# Zero-Waste and Green Energy Technologies for Europe's Circular Economy on base of the project

# 'SISAK Waste to Energy Green Upcycling Park'

## in Croatia

## I. European Market Needs and Opportunity

Europe faces a pressing need to reduce waste and greenhouse gas emissions in line with its carbon-neutral 2050 goal. Landfills are being phased out due to environmental harm (methane emissions, water pollution), and incineration – while reducing landfill use – is carbon-intensive and can discourage recycling. The EU's circular economy strategy prioritizes waste prevention, reuse, and recycling, yet a large fraction of waste (especially plastics) still isn't recycled. For example, only about 29% of all plastic waste in the EU is recycled, leaving the remainder to be handled by other means. The EU targets a 55% recycling rate for plastic packaging by 2030, but even with ambitious recycling, there will be a substantial non-recyclable waste stream that needs sustainable treatment.

At the same time, European industries are undergoing a transition from polluting heavy industries toward cleaner, technology-driven enterprises. Regions historically reliant on steel, chemicals, and other heavy industries (such as Sisak in Croatia) face challenges of high GHG emissions and economic reliance on declining sectors. There is a strong policy push – backed by EU funds – to diversify these economies with sustainable businesses and innovation hubs. Waste management and green energy initiatives can play a pivotal role in this just transition, creating green jobs and repurposed industrial sites as clean technology parks.

Waste-to-energy (WtE) and advanced recycling technologies are thus in high demand to address these needs. However, current WtE approaches have limitations. Traditional mass-burn incinerators emit ~2.5–3.0 tonnes of $CO_2$ per ton of waste (especially from plastics) and typically generate only 0.6–0.8 MWh of electricity per ton via steam turbines. Moreover, incineration's complete combustion destroys all material value and can produce toxic residues (ash, flue gas pollutants) requiring costly treatment. The EU is seeking new technologies that can recover energy and materials with lower emissions, aligning with climate goals and the circular economy.

Another emerging concern is PFAS "forever chemicals" contamination. The EU is moving toward a comprehensive ban on PFAS due to their persistence and health risks. Waste streams often contain PFAS (e.g. in municipal waste), and conventional CO2 neutral methods struggle to destroy them. Innovative solutions are needed that can eliminate hazardous substances like PFAS during waste processing.

Further EU direction is going heavy towards the elimination of Phosphates in the wastewater and sludge. Technological advancement is needed to solve the problem.

Overall, there is a clear market pull in Europe for breakthrough zero-waste technologies that:

- Handle mixed and hard-to-recycle waste (municipal, industrial, agricultural, sludge) with minimal residues.
- Produce useful outputs (energy, fuels, or materials) that offset use of fossil resources.
- Increase the quantity of Recycled Plastics demanded by European industry
- Cut greenhouse emissions significantly compared to incineration or landfilling.
- Enable circular economy outcomes by recovering materials or creating feedstocks for industry.
- Meet regulatory demands, such as PFAS destruction, elimination of phosphates and strict EU pollution standards.
- Offer strong economics (ROI) to attract investment, especially with available EU grants and carbon credit incentives.

Our holding is poised to deliver on these needs with a suite of five advanced technologies: RPP, TBD, CCC, STC, PCC and Winddriver. Each targets a different waste challenge but together they form a comprehensive solution for a Zero-Waste Green Energy Industrial Park. Below we describe each technology, the market needs its addresses, and its viability (including expected ROI).

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# Breakthrough Waste and Recycling Conversion Technologies

## 2. Recycled Plastic Products 2 lines (RPP)

RPP represents a state-of-the-art recycling solution specializing in one of the most problematic waste streams for European industries: Big Bags (FIBC – Flexible Intermediate Bulk Containers). These large polypropylene sacks are widely used in agriculture, chemicals, and raw material logistics. Once emptied, they become a disposal challenge due to contamination, bulky size, and limited downstream uses. Most industries regard them as a “pain in the neck waste”, paying high costs for removal with little to no material recovery.

