

SIGNINA CAPITAL AG

**WATER INFRASTRUCTURE
QUARTERLY REPORT – Q4 2022**



Waste Water, Mt. Holly, NJ

A New Jersey-based Wastewater Treatment Plant where original funds were partly used to mount solar panels to increase energy efficiency of the plant, lower costs over time, and provide energy to the local municipality. The state of New Jersey requires electricity suppliers to secure a portion of their electricity from solar facilities located in NJ, creating a natural market for Solar Renewable Energy Credit (SREC) trading credits. The project not only reduces the plant's energy consumption but also improves its overall efficiency. We can surely extend our reach in this area and currently look at a broader investment opportunity in the same sector.

Sustainable Sewerage, Ontario

The Sustainable Sewerage market in Ontario currently undergoes a significant change when it comes to consolidation and strong demand for renewal of existing plants. Amongst others we are working with a private company which has developed a technology providing sewage collection and water treatment. It offers an all-in-one solution which is both cheaper to install and operate than traditional systems. The existing projects are all government linked and work closely with municipalities and we are currently working towards a PPP pipeline for its sewerage system. The provincial regulations regarding sewerage mean that many municipalities are required to change/install systems in the coming years. We have been implementing the first parts of the portfolio of existing projects and we will continue to implement more under the same framework. The constant diversification increased the security for the investors but also allows us to further reach into this market. The investment model has not changed, but the reach within Ontario has become broader.

Greenhouses, Virginia

A lot of the groceries produced in the USA are transported across the country and come from regions with little water (such as leafy greens which are still 99% field grown in the US). This creates high costs and carbon footprint along with a lack of consistency for fresh produce. The greenhouses today can control the environment to produce fresher quality produce, utilizing less water, is local and sustainable. The project will be developed in Virginia for the local market.

Industrial Re-use, Blue Planet, California

The project is a carbon capture and mineralization project based in Pittsburg, CA. The company captures both wastewater and CO₂ emitted from a gas-fired power plant and combines these with locally sourced demolished/returned concrete as a process input material to produce several different "CO₂ sequestered" and "up-cycled" aggregate products for use by Bay Area businesses, governments and consumers in a wide range of low-carbon, high-value concrete mix designs. The wastewater and steam is obtained from the local power plant and the ammonia needed from their treatment plant is located adjacent to the plant. As a result, either method will use recycled water, which is legislatively supported in California. The whole process revolves around reusable and recyclable products. The carbon dioxide mitigation, waste water usage and demolished concrete process input provide a process producing recycled aggregates while reducing carbon dioxide.

The company is in its last stage of raising a mix of debt and equity, before reaching commercial viability in 2023. We are involved in the last debt round, but also on the equity side for bespoke advisory clients.

Hydropower, Marseilles, Illinois

A lock and dam hydroelectric water power project located on the Illinois River. The site has obtained a FERC License (expires 2061) and is finalising development. Once the site is connected and producing energy it will provide power to the local municipalities and income will be generated by the power purchase agreement in place.

Hydropower, Braddock, Pennsylvania

A lock and dam hydroelectric water power project located on the Monongahela River, Pittsburgh. The site has obtained a FERC License (No. P-13739) with a 5.25MW capacity and is finalising development. The site, once producing energy will provide power to the local area with income being generated via the sale of the energy.

CURRENT PROJECTS

Q4 continued the same way as the rest of 2022. The continued concerns regarding recession, energy and cost of living. Furthermore rates were increased by the Fed, Bank of England and European Central Bank to stave off the current inflation. At this point in time it is unclear what the mid term goal for central banks will be as the short term inflation reduction is the headline.

From an infrastructure perspective the rhetoric remains the same. Sustainable energy, sanitation and holistic water themes are prominent. Suez is looking into ownership of waste water plants which has been a reoccurring theme for us over the past year. Water as always is key in many areas as the taxonomy becomes stricter and more defined in both North America and Europe.

Digitisation to monitor sites is becoming more mainstream since COVID so that sites can be monitored from remote. This theme will continue as the water related industries realise the cost savings of such technologies. The current projects remain attractive and stable. Greenhouses and Blue Planet are at the forefront of the ESG movement from different angles. Hydropower gathers steam but moves a lot slower than other green energy sources such as solar but the shift to renewables and base loads will continue to consume the headlines in the coming year.

While 2023 will continue to be uncertain for the global economic outlook, we see investors and mid-sized institutions adapting their strategies and as neither infrastructure, nor ESG as a topic going away, increase their efforts in that direction again. After all, infrastructure that is non-levered continues to perform well and our jurisdictions are very often seen as a safe-haven in times of insecurities. Such times lead to potential opportunities which we aim to capture and add to what we are already doing today.

REGIONAL MARKET INFORMATION

NEWS IN BRIEF

Take a look inside a greenhouse on the rooftop of a Whole Foods in Brooklyn — reducing emissions and food waste.

<https://www.businessinsider.com/gotham-greens-greenhouse-on-top-of-whole-foods-brooklyn-2022-12?r=US&IR=T>

Sulzer & Blue Planet deepen collaboration to accelerate decarbonisation of concrete and construction.

<https://www.sulzer.com/en/shared/news/210614-sulzer-and-blue-planet-announce-partnership-to-sustainably-transform-the-cement-industry>

SUEZ doubles its investments to consolidate its position as a leading player in water and waste management.

<https://www.suez.com/en/news/press-releases/strategic-plan-suez-doubles-investments-consolidate-position-leading-player-water-waste-management>

RECYCLING AND REUSE? WAYS TO WIN THE WAR ON WASTE¹

No one can question that we have a global problem with food and beverage (F&B) waste. The numbers show the scale of how much food and money is wasted annually. According to The World Counts website, roughly one third, or about 1.3 billion tons, of the world's food is wasted. But more than that ends up in landfills.


The F&B industry, along with many others, generates a huge amount of waste through packaging. The World Bank projects that global municipal waste will increase to 3.4 billion metric tons and there will be more plastic than fish in the ocean by 2050. How can the world and the F&B industry confront the fact that packaging waste is generating both cost and pollution?

