Haffner Energy

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FOR IMMEDIATE RELEASE

Haffner Energy details the nominal performance of its C-iB line for large industrial facilities

Up to 2.5 times the syngas output of C-iC, with identical module dimensions, in configurations of at least four modules

Vitry-le-François, France – November 16, 2026, 6:00 p.m. CET

Haffner Energy, a specialist in renewable energy and biofuel production solutions using residual biomass, is providing details on the expected nominal performance and industrial advantages of its C-iB line, designed for high-capacity facilities and projects seeking biochar co-production.

Already included in its energy offering for data centers and its CORE100 program, which aims to deploy 100 standardized biomass conversion modules, C-iB has notably received reservations for 40 C-iB modules from its Canadian partner Mundi Énergies.

C-iB uses the same H6 technology as C-iC. It also retains the same dimensions and many of the same components. Depending on the configuration, it can increase expected nominal syngas output per module by approximately 40% to 150%.

These output gains result from moving biochar handling outside the module, freeing up space and shortening the processing cycle, as well as shared biomass pre-drying n multi-module facilities, which accelerates thermolysis kinetics.

"*With C-iC, we developed a standardized solution ideally suited to decentralized projects. With C-iB, we are significantly increasing equipment productivity without fundamentally changing our technology platform. This approach combines the cost competitiveness of large industrial facilities with the benefits of modularity, while limiting technology risks and project timelines,*" said Philippe Haffner, Chairman and CEO of Haffner Energy.

C-iC and C-iB: Two Complementary Industrial Architectures

Unveiled on January 27, 2026, C-iC features a fully integrated architecture that is particularly cost-competitive for midsize decentralized projects. Each module is designed to produce approximately 1.7 MW of renewable syngas or, in its HYNOCA® version, 50 kg of renewable hydrogen per hour. Biochar from thermolysis is systematically used for energy recovery.

By contrast, C-iB is primarily intended for large industrial facilities starting at 20 MW, or for projects seeking biochar co-production, including at smaller scales. Biochar is removed from the module for energy recovery or other applications.

A standalone C-iB module is designed to produce approximately 2.4 MW of renewable syngas, compared with 1.7 MW for C-iC, an output increase of about 40%.

"Our *customers' priority is access to competitive, reliable renewable energy tailored to their needs. With C-iB, we are strengthening our position in large industrial projects, particularly data centers, renewable fuel production, and industrial decarbonization. The complementary nature nature of our two ranges, from decentralized facilities to large industrial plants, is a major asset in accelerating our international commercial expansion," said Marcella* Franchi, Chief Commercial Officer of Haffner Energy.

Shared Systems Increase Output per Module by Up to 2.5 Times

In facilities with at least four C-iB modules, a shared system pre-dries biomass before it enters the reactors.

By drastically reducing the amount of water that must be evaporated, pre-drying significantly accelerates thermolysis kinetics and increases each module's processing capacity. The extracted steam is recovered and reused in the reformer.

Combined with external biochar handling, pre-drying enables two target nominal output levels, depending on how the biochar is used:

- 4.2 MW of syngas per module when all biochar is used for energy recovery in dedicated shared equipment. This is equivalent to 2.5 times the output of C-iC.
- 3.4 MW of syngas per module, or 20% less output, when biochar is recovered for other applications.

A Modular Architecture Combining Cost Competitiveness and Flexibility

By sharing certain functions while retaining standardized modules, C-iB captures the economies of scale of large industrial facilities. This architecture aims to match the cost competitiveness of large conventional plants without a modularity cost premium.

A four-module C-iB facility thus represents approximately 20 MW of primary energy input and a nominal output of 17 MW of syngas when all biochar is used for energy recovery. Higher capacities can then be achieved in increments of 10 MW of primary energy input by adding two standardized modules at a time.

The principles of this architecture are also intended for very large projects, particularly renewable diesel and sustainable aviation fuel (SAF) production. Haffner Energy's proprietary SB-HEFA process uses the same thermolysis technology, but without the syngas reforming step.

By building on the industrial development already completed for C-iC, Haffner Energy avoids the technology risks associated with significantly scaling up reactors. C-iB modules retain the same industrial advantages as C-iC: factory preassembly and testing, road transport within standard dimensional limits, and simpler, faster on-site installation.

Standardization also simplifies preliminary feasibility (FEL 1) and design (FEL 2) studies, reduces engineering costs and timelines, and makes capital expenditure easier to estimate, helping projects reach final investment decision (FID) sooner.

Flexible Biochar Uses to Suit Local Markets

The C-iB and C-iC lines are expected to achieve equivalent biomass-to-syngas conversion efficiencies, with the energy content of recovered biochar deducted from the biomass primary energy input when calculating this efficiency.

Beyond energy recovery, biochar produced by C-iB can be sold for industrial applications, soil amendment, or durable carbon storage, potentially generating carbon removal certificates.

Commercializing biochar requires sufficiently valuable markets. This flexibility allows facilities to adapt to local markets and optimize their business models by balancing renewable energy production against biochar sales.

Additional Information

Tuesday, November 17, 2026, at 6:00 p.m. CET: Webinar (French only) on Haffner Energy's technology positioning, presented by Meryl Haffner, Business Development & Technical Solutions Manager, and Philippe Haffner, Chairman and CEO. Click here to register..

January 27, 2026, press release introducing the C-iC line: https://www.haffner-energy.com/wp-content/uploads/pr-c-ic-line-20260127.pdf

About Haffner Energy

Haffner Energy designs and supplies innovative solutions for producing cost-competitive renewable fuels from biomass. Drawing on more than 33 years of experience converting all types of biomass, the Company has developed proprietary thermolysis and gasification technologies to produce renewable gas, hydrogen, methanol, and diesel, as well as sustainable aviation fuel (SAF).

Beyond supplying technology, Haffner Energy supports customers in developing industrial projects that accelerate decarbonization in the energy, industrial, and transportation sectors. Its solutions also contribute to the production of biogenic CO_2 and biocarbon (biochar), supporting the energy transition and sustainable biomass utilization. Haffner Energy is listed on Euronext Growth (ISIN: FR0014007ND6 – Ticker: ALHAF).

Media Relations

Laetitia Mailhes
laetitia.mailhes@haffner-energy.com

Investor Relations

investisseurs@haffner-energy.com