Our RPP technology directly addresses this problem by converting used Big Bags into high-quality recycled virgin pellets and durable plastic products. This is not just a sustainability solution but also a compliance necessity: under EU legislation, at least 30% of recycled plastic must be incorporated into

new plastic products. This legal requirement is creating an urgent and rapidly growing demand for high-quality RPP material, with demand significantly outstripping supply across the continent.

Market drivers:

- Regulatory push – The EU's Circular Economy Action Plan mandates recycled content, forcing industries to secure reliable sources of RPP.
- Supply gap – There is more demand for compliant recycled plastic than available capacity in Europe, creating strong price support.
- Industrial necessity – Large companies receiving Big Bags (chemicals, agriculture, food ingredients, minerals) are under pressure to both dispose of waste responsibly and source recycled materials to meet legal obligations.

Strategic fit: RPP in our technology park ensures a closed-loop solution: industries disposing of Big Bags can see them recycled locally into pellets, which can then feed back into product manufacturing. This delivers both regulatory compliance and cost savings, while reducing reliance on imports of recycled plastic.

**ROI:** 3,31 years according to the attachment

## 3. Cold Catalytic Conversion 2 modules (CCC)

CCC (Cold Catalytic Conversion) is an innovative chemical recycling process that converts waste plastics into synthetic fuel (oil and gas) at relatively low temperatures. It uses a proprietary catalyst to depolymerize mixed plastic waste into diesel-like oil and combustible gas, without the extreme heat or pressure of traditional pyrolysis. This technology directly addresses plastic waste that cannot be mechanically recycled or reused, transforming it into a valuable energy resource.

Market need: Even with maximized conventional recycling, Europe will have a substantial fraction of plastic that is dirty, mixed, or non-recyclable (multi-layer films, contaminated packaging, etc.). CCC provides a solution for this fraction, ensuring it is not wasted. The output – synthetic oil – can be used as a drop-in fuel or refined further, helping to displace fossil fuels. With Europe striving to reduce fossil fuel dependence and improve energy security, CCC's ability to produce fuel from waste is highly attractive. In fact, experts note that after feasible recycling, routing the remaining plastic waste to efficient energy recovery (like CCC) would significantly support EU recycling targets and reduce landfilling.

Viability and performance: CCC has proven to be far more efficient and cleaner than incineration for plastics:

- Higher energy yield: One ton of plastic waste converted via CCC yields approximately 600–750 kg of oil, containing ~30–35 GJ of energy. This can generate roughly 1.5–2.0 MWh of electricity if used in generators. By contrast, incinerating the same ton yields only ~0.6–0.8 MWh of electricity. CCC thus recovers 2-3 times more electricity per ton of waste than burning it.

- Valuable fuel output: The liquid oil from CCC can be used directly as a low-sulfur synthetic fuel or as feedstock for petrochemical processes, feeding back into industry instead of being lost. This contributes to a circular carbon economy, as the carbon from waste is reputed rather than emitted.

- Lower emissions: Because CCC operates at moderate temperatures (around a few hundred °C) and uses catalytic reactions, it releases far less $CO_2$ and air pollution than incineration. Lifecycle analyses show $CO_2$ emissions of ~300–600 kg per ton (mainly from energy use) for CCC, versus 2,500+ kg for conventional incineration. It also produces minimal NOx or dioxins since combustion is not part of the primary process. This helps cities meet strict EU air quality regulations.

- Flexibility: CCC units can be scaled to regional or even onsite installations, reducing the need for long-distance waste transport. The process can handle mixed plastic streams (no need for sorting by polymer type), and the residuals are minimal and inert.

These advantages mean CCC can play a key role in closing the loop on plastics. It generates both economic returns from the sale of oil and environmental benefits by offsetting fossil fuel use and reducing emissions. Studies conclude that CCC offers indirect $CO_2$ savings when the oil is used to replace virgin fossil fuels and yields a higher quality energy output per ton of waste compared to other methods.