Recycling is a start

Recycling is a start, and big companies are making a big push, but recycling cannot do the job alone. According to the U.S. Environmental Protection Agency, consumers globally use about 1 trillion plastic bags annually, with fewer than 10% in the U.S. ultimately recycled. That leaves a lot of room for more recycling, but recycling is unlikely to be the whole answer to the problem.

Confronting packaging waste

Big F&B companies are taking steps to advance solutions, even as current product packaging continues to accumulate in waste streams. Evian manufactures some “bottles made from bottles” or recycled plastics.



Hormel Foods introduced packaging for 16-ounce Planters Dry Roasted Peanuts using 8% less plastic. The company said this will save 220 tons of plastic per year, according to Food Dive. Hormel reduced packaging by 727,000 pounds in 2021, which saves money as well as reducing waste. Nestlé introduced Nespresso capsules made with 80 percent recycled aluminium.

Reuse could be a better solution

The fourth “R” — reuse — may be one way to make a better, cleaner world. Matt Prindiville, CEO of Upstream, outlined big opportunities for F&B companies, asserting that firms that reduce waste can boost earnings. And green efforts can boost branding along the way. He stated that there is no way we can hit our climate goals without reuse. It may sound like a utopian concept, especially with safety on the minds of consumers after the Covid pandemic. But where there’s a will, there often is a way.

Reuse can be successful if our current bin system is expanded to accommodate different products. On Upstream’s website, for instance, there are links to companies that have dedicated reusable products for F&B companies, and the variations are quite interesting. For food services, there are reusable cups. For takeout and delivery, it gets more complicated, but there are reuse services available for restaurants.

Reuse re-considered

The Clean Water Fund’s ReThink Disposable program in California showed companies saved money by switching to reusables for on-site dining, according to Upstream. Typical savings for a small business range from \$3,000 to \$22,000, while eliminating 110,000 to 225,000 packaging items

and 1,300-2,200 lbs. per business. What’s good for a company’s economics can be good for the environment.

Looking forward

Many companies issue corporate responsibility reports. They often emphasize the ways companies are seeking to innovate, including looking at new means of packaging. But big change will require big, bold decisions. Reuse can be a big part of that along with recycling. Companies need to keep testing new packaging, reusable solutions and recycling. In the end, reducing waste can reduce cost and maybe even boost earnings. Companies can go green, and also boost the green they make.

BILLIONS AT STAKE IN EUROPEAN GREEN WASTEWATER OVERHAUL³

The EU is getting serious on micropollutants and nutrients in an ambitious new upgrade to wastewater rules. It wants to lay large parts of the cost on industrial polluters.

At the end of October, the EU revealed plans to overhaul contaminant and nutrient removal standards in Europe in a revision to the Urban Waste Water Treatment Directive (UWWTD) that will drive billions in new spending.

New standards to address emerging pollutant concerns through increased treatment and monitoring are expected to result in an additional €3.8 billion a year of capital and operating expenditure by 2040, as utilities and plant owners look to achieve the UWWTD's goals. At the same time, it forecasts annual monetised benefits of nearly €7 billion a year. While the ambitious spirit of the proposal was widely supported in the industry, there have been concerns over the implementation timelines – and anger from the industries that are expected to foot the bill for some of the required spending.

Big changes for micropollutants

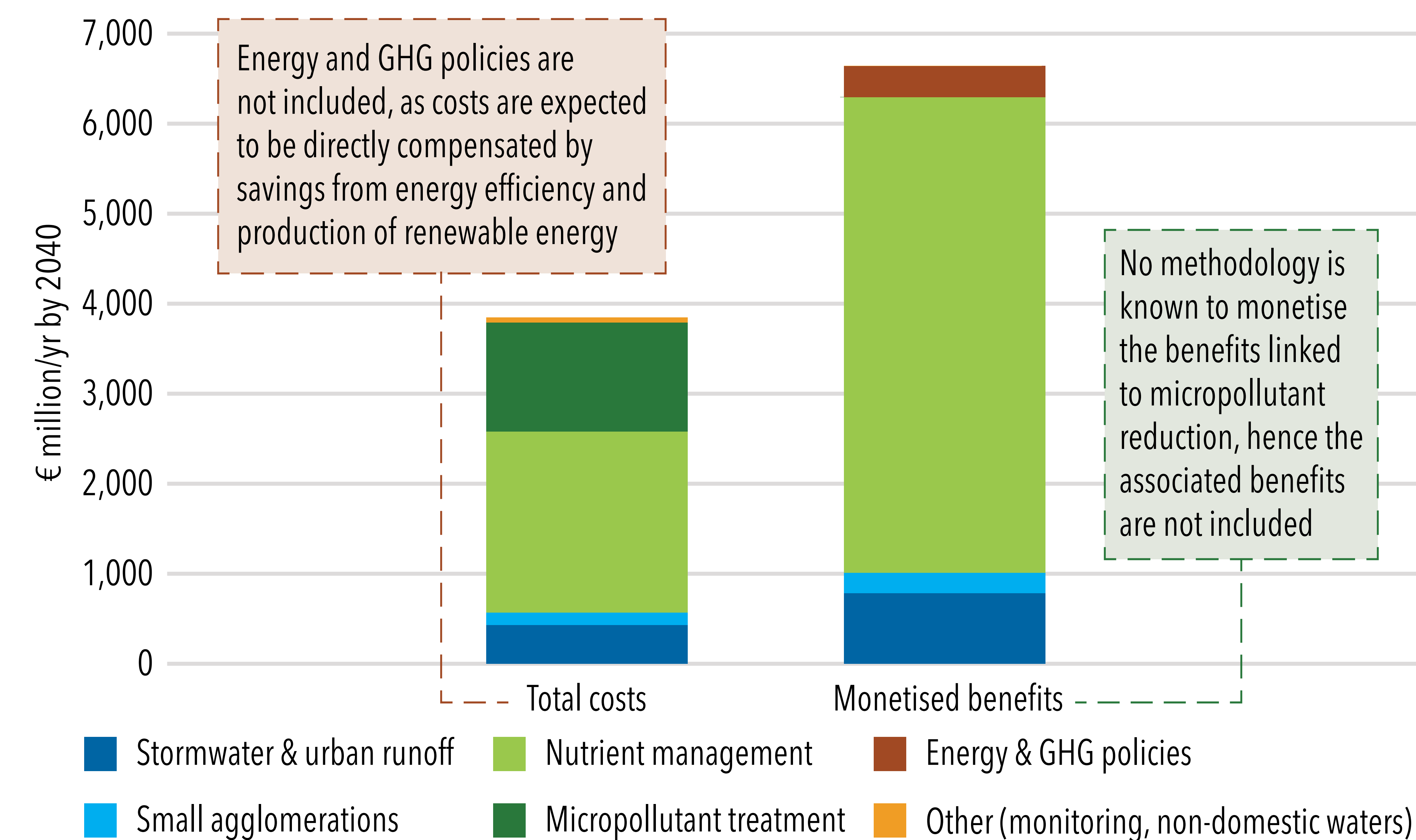
Additions to the rules to address micropollutants will require a massive roll-out of treatment technology across Europe in the coming decades. The regulation, following in the mould of Switzerland's 2015 regulation on micropollutants, requires a broad spectrum of micropollutants to be treated to a minimum 80% removal level, with benchmarks to be established at each plant. This means that quaternary treatment would be required in all WWTPs with capacities over 100,000 population equivalent (p.e.) and

