



Completion Report

Piloting, optimizing and future-proofing high efficiency heat networks in Kenya (NCF-C9-0274)

Grantee: EA Energy

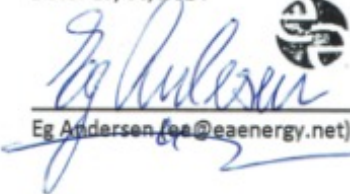
Local Partner(s): Ariya Finergy

Other Partner(s): LOGSTOR

Project start date: 01/11/2020

Project end date: 30/08/2023

Date: 19/06/2024


Eg Andersen (eg@eaenergy.net)



ea energy
Evasvej 3
DK-9000 Aalborg
CVR-nr. 33912544

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1. EXECUTIVE SUMMARY

Eastern Africa energy situation came to our attention from talks with local companies in early 2019. Due to very poor insulation at most process factories in Kenya, the energy loss from the pipe run makes the production expensive, and if the heat source is HFO or diesel, the return of investment is often less than three years and its implications for the environment is negative. There are many process factories in and around Nairobi that could benefit from our technology, pipe design and after sales.

It was against this backdrop that the project partners applied for NCF financing to pilot high efficiency heat networks in Kenya. The application was successful, and we initiated the project in late 2020, and in May 2022 we reached a key milestone when we commissioned our first installment at powerplant (IberAfrica) in Nairobi.

It is key for our market approach to operate with a local project developer like Ariya Finergy to handle costs, transport and certified installation of the pipe system, and we managed the certification by sending a supervisor to Kenya to train and certify eight welders. They did the installation at IberAfrica with more than 600 meters of pipes, six meters up in the air in less than half the time we expected. Now the customer is saving more than 40% of energy in his pipe system that will last for plus 50 years without significant heat loss and maintenance costs.

However the investment is mostly considered as a capital investment, and the decision process is very long in Kenya and often must be approved by the company board. We were not fully aware of this complication, and even if we pushed hard with many follow up meetings, documentation and heat loss calculations, the response was very rigid and long. Ultimately, this mean that we were not able to make installations at three factories as originally intended.

Furthermore, the war in Ukraine with fluctuation of transport and raw material costs, turned our business approach upside down. The investment horizon was suddenly prolonged, and even our two most promising projects did not mature before the end of the project deadline in August 2023.

However, the future of the project looks promising. Through Ariya, who are locally based, we have established good connections with potential customers, installers and sales organizations. This, coupled with the presence of Logstor Industry Export Division, we have a solid foundation to continue our market development in Kenya and the Eastern Africa.

2. ACHIEVEMENT OF RESULTS

2.1 Achievement of outcomes and outputs

Expected outcomes and outputs	Indicator(s):	Achievement of outcomes and outputs:
<i>Outcome 1: Demonstrated the viability of an heating energy performance leasing solution for Kenyan C&I sector, utilising the world's leading pre-insulated and fabricated pipework, leading to a reduction in primary energy consumption in the sector.</i>	1) GHG emission reductions (262t of tonnes of CO ₂ e)	1) At project completion, the installation at IberAfrica had resulted in reduction totaling 299t of CO ₂ .
<i>Output 1.1: Detailed designs for highest potential clients in order to demonstrate the viability of the solution</i>	1) Feasibility and detailed design completed (3)	1) Activity carried out at three companies: IberAfrica, SpinKnit, and Renetech.
<i>Output 1.2: Technology and approach demonstrated through installation at complex industrial case studies, with application across different industrial sectors.</i>	1) Systems manufactured, shipped and installed (3) 2) Onboarded customers (3)	1) For the IberAfrica project, all pipe material was produced in Denmark and shipped to Kenya for a fast and reliable certified installation at the customer. The two other projects did not formalise an agreement before project closure. 2) One customer, IberAfrica, was onboarded.
<i>Output 1.2: Heating energy performance leasing solutions are ready for commercialization and scale-up in Kenya, through capacity building, proof and verification, and commercialization.</i>	1) Consultants and installers trained (15) 2) Amount of funds leveraged (EUR 3 million) 3) Delivery/enactment of business development/scale-up plan (1)	1) Seven consultants were product- and sales trained and eight installers were certified for Logstor installations. 2) The project did not manage to leverage additional funding for scale up before project closure. 3) Detailed report was delivered to clarify the market opportunities for retrofitting of the process industry. The report demonstrates many opportunities in the market for pre insulated pipe systems within the process industry in Kenya to cover the heat demand in a sustainable way.

