

Fueling the Future

Advancing the production of sustainable biofuels at scale

A preeminent leader in the commercialization of the production of sustainable bio-oil, a bio-intermediate that can be refined to create a range of biofuels and biochemicals. Arbios is at the forefront of transforming renewable resources into sustainable energy and chemical products, driving the future of clean technology.

Arbios envisions a future where waste and under-utilized biomass is not a burden, but a valuable resource, inspiring more carbon neutral industry and transportation sectors globally. By transforming locally sourced biomass, such as forestry residues, into high-value, renewable biofuels, Arbios offers a sustainable alternative to fossil-based oils.

Arbios has established a facility in Prince George, British Columbia, to demonstrate the continuous production of renewable bio-oil, which can be further refined into sustainable biofuels for sectors like aviation, road transport, and shipping. As a joint venture between industry leaders Licella and Canfor, Arbios is advancing the implementation and operationalization of hydrothermal liquefaction technology.

Leading the global commercialization of HTL technology

Arbios Facilities and Projects

Arbios Chuntoh Ghuna Facility, Prince George

Location	Prince George, British Columbia, Canada, central to British Columbia's forest industry and close to underutilized forest residues. https://maps.app.goo.gl/8Q61CUrSaF4a7QRr5
Completion	Completed in 2024, Arbios has constructed a new biomass to biofuels plant which is the world's largest Hydrothermal Liquefaction (HTL) facility.
Capacity	Initially converting 25,000 dry tonnes of wood biomass into 50,000 barrels of renewable bio-intermediate annually, Chuntoh Ghuna currently holds permitting to double this capacity. The facility's footprint allows for a potential quadrupled output of 200,000 barrels yearly.
Core Technology	Arbios is utilizing Licella's Cat-HTR™ hydrothermal liquefaction technology, which has been developed for over 16 years and now we are proving the commercial viability of the technology / facility configuration.

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Design Basis	The Arbios Chuntoh Ghuna in Prince George is designed to operate 24/7 to prove steady state process conditions and long-term reliability for HTL production of renewable bio-oil from both commercially available forest residues, and residues that have previously been difficult to process, such as slash, tops and thinnings . Post commissioning, the facility will ramp up to produce sufficient bio-oil to support steady offtake by a refinery for co-processing to sustainable transportation fuels.
Project Partners	Situated in the heart of the unceded territory of the Lheidli T'enneh First Nation, the facility has been developed working in close partnership with the Nation who named the facility <i>Chuntoh Ghuna</i> ("Chan-toh Hannah"), meaning <i>The Forest Lives</i> .
Other Project Funding	The Arbios Biotech Chuntoh Ghuna facility received support from the British Columbia Low Carbon Fuel Standard (LCFS); Sustainable Development Technology Canada; the BC Innovative Clean Energy Fund; and Natural Resources Canada's Clean Growth Program.

Arbios CS-1 (Commercial Stage 1)

Location	Somersby, New South Wales, Australia.
Completion	The world's first small-scale commercial HTL plant, CS-1 was commissioned in 2021, after 3 previous rounds of scale-up since 2007.
Capacity	This facility can process 5,000 tonnes per annum of post-consumer and residue biomass, producing 10,000 barrels per annum of renewable bio-oil, using commercial-scale reactors.
Core Technology	Cat-HTR™ hydrothermal liquefaction.
Design Basis	Facility can process a range of post-consumer biomass feedstocks including agricultural waste biomass, forest residues and woody biomass, and biogenic forms of municipal solid waste.
Project Partners	Arbios' CS-1 is operated by an experienced and innovative team from Licella

Combining deep operational expertise with proven success in commercializing sustainable technologies

Arbios' Board comprises a seasoned and diverse team including senior executives from Licella, Canfor, and the wider finance and clean biotech industry.

Our leadership team takes strength from its highly collaborative approach, drawing upon the team's experience in similar biofuel projects, finance, M&A, industrial operations and infrastructure projects.