those deemed at risk above 10,000 p.e. – representing estimated total expenditure of €1.2 billion a year by 2040, according to the proposal's impact assessment.

Upgrades to meet the standards will likely rely on ozonation, activated carbon, or a combination of both technologies. While this could represent a significant opportunity for treatment technology providers, concerns have been raised over the resource demand this generates.

THE COSTS AND BENEFITS OF BETTER WASTEWATER

Extra costs imposed by the new EU wastewater directive are expected to be significant – but the body aims to pass large parts of the cost onto industrial polluters. The expected benefits, meanwhile, are much larger.



New rules for nutrients

Proposed changes to make nitrogen and phosphorus limits more stringent could present a more immediate opportunity for treatment technology providers; implementation timelines for these are seen as more feasible, given the current technological capabilities. The new standard for total nitrogen is more stringent than any existing national standard globally, while phosphorus standards bring the EU in line with the most stringent national total phosphorus limits, such as those in mainland China. However, these phosphorus limits have already been surpassed in several countries. While 17 countries surpassed 90% compliance levels for previous nitrogen and phosphorus standards in 2018, other countries still had far to go.

While there is no figure currently available for the shortfall in reaching the new standards, widespread implementation of the new nutrient limits is expected to require additional spending of €2 billion a year by 2040.

Ensuring efficiency

The proposal's environmental targets centre on net energy neutrality. Increased production of biogas is central to achieving this net neutrality, based on the experience of WWTPs in Denmark, although it was noted that solar or wind energy at WWTP sites may be more cost-effective in some member states. Nevertheless, the impact assessment of the proposal does notably pay attention to the expected greenhouse gas (GHG) reductions of the options considered, with the preferred option leading to a 33.7% reduction in avoidable emissions relative to current policies by 2040. This is a welcome move, given the extent of non-energy emissions from the water sector. By only setting targets for energy neutrality, however, the UWWTD

may miss crucial mitigation opportunities. Research on the GHG emissions of wastewater treatment found nitrous oxide is approximately 300 times more potent a GHG than carbon dioxide and hence makes up 41% of total sewerage wastewater emissions in Europe. Despite this, the proposal makes very little reference to the gas. Recommendations for methane capture and reduction address process emissions, although no specific standards or requirements have been set to directly target GHG reductions – only requiring energy audits to identify methods for reducing methane emissions.

The publication of the UWWTD proposals marks the start of the next stage of discussions between the European Commission, the European Parliament, and the Council of the EU to reach a consensus before it is adopted, possibly by spring 2024.

KEY MEASURES IN THE PROPOSED URBAN WASTE WATER DIRECTIVE UPDATE

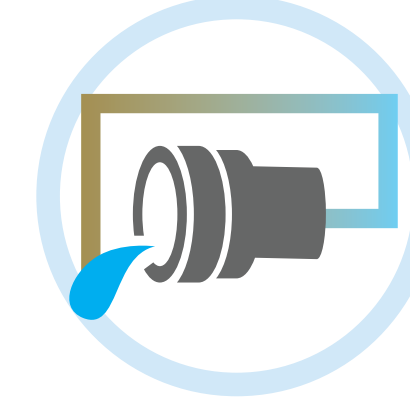
Article	New policy?	Implementation timeline	Details
Article 3: Collecting systems and Article 6: Secondary treatment	Changed	Compliant by 31 Dec 2030	Obligation of wastewater collection for agglomerations of 1,000 p.e. (previously 2,000 p.e.) and to apply secondary treatment before wastewater is discharged in agglomerations > 2,000 p.e.
Article 5: Integrated urban wastewater management plans	New	Plans for agglo. >100k p.e. by 2030, at risk 10-100k p.e. by 2035, and all agglo. >10k p.e. by 2040. Achieve indicative targets by 2040	Obligation to establish management plans to address pollution from rain due to stormwater overflows or urban runoff. Targets set to limit storm overflows to <1% of annual wastewater load
Article 7: Tertiary treatment	Changed	Treatment for all agglo >100k p.e. by 2035, and agglo >10k p.e. sensitive to eutrophication by 2040 (interim targets exist)	Removal of total nitrogen to 6 mg/L (previously 10-15 mg/L) and total phosphorus to 0.5 mg/L (previously 1-2 mg/L)
Article 8: Quaternary treatment	New	Treatment at all WWTPs >100k p.e. by 2035, and all at risk >10k p.e. by 2040 (interim targets exist)	Treatment to remove 80% of a broad spectrum of micropollutants. Calculated through measurements of concentration of at least six organic substances
Article 9: Extended Producer Responsibility	New	Schemes to be set up by 2025	Producers of pharmaceuticals or cosmetics responsible for micropollutants are expected to pay the full costs of quaternary treatment
Article 11: Energy neutrality	New	Energy audits at agglo >100k p.e. by 2025, and all >10k p.e. by 2035. Energy neutrality by 2040 (interim targets in 2030 and 2035)	Energy audits of WWTPs including identifying scope for renewable energy generation and GHG reduction. Net energy neutrality at the national level for WWTPs >10k p.e.
Article 17: Urban wastewater surveillance and Article 21: Monitoring	New	Coordination structure for public health set up by 2025. Monitoring of parameters by 2025	Member states must monitor wastewater for relevant public health parameters (e.g. SARS-Cov-2) and antimicrobial resistance in agglo. >100k p.e. Monitoring also obligatory for storm overflow pollution, regulated pollutants in WWTP outlets, GHG emissions, and microplastics (including in sludge)
Article 18: Risk assessment and management	New	Risks identified within two years of the directive entering into force; reviewed every five years	Member states must identify risks to environment or public health caused by discharges, apply treatment in accordance with this directive, and apply additional measures on top of this where necessary to address risks
Article 19: Access to sanitation	New	Assessment by 2027. Achieve SDG6.2 targets by 2030	Member states must assess groups with insufficient sanitation access and possibilities for improving access. Article enshrines SDG 6.2 to achieve access to adequate and equitable sanitation and hygiene for all, and end open defecation