**ROI:** 3,85 years according to the attachment

To reach this ROI, it will be necessary to add a refinery as service provider in the middle and then sell the refined market products like synthetic Diesel, Benzin, Ship Fuel and Jet Fuel. Directly In Sisak operates a larger INA refinery with capacity just a few kilometers away from the park.

## 4. Sludge To Coal (STC)

STC is a state-of-the-art thermal treatment platform engineered for waste streams that conventional WtE or mechanical recycling struggle to process. The primary focus in our deployment is community sewage and industrial sludge. Through controlled high-temperature conversion in sealed reactors, STC transforms dewatered sludge into a stable, high-calorific solid fuel while minimizing emissions and residues.

Market need. Across Europe, municipalities and industries face rising costs and regulatory pressure around sludge handling and disposal. Land application and simple incineration are increasingly constrained, both by environmental considerations and by circular-economy targets. STC provides a compliant pathway to divert sludge from landfill and low-value disposal and to recover energy as a usable fuel for district heating, industrial boilers, or co-firing.

Technology overview. Sludge is conditioned and thermally converted under controlled conditions to yield a uniform calorific product comparable to medium/high-rank coal on an energy basis. In our reference configuration, the output fuel (GAYDISS) typically achieves an energy content in the ~21–30 MJ/kg range and is supplied as briquettes or pellets in 500–1000 kg big bags for straightforward logistics and long shelf life. Mineral residues are inert and manageable, and off gases are treated to comply with strict EU emission limits.

Benefits. STC reduces sludge volumes, stabilizes the material, and converts a disposal liability into a local energy asset. The process integrates clean emissions control, supports circular-economy objectives by replacing fossil fuels in heat applications, and improves cost predictability for operators compared with escalating gate fees and transport for traditional disposal.

Strategic fit: Within the Green Energy Industrial Park, STC complements CCC and PCC by targeting industrial and community sludge fractions that are unsuitable for plastic-focused or mixed-MSW routes. This ensures full coverage of regional waste streams with zero-landfill outcomes and bankable offtake in the form of standardized solid fuel.

**ROI**: 3,82 years according to the added calculation

## 5. Pyrolytic Catalytic Cracking Plant with 36 reactors (PCC)

This is a state-of-the-art W2E hybrid built around automatic front-end sorting and SRF preparation, hot-air gasification with downstream conversion of biochar to activate carbon, mobile thermal storage for distributed energy, and external-fired gas turbines (EFGT) for power generation. Mainly it produces synthetic crude oil for further refinery process. It accepts essentially all municipal waste streams excluding hazardous and construction & demolition waste, achieves zero waste to landfill, converts RDF/SRF to clean hot air rather than dirty syngas, and is engineered for the lowest processing fees and lowest cost per kWh in its class. The combustion chamber of the turbine never contacts waste-derived gases, enabling zero stack emissions in contact with waste. The process eliminates PFAS, furans and dioxins.

In its prepared configuration the plant treats about 1000 metric tons per day of unsorted MSW and delivers approximately 20 MW of electricity. In combining heat and power operation the electrical efficiency exceeds 85 percent, with additional thermal energy available for the drying chamber

Typical applications include municipalities and utilities, hospitals and hotels, airports and seaports, rail hubs, and industrial campuses that require reliable, dispatchable clean energy with zero landfill. Revenue is multi-stream: contracted waste processing, electricity and heat sales, activated carbon sales, crack oil and carbon credits. Standardized modules and performance guarantee across the supply chain support bankability and fast deployment.

**ROI:** 3,46 years according to added calculations

Like CCC technology to reach this ROI, it will be necessary to add a refinery as service provider in the middle and then sell the refined market products like synthetic Diesel, Benzin, Ship Fuel and Jet Fuel. Directly In Sisak operates a larger INA refinery with capacity just a few kilometers away from the park.

## 6. ThermoBaric Destruction with 2 Reactors (TBD)

The agro-industrial complex is the leader among manufacturing industries in terms of the number of harmful substances generated. Waste generated during agriculture leads to global warming.

