶ innovo-net-zero.com (company website; PR briefing page).