Source: European Commission



- ✓ Accounts in balance
- ✓ SREC prices stable
- ✓ Incoming receivables within range of model
- ✓ Costs within range of model
- ✓ Meets target return of 7-9%

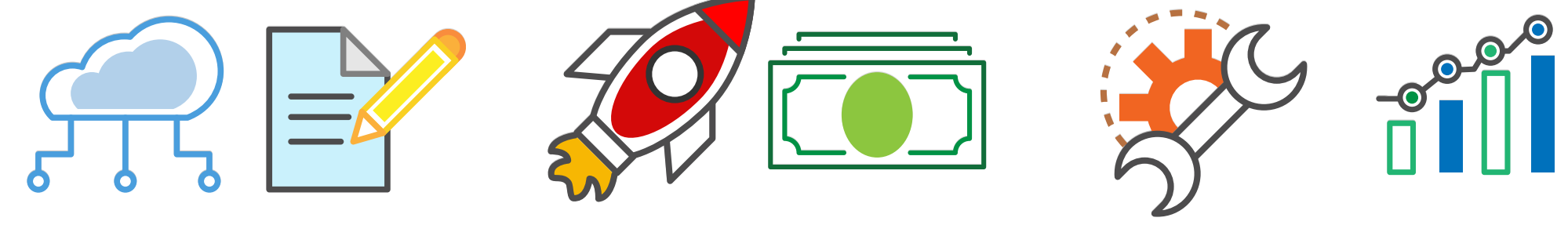
WASTE WATER | MT. HOLLY, NEW JERSEY



A **New Jersey-based Wastewater Treatment Facility (WWTF)** where funds were partially used to mount solar panels to increase energy efficiency of the plant, lower costs over time, and provide energy to the local municipality. The state of New Jersey requires electricity suppliers to secure a portion of their electricity from solar facilities located in NJ, creating a natural market for Solar Renewable Energy Credit (SREC) trading credits. The project not only reduces the plant's energy consumption but also improves its overall efficiency. It also helped in 2010 to improve the infrastructure in an area that was hard hit during the financial crises.

The site continues to operate and provide energy with the usual stronger summer months. Pricing appears to be stable.

- Monitor PPA component
- Monitor SREC eligibility and prices on the market (1 SREC for every 1000kW-hours of electricity produced)
- Monitor regulatory shifts in clean energy incentive programs (RPS) and timelines
- Document any changes to the investment expectations
- Online monitoring of the solar power as well

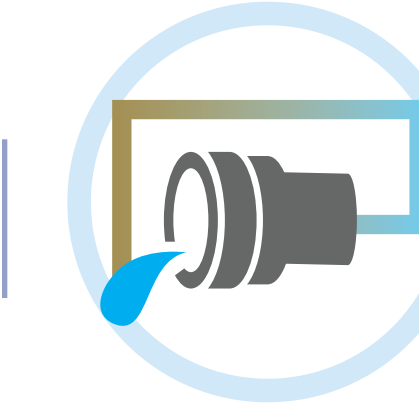


UN SDG	ICMA CRITERIA	ESG POLICY SOLUTION
<p>6 CLEAN WATER AND SANITATION</p> <p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>Renewable energy</p> <ul style="list-style-type: none"> • Climate change mitigation • Natural resource conservation • Pollution prevention and control <p>Climate change adaptation</p>	<p>Clean energy creation – solar panels provide clean renewable energy</p> <p>Pollution reduction – the Waste Water Treatment Facility (WWTF) utilizes the solar panels energy via a power purchase agreement. This reduces the heavy amount of energy required by the WWTF which would otherwise be coming from non-renewable sources of energy</p> <p>Energy efficiency – the proximity of the site to the waste water facility offers a high energy efficiency</p>
<p>ESG RISK MITIGATION</p>		<p>• Renewable Energy consumption • Water Consumption</p>



- ✓ Accounts in balance
- ✓ Project updates
- ✓ Incoming receivables within range of model
- ✓ Meets target return of 7-9%
- ✓ Interest payments made on time

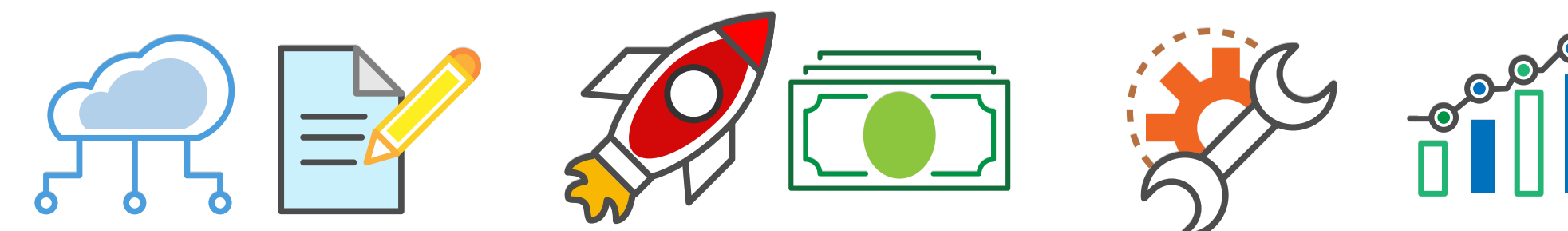
SUSTAINABLE SEWERAGE | ONTARIO



The Canadian wastewater market is highly fragmented. The market requires small impact installations, rather than traditional centralised large waste water treatment plants. Our existing 300 projects are government linked and only fully licensed projects with no planning risks are being considered. Signina focuses on business consolidation of mid-sized businesses, operating in project sizes of \$5-50m. The small to mid-range business growth is supported by shifting demographic developments into smaller, satellite communities, as well as a stable favourable regulatory environment.