Without cleaning, recycling, processing, they poison the soil, water bodies, and have a negative impact on the atmosphere. At the same time, rural "garbage" can be raw material for fertilizers, feed or fuel. Modern technologies allow organizing low-waste or waste-free production.

The share of agricultural waste is growing annually along with the growth of the Earth's population and the increase in food production. By- products obtained during the cultivation of plants, breeding of farm animals, and the work of agricultural enterprises are classified as agricultural waste. Their danger to the environment, methods of neutralization and disposal directly depends on their type. The main ones are:

- Manure or droppings.
- Untreated wastewater
  - ➡ from the fields - contaminated with fertilizers,
  - ➡ from livestock and poultry farms

- from meat processing and dairy industries In the absence of proper purification systems, they pollute water bodies and groundwater.
- Harmful gases, formed during waste storage. These gases are one of the main causes of the global greenhouse effect.

Unsold or spoiled apples, potatoes or vegetables harvests thrown out in the fields are not compost, but a big problem for the environment. And then there are containers from plant protection products, packaging from fruits, vegetables, milk and other food.

Recycling can reduce or eliminate the negative impact of livestock waste on the rural environment.

The currently widespread technologies – vermiculture and microbiological processing, require large areas (waste is laid out in layers 10-15 cm thick) and sanitary zones of at least 300 m, considerable time (1 layer is processed in 7-60 days). They spread an unpleasant odor. The result – bio humus, requires separate efforts for its implementation, as well as for gas purification. Anaerobic processing (processing in bioreactors) – biochemical and thermal processing of waste in an oxygen-free environment under the influence of certain bacteria. It also requires a long period and implementation of bio humus.

For a perfect cycle and combination of sufficient waste this green system uses the TBD Reactor as its core, processing organic waste and sewage into high-energy combustible gas and liquid organic fertilizers, while generating electricity for self-powering and Methane Gas for the local thermal plants or support greenhouse farming with heat, creating a closed-loop, sustainable ecosystem. The TBD Reactor is a groundbreaking solution for converting liquid organic and other waste into valuable resources with unmatched efficiency. This innovative mini-plant processes biological waste into mineral liquid fertilizer, clean water, combustible gas, and a minimal amount of safe, sand-like sediment in seconds, making it 336 times faster than traditional waste gasification methods.

The complex design is modular. It consists of a raw material preparation unit, a reactor unit, and a final cleaning unit. If, in addition to gas, it is planned to obtain electric power and/or thermal energy, an additional unit will be installed – an energy centre. The complex is fully automated, and process control indicators are displayed on the control monitor via cables or the Internet.

For processing, waste must have a moisture content of at least 85% and, preferably, no more than 90% (with a higher moisture content, the dry substance being gasified may not be enough to produce enough gas even for the self-sufficiency of the complex).

The advantage is the park efficiency will be driven to maximum as TBD is the only technology which is demanding wet waste and strong organic waste. It produces local EU Methane Gas for the National Provider to be more independent; it produces high grade cheap organic bio fertilizer for the agricultural industry. It produces pure and clean water in the reactor cycle without phosphates which are extracted

before, and which is a top priority of the EU and national countries. The water can be used for the other technologies which are in demand of water or given to the farmlands. It is a self-powering system where even the extra heat will be used for the drying chamber for the other technologies to increase by drying the efficiency of all again

**ROI:** 3,76 years according to the added calculation

### 7. Wind Driver Turbines

To export **ALL** park produced energy and goods and to keep a full sustainable cycle there will be installed a new wind energy production in the form of small vertical turbines which are made of light carbon fiber and working by magnetic field with the slightest movement of wind. They are very effective and are free of maintenance due to missing shafts and ball bearings (no friction). The turbines will be placed on roofs and all over park to fire the energy needed of the whole park by this innovative next generation wind power plant. The rotor wheels are vertical and not tall and therefore don't distract nature or any environment as well just need a tiny space.