2.2 Deviations from the planned outputs and activities

We only managed to complete one of the three intended installations. It was not possible to deliver the last two projects, Spin Knit (leading textile company in Kenya) and Renetech (food process for school kitchens in Kenya), within the NCF time frame. Both projects are still being worked on, but we do not expect a final decision before 2nd quarter of 2024 for any of them.

The main reason is that companies look at new projects from a CAPEX point of view, and approvals for financing will need to go through the companies' boards. So far we have experienced significant delays when the project idea reaches this final stages.

2.3 Achievement of NCF indicators

NCF core indicator	Results (quantitative)		Clarifications/Means of verification	
Number of beneficiaries reached	women	0	Seven consultants were product- and sales trained, and eight installers were certified for Logstor installations.	
	men	15		
	total	15		
Number of people with increased resilience to climate change	women	-		
	men	-		
	total	-		
Number of people with improved livelihoods	women	-		
	men	-		
	total	-		
New decent jobs created	full-time	women	-	One Ariya sales manager was hired to help with technical sales and fertilizing the industrial process market in and around Nairobi along with solar thermal projects.
		men	-	
		total	-	
	part-time	women	-	
		men	1	
		total	1	
	seasonal	women	-	
		men	-	
		total	-	

3. CLIMATE CHANGE

There has been a clear impact on the straight savings from the investment of pre-insulated pipes with a better lambda value compared to existing mineral wool (roughly 40% when it comes to insulation potential). At the IberAfrica, the numbers were even more staggering due to the fact, that there were other variables to take into the equation like wind velocity, humidity and the state of existing insulation. Then the heat source and running hours often improved our business case, since HFO and diesel used to run operations daily is very normal in Kenya within the food and beverage producers.

The performance of the complete installation (both pipes and solar thermal absorbers) at IberAfrica was closely monitored and by project completion GHG savings of 299 tons was measured compared to baseline.

Via the successful implementation of the pre-insulated piping project at IberAfrica the project implementers had the opportunity to highlight an understudied method of saving costs and reducing carbon emissions from unnecessary burning of carbon fuels. The implementers were able to produce a [public report](#) and to disseminate the results for further awareness across many industry experts and followers. It is expected that this will create follow-on awareness and appetite for new projects with pre-insulated pipes in the industry.

It is also worth noting, that when substitution to pre-insulated pipes (both the steel pipe itself and the insulation) the scrap from the existing pipe often results in waste. This must be either reused or carefully brought to a depot for waste. In our installation guideline this is outlined for the customers with clear directions on how to treat the waste materials.

4. DEVELOPMENT IMPACTS AND CROSS-CUTTING ISSUES

The outcome of the implementation of Logstor products has resulted in one more engineer working for Ariya, and 15 people was trained over a period of six months of installation. Eight installers have also been certified by Logstor, and are now able to install pipes, bends, joints and – in general – provide support for future projects of pre-insulated pipes, for heat steam and cooling, not only in Kenya but in Eastern Africa.

Local installers of Logstor pipe systems.

Three additional firms, that regularly employ people and carry out projects involved in piping, heat, steam, and insulation were exposed to the benefits of proper isolation methods and maintenance. Further skills of their employees, technicians and tradesmen were enhanced by attaining levels of certification and training from experts in the new technique.

5. ASSESSMENT OF THE RESULTS AND IMPACTS OF THE PROJECT

5.1 Relevance

Understanding of the availability of savings from reduction of energy (heat) losses was close to non-existing prior to the project's start. This project aided a change from a narrow focus on reducing electricity consumption to equally viewing heat consumption as an additional way of impacting carbon and cost reductions.

The results were disseminated to a wide audience of policymakers, project implementers, trades people, potential future clients and industry experts.

Not only is energy efficiency most relevant in Kenya so is the case for the rest of the region and continent. On the primary energy side like hydro, geothermal, wind and solar, there are many initiatives going on to produce the energy with a smaller carbon footprint. But also on the secondary side – transport of steam in the process industry – the efficiency, from using pre insulated quality pipes with a long performance time, is on the agenda. Less waste, less maintenance and less danger from scolding is now a KPI for the contractors and designers in Kenya and the broader region.