With wastewater rates rising steadily, the risk-reward associated with Signina’s consolidation strategy is readily apparent and has picked up pace since its start in 2008. With larger institutional mandates we have triggered more deals diversifying from the existing projects. Sustainable sewerage has become a major concern over the past couple of decades. The majority of the contracts are in municipalities that are rated A or higher by rating agencies. In addition there are various municipalities that do not carry any debt.

The operations are as expected. Some of the new potential contracts have come to fruition or making significant progress in the past quarter. There also remains a pipeline of new business and contracts which are being assessed.



UN SDG

6 CLEAN WATER AND SANITATION

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

ICMA CRITERIA

- Sustainable water and wastewater management:**
- Pollution prevention and control
 - Natural resource conservation
 - Climate change adaption
- Eco-efficient and/or circular economy adapted products, production technologies and processes**
- Climate change mitigation
 - Natural resource conservation

ESG POLICY SOLUTION

- Sustainability** - providing finance and assistance in creating and maintaining infrastructure for wastewater treatment and clean water
- Pollution prevention** - by creating sustainable sewerage infrastructure the need for septic tanks and landfill sites are heavily reduced. The waste water treatment assists an ongoing global problem with handling waste and impurities

ESG RISK MITIGATION

- Water Re-use
- Water Pollution



INDUSTRIAL RE-USE | BLUE PLANET, CALIFORNIA

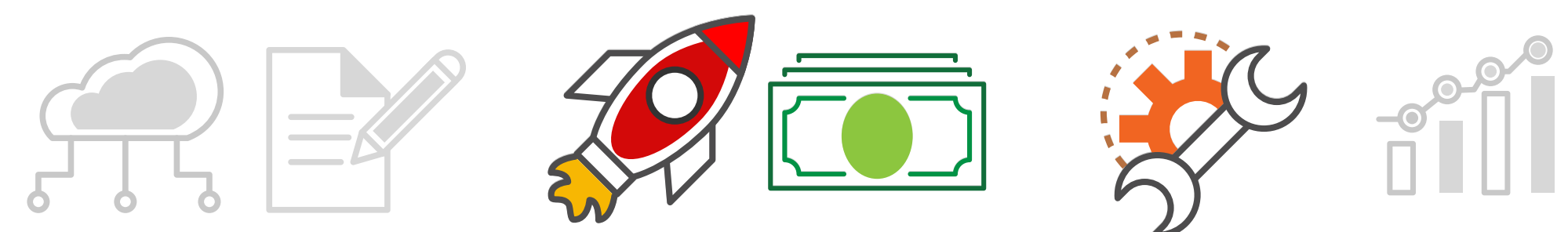


The project is a **carbon capture and mineralization project based in Pittsburg, CA**. It captures both wastewater and CO₂ emitted from a gas-fired power plant and combine these with locally sourced demolished/returned concrete as a process input material to produce several different “CO₂ sequestered” and “up-cycled” aggregate products for use by Bay Area businesses, governments and consumers in a wide range of low-carbon, high-value concrete mix designs.

The wastewater and steam will be obtained from either the local power plant or from the sanitation district that can provide wastewater and the ammonia needed from their treatment plant which is located adjacent to the plant. As a result either method will use recycled water, which is legislatively supported in California. The whole process revolves around reusable and recyclable products. The carbon dioxide mitigation, waste water usage and demolished concrete process input provide a process producing recycled aggregates while reducing carbon dioxide.

The project and technology company continues operate as expected and has gained momentum from some large industrial firms.

- Maintain monthly communication with project team
- Document changes and delays to the permitting process



UN SDG

ICMA CRITERIA

ESG POLICY SOLUTION



- Climate change adaptation**
Green Buildings
- Climate change mitigation
 - Natural resource conservation
 - Pollution prevention and control
- Eco-efficient and/or circular economy adapted products, production technologies and processes**
- Climate change mitigation
 - Natural resource conservation

- Reuse of wastewater** – the water will be obtained from either the local power plant or from the sanitation district. This results in recycling the wastewater
- Recycling products** – the process also uses locally sourced demolished concrete as a process input to create aggregate products for use in the Bay Area
- Sustainable buildings** – the aggregates created in the process are from renewable and green sources. This in turn does not impact the environment negatively and meets the goal of sustainable cities and communities

ESG RISK MITIGATION

- Water Re-use
- CO₂ Emissions Neutrality
- Pollution

- ✓ Accounts in balance
- ✓ Permitting process on schedule
- ✓ Timeline on Track
- ✓ In line to meet target return of 7-9%



- ✓ Accounts in balance
- ✓ Regulatory requirements kept to date
- ✓ Costs within range of model
- ✓ Timeline on Track