The ROI is 5 years, and the energy sales price is based on very low level to support the 4 larger project companies with secure and cheap energy. With potential subsidies this of course will lower even more the operation costs of the production facilities. Even when some project companies produce energy, we want to show a perfect example of autonomy inside an industrial park as well as the other companies can sell to higher market prices to the net the whole output without complicated internal deductions.

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## II. Sisak Green Energy Industrial Park: A European Showcase

Our vision is being realized first in Sisak, Croatia, where we have secured construction land with full permissions to establish a Zero-Waste Green Energy Industrial Park. Sisak was historically an industrial hub (steel mills, oil refinery) and is part of the Sisak county known for heavy industry. This legacy has left challenges – pollution and a need to re-employ skilled workers – but also presents an opportunity: abundant industrial infrastructure and a workforce ready to pivot to new industries. The European Commission's Just Transition Fund identified Sisak as a priority for climate transition funding, noting its "highly polluting industries" and the need for economic diversification through sustainable technologies. Our project answers this call directly.

**Key features of the Sisak project:**

- Strategic location: Sisak lies at the confluence of the Sava and Kupa rivers, offering excellent logistics. The site has river barge access, rail connections, and proximity to highways, situated as a transportation hub in Central Europe. This means efficient supply of waste feedstock from

surrounding cities/countries and easy distribution of energy or products (electricity into the grid, fuels by rail/river, etc.).

- Industrial synergy: The park's site is in an industrial zone with existing utilities, including the potential to integrate with the city's district heating network. Excess heat from our PCC plant can be fed into Sisak's heating system, replacing fossil fuel use for heating local homes and businesses. The electricity generated can support the local grid which previously depended on fossil-based power. By tying into existing grids and pipelines, we reduce costs and quickly demonstrate the benefits of a circular energy economy.

- Pollution remediation: Transitioning from the old polluting industries, the park will also contribute to environmental cleanup. By processing local waste (and even legacy waste like old landfill content) in our systems, we help remediate past pollution. For instance, we can mine and gasify the top layers of old landfills (as our PCC tech allows processing of existing dump waste), restoring land and eliminating sources of leachate and methane.

- Economic revitalization: Our project will create a cluster of sustainable businesses and green jobs in Sisak. We plan to hire and retrain workers from fossil-based industries (e.g., oil refining, chemicals) into roles operating the CCC, PCC, TBD and other units. This know-how transfer is supported by EU initiatives; indeed, part of the JTF funding in the region is earmarked for reskilling workers from refining/chemical sectors to clean tech. By leveraging that, we ensure we have skilled local operators and the community benefits through employment. Ancillary services (maintenance, logistics, R&D lab, etc.) will spur SME growth around the park.

- Innovation hub: The Sisak park will serve as a demonstration and innovation center for our technologies in Europe. We intend to collaborate with local universities and institutes (as encouraged by EU diversification plans) to continually improve the processes – for example, testing new catalysts in CCC. The site will host visitors and stakeholders from across Europe to showcase what a fully integrated zero-waste energy solution looks like in practice.

- Laboratory: It is planned to implement a research team in the laboratory to do further scientific research in chemistry and physics

The Green Waste to Energy Park Sisak project will be seen as state relevant project in Croatia and will be tax free for 10 years.

We have a waste treatment permitted land ready to purchase on hand with a total space of 80,000,00 m2 which fits the size needed by the park perfectly.

We have access to all necessary sludge, waste, garbage and can secure and continuously feed the plants and modules

The large financial advantage of the whole project is that all goods produced are extremely high-demand commodities which are not in enough supply where the sales are automated by existing stock and contracts. So, the risk of non-performing sales is close to zero.