The product advantages that Ariya and Logstor offer also resulted in a solid interest from public school kitchens (Renetech project). In Kenya alone there are more than 11.000 school kitchens where they cook food for the students and staff under open fire with CO2 emission and health issues from NOx. This is currently being addressed by Kenyan authorities who are seeking funding and partners to address these issues across sector in Kenya.

Solar thermal and pre insulated pipes can reduce the CO2 emissions and improve these health issues. The Renetech project in pipeline could be a viable solution where Logstor's high quality products are coupled with Ariya's installation and project management skills.

5.2 Effectiveness

The whole NCF project was only partial successful by achieving one of three intended installations. This project however was effectively able to show proof of results to industry groups as IberAfrica is a high-profile industry. During the lifetime of the project, Ariya Finergy has marketed this project directly to 140 clients and has built a pipeline of potential new entry points.

It was very satisfactory for the project team to help eight welding installers from three different companies being certified with Logstor pipe certificates through local training from Logstor Academy as well as training seven persons in product- and sales advantages at Ariya HQ with documentation and product samples. We now

have local people that can approach the huge potential of food and beverage factories both within heating, steaming and cooling of process piping.

Ariya and Logstor are ready for scaling up the delivery of pipes for the Kenyan market, and this is a part of both companies' business plan for not only Kenya but all the countries in the EAC.

5.3 Efficiency

The installation at IberAfrica was delivered timely and within budget and scope. We kept the costs within the budget through local and focused project management, detailed material planning to avoid waste, and dedicated efforts to control and bring down the installation time. Based on this, the installation has been economically positive for the client, and this is overall a testimony that the project partners can deliver a financially attractive solution if the client and work environment is conducive.

However, the overall NCF project was extended with 10 months due to COVID-19 and the war in Ukraine. Both resulting in fewer visits to potential clients and it also made it difficult to send out attractive offers that could take the fluctuating of raw material prices into the equation. This 10-month extension provided us with additional time to work on additional projects, but, unfortunately, none of these reached agreement stage before the end date of the project.

In relation to the overall project budget, we did not manage to execute this as anticipated, which has led to an underspend. The main reason behind this is under implementation of activities. Originally, we intended to pilot our solution at three factories, but only managed to deliver one.

5.4 Impact

The impact of heat losses on savings and carbon footprint were at extremely low levels prior to the project start. We feel that a well implemented project at a high-profile client (IberAfrica), a public dissemination plan, numerous visits to the site by interested parties, and directly engaging 140 clients has had a positive effect in raising the awareness of the high cost and large carbon emissions for a company when identifying solutions to their high heat losses due to old, poorly maintained, faulty existing insulation.

5.5 Sustainability

The arguments presented in 5.3 and 5.4 demonstrate our high degree of confidence that we have made a positive difference in the awareness around high costs and large carbon emissions that occur with poorly maintained insulation on pipes. We will continue to take clients to the existing, successful, operating project site and continue to message the available savings from pre-insulated pipes.

It is our expectation at IberAfrica is also sustainable in the long run. The company's management has access to an online information center where they can track savings, which should serve as a strong motivation to maintain the system. Also, there is a maintenance contract in place with Ariya to ensure the performance in the years to come.

Logstor, Ariya and Ea Energy will continue our partnership through close contact regarding the IberAfrica project, but also to continue to pursue the many offers given to the process industry in and around Nairobi. In the future we will also look into the potential market for mining, geothermal and cooling for the process industry. We will also be open to make other partnerships within the horizontal value chain to be able to supply the customers with an overall solution for both the primary and secondary side of the energy production at the factories.

5.6 Coherence

The compatibility of pre-insulated pipes with clients in the tea sector, textiles sector, manufacturing, food and beverage is very high. Ariya continues to engage these clients in their Solar PV and thermal activities, and this messaging will continue.

Further, the compatibility of pre-insulated pipes along with solar thermal projects is essential to the success of these types of installation. Ariya will continue to expound the necessity of pre-insulated pipes in their partnership with Swedish solar thermal company, Absolicon, who are currently developing solutions for the Kenyan market.

6. INNOVATION

The project introduced pre-insulated piping to East Africa for the first time. This is a market with many industries that highly depend upon large amounts of heat. To implement this innovation, three piping and insulation companies were trained on new welding and implementation techniques, as well the overall design process with Logstor aiding a higher degree of pipe installation methods to these three local companies (e.g. pipe expansion design via u-joints was heavily discussed during the design process).