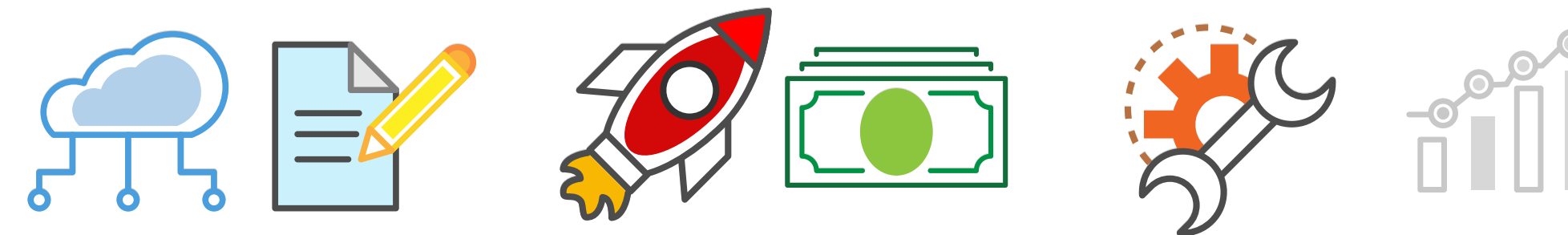
HYDROPOWER | MARSEILLES, ILLINOIS



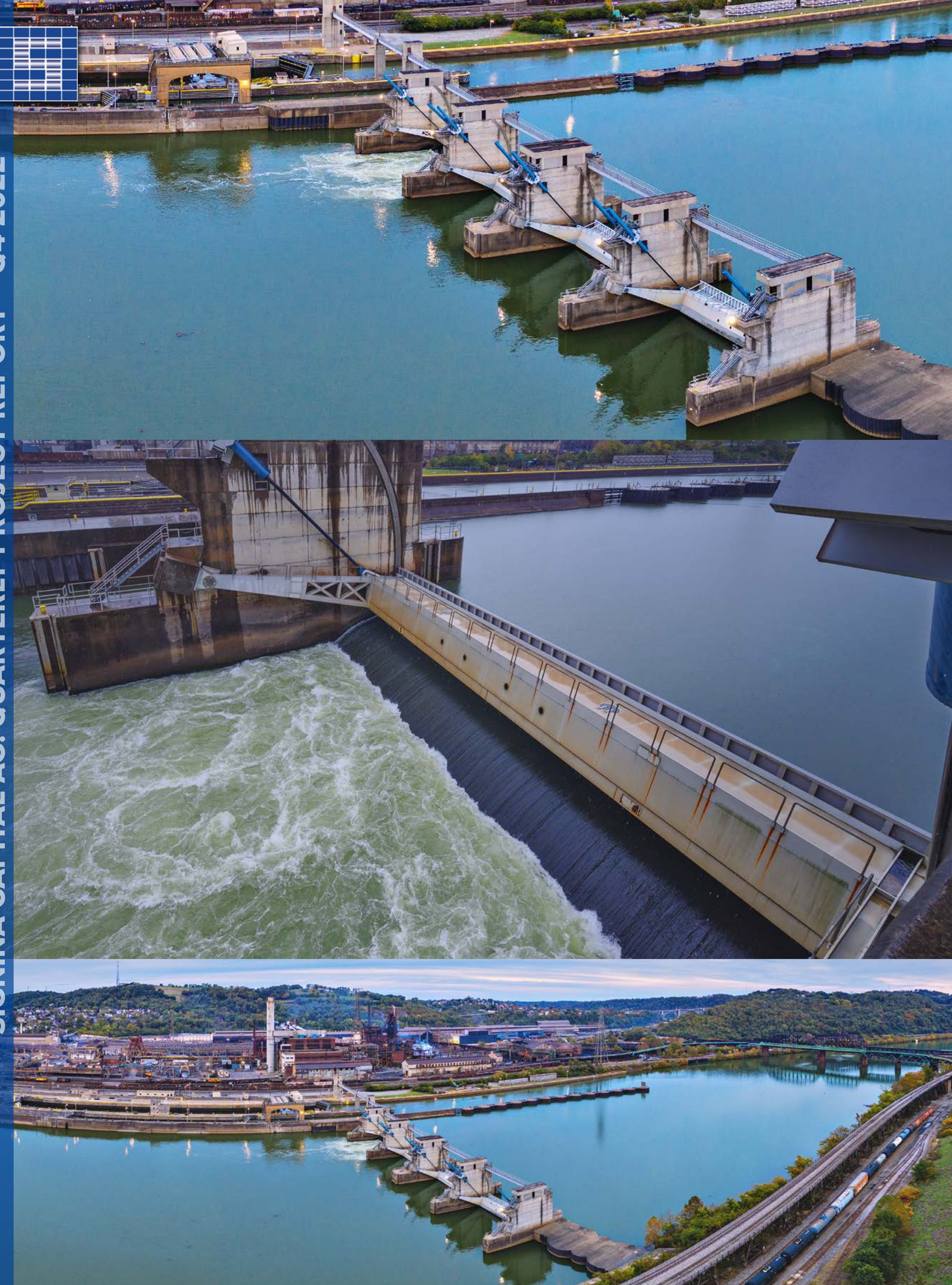
Hydropower, Illinois: A lock and dam hydroelectric water power project located on the Illinois River. The site has obtained a FERC License (expires 2061) with a 10.26MW capacity. Once the site is connected and producing energy it will provide power to the local municipalities and income will be generated by the power purchase agreement in place. The project is considered a small- or mid-sized project and has reduced the environmental impact dramatically. It entails a variety of environmental rules from the EPA that have been fulfilled with the FERC licence. The mandate looks at small hydropower facilities (below 25 MW) as such sites have minimal impacts on the surrounding area unlike large hydropower facilities which often have negative impacts on the surrounding environment.

The project continues to move slowly both on from a construction aspect as well as any PPA finalisation. Hydropower continues to be a hot topic in the clean energy movement and will likely pick up momentum now the world is reopening. There continues to be some volatility in the pricing too which is being monitored closely.

- Maintain monthly communication with onsite project manager
- Document any changes to the investment expectations
- Monitor the financial reporting, cash flows and accounts



UN SDG	ICMA CRITERIA	ESG POLICY SOLUTION
<p>7 AFFORDABLE AND CLEAN ENERGY</p>	<p>Renewable energy</p> <ul style="list-style-type: none"> • Climate change mitigation • Natural resource conservation • Pollution prevention and control 	<p>Renewable energy creation - hydropower is a clean renewable source of energy which can be sold via a PPA agreement or via merchant wholesale pricing on hydropower exchanges</p>
<p>14 LIFE BELOW WATER</p>	<p>Energy efficiency</p> <ul style="list-style-type: none"> • Climate change mitigation • Pollution prevention and control <p>Environmentally sustainable management of living natural resources and land use</p> <ul style="list-style-type: none"> • Natural resource conservation • Biodiversity • Climate change adaptation 	<p>Environmental management – the small hydropower market goes through a rigorous environmental approval process to make sure there is minimal impact to the surrounding region</p> <p>Biodiversity conservation – the environmental approvals for such projects include aquatic preservation to ensure the natural environment is not negatively impacted</p>
<p>ESG RISK MITIGATION • Project Size under 25mw • Renewable Energy Production</p>		