Board		Leadership Team	
Name	LinkedIn	Name	LinkedIn

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Don Roberts Board Chair	https://www.linkedin.com/in/don-g-roberts-b0173863/	Rune Gjessing CEO	https://www.linkedin.com/in/rune-gjessing/
Dr Len Humphreys Director	https://www.linkedin.com/in/len-humphreys-59483a14/	Stefan Muller COO	https://www.linkedin.com/in/stefan-muller-67a2bb/
David Calabrigo Director	https://www.linkedin.com/in/david-calabrigo-3a61b931/	Katie Platt People & Culture Lead	https://www.linkedin.com/in/katie-platt-7b330a214/
Alan Nicholl Director	https://www.linkedin.com/in/alan-nicholl-921a1731/	Stephen Yeh Director, Corporate Finance	https://www.linkedin.com/in/stephenyeh/
Ben Goodier Director	https://www.linkedin.com/in/ben-goodier-09661216/	Tessa Gill External Relations Lead	https://www.linkedin.com/in/tessa-gill-72031b7/
		Ian Rose General Manager Operations	https://www.linkedin.com/in/ian-rose2019/

Boots on the ground, eyes on the future

About Arbios – the company

HQ location	Arbios Biotech is headquartered in Vancouver , a hub of Canada's natural resource and biotech development companies. Arbios Biotech has strong government and community support; by working within markets where biofuels stimuli are available, we can maximize the economics of the projects for our partners.
Territory	Arbios is growing its business in North America, South America and Europe .
Team	Arbios has a diverse and experienced team of approximately 40 people.
Ownership	Arbios is a privately owned joint venture of two industry leaders: Licella (www.licella.com) and Canfor (www.Canfor.com).
Partners / Alliances	Arbios has a strategic alliance with Shell Catalysts and Technology to explore upgrading and biorefining technology with a low carbon intensity. Following the principles of UNDRIP and FPIC, Arbios has been working in Partnership with the Lheidli T'enneh Nation since the inception of its Chuntoh Ghuna facility in Prince George, British Columbia.

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	Arbios works in jurisdictions where governments support the development of biofuel technology and commercialization.
Technology Development	Arbios is utilizing Licella's Cat-HTR™ hydrothermal liquefaction technology which has been developed for over 16 years and 3 scale-ups to bring us to this point where we are proving the commercial viability of the technology / facility configuration. Arbios' facilities are based on modular design that is easily scalable and can be positioned close to feedstock supplies.
Advantages of HTL Bio-oils	Studies have shown that HTL technology can yield a superior bio-oil when compared to Fast pyrolysis oil. HTL can yield an oil with up to 50% more energy density, a lower oxygen content, and is generally a more stable and less corrosive product. This makes HTL bio-oils more compatible with existing refinery processes and improves overall fuel quality and efficiency, paving the way for widespread adoption. Source: Elliot et al (1571)
Feedstocks	The Cat-HTR™ core technology utilized by Arbios is versatile and somewhat feedstock agnostic. The technology can handle high moisture content biomass including sawmill residuals like bark, forest industry and agricultural residues, and biogenic forms of municipal solid waste.
Products and Applications	Arbios' bio-oil is a ready-for-refining intermediate, with further processing required for end-use products. With the bio-oil market valued at USD 92.59 Million in 2023 (VMR, 2024), we work with partners in the refining and chemical industries to bring these sustainable products to market. End use applications with the highest value potential include Sustainable Aviation Fuel (SAF), marine fuels, renewable transportation fuels, and renewable chemicals. In 2023, the IEA predicted: "Total biofuel demand rises 23% to 200 billion litres by 2028, with renewable diesel and ethanol accounting for two thirds of this growth, and biodiesel and biojet fuel making up the remainder".
Future Projects	Arbios is currently permitted for expansion at its Chuntoh Ghuna facility in Prince George and the company is exploring projects in North America and Europe. Our modularized approach provides flexibility in both scalability and ability to be positioned close to feedstocks.
Net-Zero	Bio-oils like ours have the potential to be up to 80% less carbon intensive than fossil-based fuels. By using feedstocks that would otherwise be burnt or left to decompose, Arbios' products have the potential to be truly Net-Zero – an advantage for the environment, and our partners and customers.

From opportunity to action-join us on our journey to net-zero

Arbios is open to working with like-minded partners. We have the versatility to consider a range of structures. From global feedstock suppliers to forward-thinking off-take partners, we're building a

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collaborative ecosystem that drives the bioeconomy forward. Our collaborative approach is built on open communication, shared goals, and a commitment to driving positive change in the industry.

Contact us

Arbios is open to exploring how to create mutual value through expanded partnerships. Please contact. Please contact us at investors@arbiosbiotech.com