7. POTENTIAL FOR SCALING UP AND FOLLOW-UP INVESTMENTS

Overall, the interest in the energy journey of the 140 potential clients we spoke to are still focused on electricity. This is likely because the electricity supply is constantly interrupted and is itself more expensive (10x on a kW/h basis) than heat.

Ariya is committed to continue to identify energy savings to all their clients and continue their activities in sales and marketing. In extension of the NCF engagement, capacities on energy savings have been built and a successful demonstration project at IberAfrica is available for demonstration.

We are considering scale up and follow-up investments through financing mechanisms such as the one offered through NCF. Currently, we have focused our attention on the 'Industrial Cleantech Program' and 'EEP Africa' and considering applying for partnership and funding. Additionally, we are also keeping an eye on the different support opportunities through various EU modalities, including the Global Gateway for Kenya and the AEGEI investment package.

8. RISKS

The main risk that we face can be taken from the SpinKnit example. The market in our region is hesitant to new investments (of any sort) and new technologies. Therefore, the sales cycle will remain slow, unpredictable, and irrational from a financial point of view for the foreseeable future.

Projects such as this NCF funded endeavor contributes to changing these norms, and we consider this project as a vital first step in moving the needle towards roll-out of heat saving technologies.

9. MONITORING AND EVALUATION

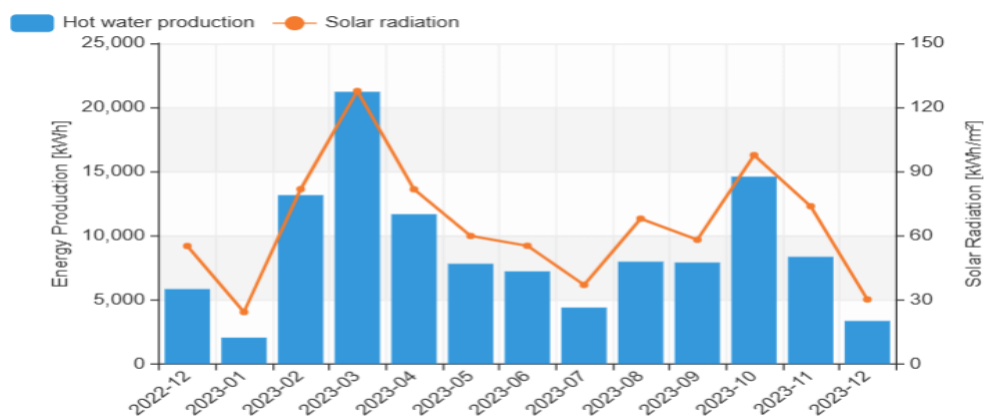
The project has been clearly defined with milestones, deliverables, and indicators. Those has been monitored inside the requirement of an NCF grant.

Dedicated monitoring efforts have also been carried out at the IberAfrica installation. Specifically, the heat reduction of the solar thermal project, including temperatures of the liquid within the piping, continues to be monitored at multiple locations which feeds into ongoing performance reporting available to the client and Ariya. The client is satisfied with the overall project implementation and the profit and savings derived from it's implementation. Further details on these reports are annexed to this report and snip from the performance dashboard is inserted below.

Monthly energy production



How much energy has the system produced the last 12 months?



It has been very uplifting to see the performance of the pipe installation itself. The product advantages, not only the savings from the insulation but also the fast installation and rigid performance showed us, that the product system works as expected, when we ensure that all installers are trained by the Logstor Academy and certified before they do the installation.

10. LESSONS LEARNT

The IberAfrica project has been a very good example of introducing high-end insulation products to a new market, and we consider the achieved market development as an initial success for Logstor and Ariya.

Logstor has realised that longer processes for project maturation is required. There is definitely a large potential for the products, but the dialogue with clients and follow up is very different compared to Northern Europe due cultural difference. Furthermore, the general knowledge in the market about energy savings in industrial pipe runs is low, and this is an area where Logstor needs to be proactive.

Ariya has learned that the impact of high energy saving pipes is a strong value point in their business platform. The integration of the product into IberAfrica project required learning of new skills. Firstly, they learned the importance of working across engineering groups (solar thermal producer, Logstor, installers, the customer and their own technical department) as well as financing and controlling/transport.