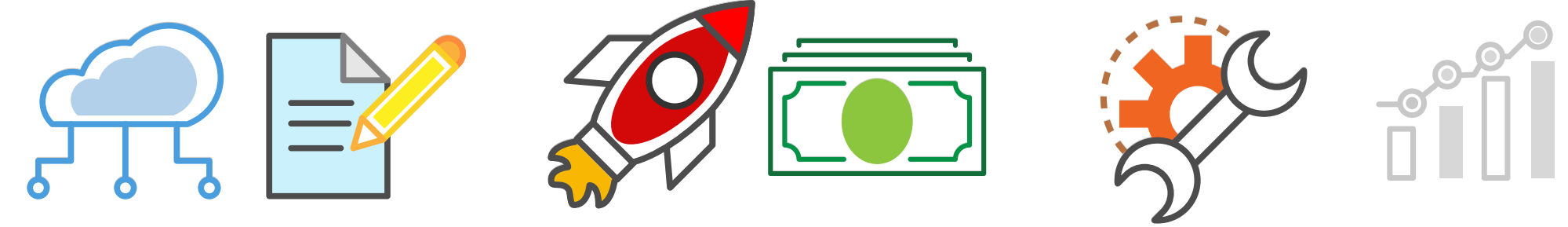
HYDROPOWER | BRADDOCK, PENNSYLVANIA



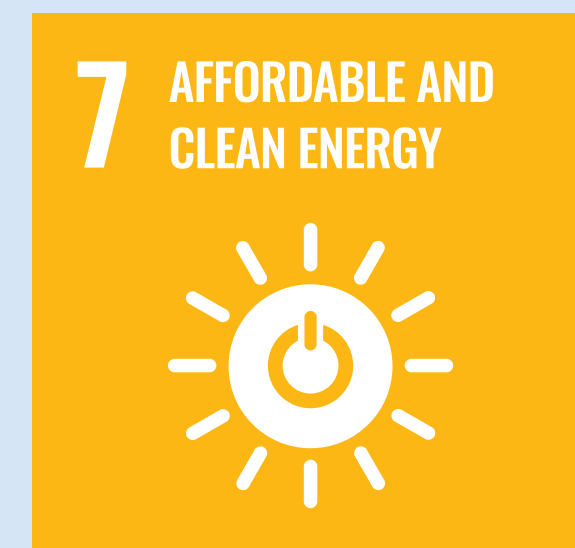
Hydropower, Pennsylvania: A Lock and Dam Hydroelectric Water Power Project located on the Monongahela River, Pittsburgh. The site has obtained a FERC license (expires 1965) with a 5.25MW capacity. It is a similar project to Illinois and is in an advanced stage in the PPA negotiations to lock in a price for the first few years post commissioning. Furthermore the project has received state grants.

The project is getting through its final approvals in order to construct the Hydropower plant. Alongside this step there continue to be discussions with some local groups to regarding PPA offtakes for when the site should be operational.

- Maintain monthly communication with onsite project manager
- Document any changes to the investment expectations
- Monitor the financial reporting, cash flows and accounts



UN SDG



ICMA CRITERIA

Renewable energy

- Climate change mitigation
- Natural resource conservation
- Pollution prevention and control

Energy efficiency

- Climate change mitigation
- Pollution prevention and control

Environmentally sustainable management of living natural resources and land use

- Natural resource conservation
- Biodiversity
- Climate change adaptation

ESG POLICY SOLUTION

Renewable energy creation - hydropower is a clean renewable source of energy which can be sold via a PPA agreement or via merchant wholesale pricing on hydropower exchanges

Environmental management – the small hydropower market goes through a rigorous environmental approval process to make sure there is minimal impact to the surrounding region

Biodiversity conservation – the environmental approvals for such projects include aquatic preservation to ensure the natural environment is not negatively impacted

ESG RISK MITIGATION

- Project Size under 25mw
- Renewable Energy Production

- ✓ Accounts in balance
- ✓ Regulatory requirements kept to date
- ✓ Costs within range of model
- ✓ Timeline on Track



- ✓ Off-take agreement signed
- ✓ All licenses acquired
- ✓ All EPC contracts and bonding signed
- ✓ Costs within range of model
- ✓ Timeline on Track

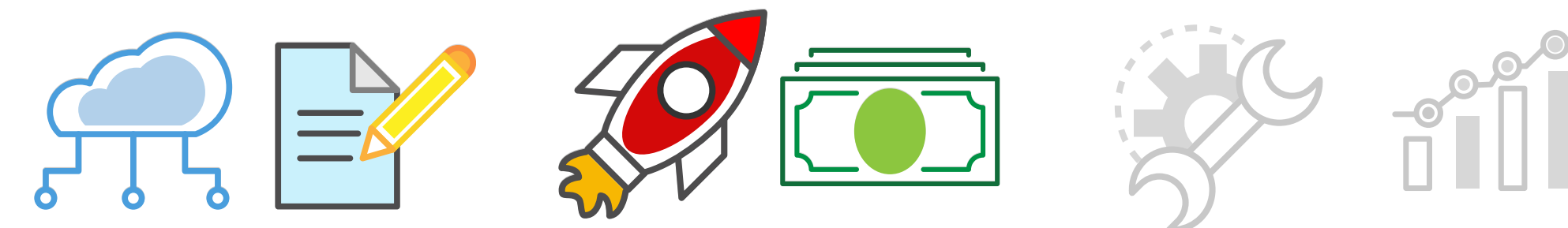
GREENHOUSES | VIRGINIA, USA



A lot of the groceries produced in the USA are transported across the country and come from regions with little water (such as leafy greens which are still 99% field grown in the US). This created high costs and carbon footprint along with a lack of consistency for fresh produce. The greenhouses today can control the environment to produce fresher quality produce, utilizing less water, is local and sustainable.

There is continued growth of advanced greenhouse market (482 acres built or in construction in U.S. since 2018). There has been significant disruption in leafy greens caused by food safety (recalls), changing climate, and labour availability. There is an expected acceleration in food service driven by demand for food safety, resiliency, and quality representing a strong growth sector. The target crop segments benefit from demand for sustainably grown, local food, enhanced convenience and taste, and improved food safety.

The major food chains need reliable produce which is hard with purely field grown facilities. Therefore similar to other areas in infrastructure the various food service, retail and integrated growers are happy to sign off-take agreements to guarantee a reliable product. Such greenhouses are plentiful in Europe reducing the technology risk to being tried and test.