**The core team (Board of Directors) consists of**

1) Martin Eckerstorfer, MBA MLE BA as CEO (Chief Executive Officer) Holding and Companies

   Park Management, Overall Responsibility,

2) Mag. Kurt Jürgen Jöbstl as CFO (Chief Financial Officer) Holding and Companies

   Financial Management

3) Ismet Mesic as CIO (Chief Information Officer) Holding and Companies

   AI, Information Technology, Tokenization

4) Ing. Georg Michael Ringholz as COO (Chief Operations Officer) Holding and Companies

   Park Overall Operations

5) Dipl. Ing. Mario Wagner as CTO (Chief Technology Officer) Holding and Companies

   Technology, Maintenance, Energy, Quality

6) Luka Batinovic as CLO (Chief Legal Officer) Holding and Companies

   Legal, Local and Administrative Management

7) Dr. Peter Vitz, MBA as CMO (Chief Marketing Officer) Holding and Companies

   Scientific Research, Laboratory

8) Igor Tipalo, PhD MSc as CRO (Chief Research Officer) Holding and Companies

   Electronics, Research, Engineering, Reactor Control

9) …. as CPO (Chief Purchasing Officer) Holding and Companies

   Purchasing and Logistics

10) … as CCO (Chief Commercial Officer) Holding and Companies

    Trading, Commodity Price Analysis, Export

11) Dr. Markus Fido as CSO (Chief Scientific Officer) Holding and Companies

Laboratory, Basic Scientific research, Chemical development

**Supervisory Board**

1) TBA – Chairman of the Supervisory Board
2) TBA – Deputy Chairman of the Supervisory Board
3) TBA – Supervisory Board Member
4) TBA – Supervisory Board Member
5) TBA – Supervisory Board Member

The plan is to form a Holding 'Green Sisak Transformation Park'

**The Holding will be owner of 100 % of the shares and is responsible for 6 limited companies**

A) STC Project Company
B) RPP Project Company
C) PCC Project Company
D) TBD Project Company
E) CCC Project Company
F) Winddriver Company
G) Laboratory Company

The Holding will employ shared service managers for trading, purchasing, park maintenance, utilities, financials, administration, legal and logistics. Each limited company will have its own management with bookkeeping and operational staff. All companies will work also with external consultants for non-core activities.

# III. Financial Overview in Total

| Sisak Green Energy and Waste Park Total ROI | | | | | | | |
|---|---|---|---|---|---|---|---|
| Total Project Cost in EUR | | | | | | | |
| *Project Name* | CCC | RPP | STC | Winddriver 2,5 MW/h | TBD | PCC | |
| Project Costs in EUR | 15007189,20 | 9545000,00 | 14163850,00 | 14000000,00 | 25000000,00 | 302300000,00 | |
| | | | | | | | |
| With 20 % Subsidies | 12005751,36 | 7636000,00 | 11331080,00 | 11200000,00 | 20000000,00 | 241840000,00 | 20% |
| | | | | | | | |
| With 80 % Subsidies | 3001437,84 | 1909000,00 | 2832770,00 | 2800000,00 | 5000000,00 | 60460000,00 | 80% |
| | | | | | | | |
| Turnover | 6848050,00 | 13835404,80 | 7777140,00 | 2762500,00 | 10447350,00 | 120793250,00 | |
| | | | | | | | |
| Annual Profit starting year 2 | 5265810,00 | 4123973,76 | 5017140,00 | 2762500,00 | 9057350,00 | 87373250,00 | |

| *Further Project Shared Costs* | |
|---|---|
| Land Purchase | 2250000,00 |
| Drying Hall & Instalations | 18000000,00 |
| AI inducted Sorting System | 40000000,00 |
| Electricity Installations | 4500000,00 |
| Labaratory | 2750000,00 |
| Shared Buildings and Utilities | 3000000,00 |
| Holding Charges | 3500000,00 |
| Crusher | 4750000,00 |
| Start Up Project Management / Company Costs / Permission Costs / Architect | 3250000,00 |
| | |
| *Total Project Costs* | 462016039,20 |
| Total Project Costs with 20 % subsidies | 324512831,36 |
| Total Project Costs with 80 % subsidies | 96503207,84 |
| | |
| Total Annual Turnover | 162463694,80 |
| | |
| *Total Annual Profit starting year 2* | 113600023,76 |
| *Total Annual Profit starting year 2 minus annual holding charges 3,5 MIO EUR* | 110100023,76 |
| | |
| **ROI in years without subsidies and tax freedom / first year no income** | **4,20** |
| **ROI in years with 20 % subsidies and tax freedom / first year no income** | **2,95** |
| **ROI in years with 80 % subsidies and tax freedom / first year no income** | **0,88** |

| | |
|---|---|
| **Cash Flow Position for 4 month Start Up Operation which must be added into the company at start of operation** | **19969373,89** |
| **Total Investment with calculated and needed Cash Flow** | **481985413,09** |