UN SDG

ICMA CRITERIA

ESG POLICY SOLUTION



- Energy efficiency**
- Climate change mitigation
 - Pollution prevention and control
- Environmentally sustainable management of living natural resources and land use**
- Natural resource conservation
- Eco-efficient and/or circular economy adapted products, production technologies and processes**

Food Security – The sites create standardized produce. The classic agriculture method leaves a lot of the quality down to the elements. This could lead to bad harvests. The Greenhouses secure the output quality and quantity.

Environmental Management – The greenhouses reduce the amount of water required in order to grow the fresh produce. As it is under strict conditions the process can be optimized. Furthermore the sites are local rather than cross country.

ESG RISK MITIGATION

- Water Consumption
- Pollution
- Water Re-Use

LATEST DEVELOPMENTS

The main areas from last quarter remain at various stages of progress. Furthermore there are a couple of other highlights:

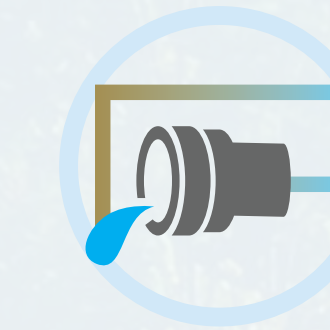
- 1** Carbon linked projects – Blue Planet continues to operate as expected. The SFBA site is producing aggregates as expected. The aim in the coming months will be to expand the operations and produce on a more industrial scale. They have partnered with firms such as Holcim and Sulzer to assist with the growth.
- 2** Agricultural Greenhouses – The opportunity is now closed and we are in the aftermath of the legal full documentation. Financing will be completed in the 2nd quarter 2023 and construction will start in parallel. All off-take agreements are already in place and we are pleased to have one of the top 3 green leaf growers in the US as a partner. The greenhouses are fairly straightforward to replicate.
- 3** Waste water in Canada continues to be a growth opportunity. The regulatory framework implies that many development owners and sites need compliant oversight. This creates the opportunity to consolidate the market with ownership projects. We have already lined up two new ownership projects for Q1 2023.
- 4** Hydropower – as mentioned earlier, the momentum stays strong. With higher inflation, the prices for electricity have reached new highs, including off-take for hydro. We now have offers to close on PPAs (Power Purchase Agreements) on all our projects. Some of them for 15years plus and at a 5-year high pricing range.

REFERENCES

1. **Recycling And Reuse? Ways To Win The War On Waste.**
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2. **The World Counts Website.**
<https://www.theworldcounts.com/>
3. **Billions at stake in European green wastewater overhaul.**
GWI Report November 2022
4. **Questions and Answers on the new EU rules on treating urban wastewater.**
https://ec.europa.eu/commission/presscorner/detail/en/QANDA_22_6281

LEGEND

INDUSTRY



Waste Water symbol: refers to projects in the US and in Canada and includes water treatment, water discharge and waste water treatment.

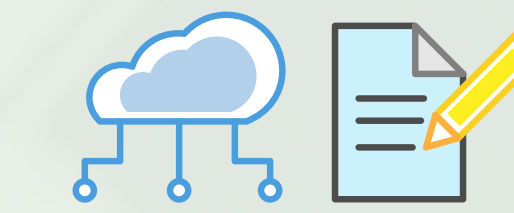


Re-cycle symbol: refers to industrially used water that is recycled or re-used and cleaned for our projects.

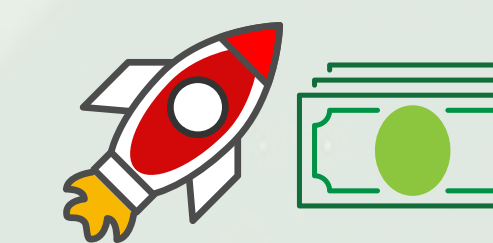


Hydro symbol: refers to any project that generates energy out of flowing water.

PROGRESS



Cloud / Contract: the planning stages and contracts are drawn up and we have fully due diligenced all security matching our criteria.



Rocket / Money: execution of all major contracts, licences and financing has been agreed upon.



Cog Wrench: Construction is in progress.

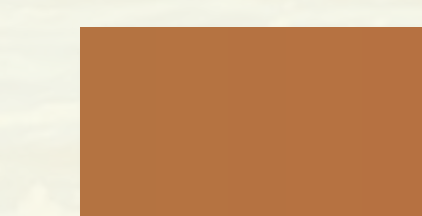


Bar Chart: project is producing cash flows or fully financed and up and running.

COLOUR



Brown-yellow: contains current or past brownfield status combined with extensions or upgrades.



Brown: brownfield projects mid-stage projects that we entered relatively early with a limited or de-risked construction period.

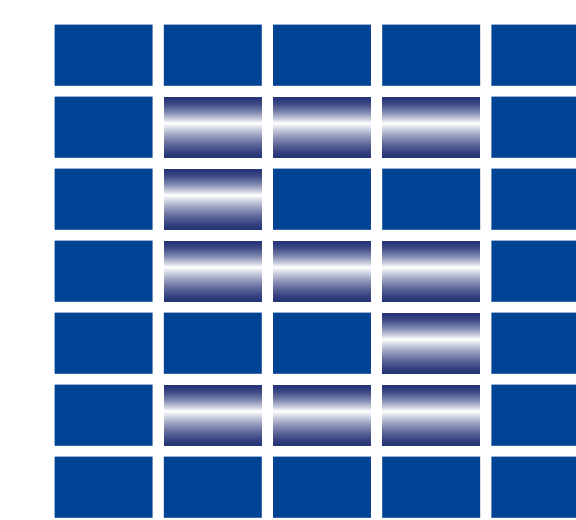


Green: greenfield projects mean that we are an active part since the very beginning of the projects. This is unusual for us and only applies to a fully de-risked contractual situation.

SIGNINA CAPITAL AG

Zurich-based Signina Capital AG was established in 2006. Signina is a full spectrum advisory firm in the water infrastructure sector. The team has more than 100 years of combined industry experience. They have placed in excess of USD 1 billion of capital with the private and public sector into environmentally and commercially strategic water infrastructure assets. It is currently overseeing more than USD 750 million of active water infrastructure assets.

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