Ultimately, the Sisak Green Energy Industrial Park will be a model that can and should be replicated across Europe. Many European regions – from coal regions in transition to industrial ports – are looking for ways to implement circular economy projects at scale. By perfecting our approach in Sisak, we aim to scale out to other locations (with local adaptations as needed). The goal is to establish a network of Green Energy Parks, making Europe a leader in advanced waste conversion and renewable energy generation.

## Financing and Expansion Strategy

A major factor in the viability of these projects is the supportive funding environment in the National States and EU. We are aligning our expansion strategy to take full advantage of EU green funding programs, which significantly derisk the investments and improve ROI for stakeholders:

- EU grant funding (80/20 model): Many EU programs (Horizon Europe, Innovation Fund, Just Transition Mechanism, etc.) are offering substantial grants for technologies that reduce emissions and promote circular economy. In our plan, up to 80% of project capital expenditure can be covered by EU grants, while our company and partners will finance the remaining ~20%. This leverage of public funds means that for each project, only a small portion comes from equity or debt, yet we retain the upside of the entire project. It provides investors with confidence, as the EU's 80% grant acts as a financial backstop. For example, the EU Just Transition Fund is already

investing €179 million in Croatian green projects including Sisak, and similar levels of support are expected in other countries for qualified projects.

- Public-private partnership approach: We are structuring projects as partnerships with municipalities or regional authorities (who often help secure EU funds), plus private investors. This ensures local buy-in and smooth permitting, while the private side brings efficiency and innovation. The investment security is high because once a grant is approved, the project has guaranteed funding for most of its cost – reducing the risk of cost overruns or revenue shortfalls affecting the investor's capital.

- Revenue streams and ROI drivers: Each technology in the park contributes to multiple revenue streams. Electricity sales, heat sales, fuel/oil sales, material product sales, tipping fees for waste processing contracts, and carbon credits all add up. Because of this diversity, the business model is resilient – if electricity prices dip, perhaps demand for recycled products or fuels is up, etc. Our financial analyses (and initial projects) indicate that even conservatively the parks will generate solid returns. For instance, the PCC unit alone with its 4-year ROI sets a strong baseline. When stacked with other tech, the overall park ROI remains very attractive (even after accounting for operating costs and feedstock logistics).

- Scaling globally: While Europe is our focus (due to the strong policy support and need), our long-term aspiration is global expansion. Waste management and clean energy are universal challenges – emerging economies in Asia, Africa, and the Americas are also seeking solutions. By proving our model in the EU (a demanding regulatory environment), we will be well-positioned to deploy internationally. Global institutions (World Bank, development banks) are financing waste-to-energy and circular economy projects, and we can tap those channels when expanding beyond Europe. The knowledge and efficiencies gained in Europe – in areas like PFAS destruction, CO2 neutrality, advanced recycling, and integrated energy systems – will give us a competitive edge abroad.

In conclusion, the combination of urgent market need, cutting-edge technologies, and favorable funding creates a perfect landscape for our Zero-Waste Green Energy projects. Europe's policy climate and grant programs provide an unprecedented opportunity to implement these solutions on a scale with minimal financial risk. By starting in Sisak and then replicating across Europe, we aim to lead the market with breakthrough technologies that turn waste into wealth, all while helping the EU achieve its climate and circular economy ambitions. This strategy not only promises strong business returns but also measurable environmental and social benefits – truly a win-win scenario for investors, communities, and the planet.