We have learned a lot about not only dealing with another culture, but also to adjust to a business culture that any many ways differ from the Danish one. We also learned through the process that people deal with people, and that we should have planned more local meeting both here in Denmark but also in Kenya.

Overall, our learnings have been around the sales cycle of heat saving technologies and the slow uptake of the 140 clients that are facing economic losses at their factories daily.

We always consider project financing as an option for these clients. However, all project financing from different sources (DFI, bank, impact investing fund) always reaches the end-client at +16% making financing unjustifiable for these projects (they are profitable but not +16% profitable). The availability of decent rates within the “impact investing” community for end-clients is to a large extent a falsehood in practical terms, despite the popularity of such vehicles in development conferences etc.

Potentially, another avenue for the project implementors would have been to approach pipe manufacturers in East Africa for a transfer of technology for them to produce a pre-insulated pipe. However, this would not have been in LOGSTOR’s interest as in all likelihood the local manufacturers would have eventually identified a cheaper, lesser version of LOGSTOR’s solution and produced that. The market is focused on lowest installed capex equipment, and that makes a higher quality, lower OPEX product such as Logstor pre-insulated pipes a much harder sell.

11. OUTREACH

The project has produced a [video](#) and a [pamphlet](#) that is made available at all tradeshows in the region. Ariya regularly interacts with 50+ industrial clients per year in the beverage, textiles, manufacturing, tea, and food sector, and regularly discuss heat losses as well as electricity costs in all these discussions.

Ariya now has offices in Uganda and Tanzania, so the messaging continuously expands with potential new clients in these countries.

Ariya continues to take new clients to the IberAfrica project (10+ per year) and the project benefits from the pre insulated pipes continue to be exhibited and discussed with potential industrial clients. The benefits of reducing their heat losses in piping is expounded from both financial and environmental avenues.

12. FINANCIAL SUMMARY

Table 1. Project financing per partner

Expenditures, EUR	NCF	Grantee	Total
EA Energy	40.513	78.240	118.753
Logstor	137.192	7.001	144.193
Ariya Finergy	74.436	18.429	92.865
Total	252.141	103.671	355.812

13. CONCLUSIONS AND RECOMMENDATIONS

It has been quite a steep learning curve to conduct the production and delivery of pre insulated pipes from LOGSTOR in northern Denmark, to ensure the right level of information and communication, to oversee the impact of products and aftersales with potential new customers as well as IberAfrica. But it has also been very fruitful to see the impact of high-end quality pipe runs exposed to the process industry in and around Kenya.

Ariya Finergy and LOGSTOR can surely benefit from the market data that has been collected for future cooperation between them. Kenya can be the set off to other markets in the EAC within energy solutions that will benefit companies is keeping a stronghold when going green while leaving a smaller CO2 footprint.

Annex 1 *Project completion fact sheet*

Project Name:						
Project no.	C9-0274					
Country:	Kenya	Financing:				
		EUR	%			
Nordic Partner:	EA Energy	78.240	22%			
Local Partner:	Ariya Finergy	18.429	5%			
Other Partner:	LOGSTOR	7.001	2%			
	NCF grant disbursed	252.141	71%			
	Total		100%			
Classification:	Mitigation					
Project cycle:	Project start date: 01/11/2020 Original closing date: 31/10/2022 Actual closing date: 30/08/2022					
Short project description:	The project demonstrated the viability of an integrated and holistic energy leasing service model to distribute the world's leading pre-insulated pipework solution with the objective to reduce energy costs and emissions from commercial and industrial (C&I) heat networks in Kenya.					
Project performance:	Expected Outcomes and Outputs		Achieved	End-of-project status		
	GHG emission reductions		Yes	Target met at IberAfrica		
	Feasibility and detailed design completed		Yes	At three sites		
	Systems manufactured, shipped and installed		Partially	One system installed		
	Onboarded customers		Partially	One onboarded		
	Consultants and installers trained		Yes	15 Installers trained		
	Amount of funds leveraged		No	Not achieved		
	Delivery/enactment of business development/scale-up plan		Yes	Plan has been published		
Climate change outcomes and impacts:	By the reduction in heat production due to better insulation comes reduction in NOX particles and CO2 emission. Thereby air pollution is reducing and less carbon footprint is achieved. Ultimately, better livelihood for all living beings in and around the production facility.					
Development outcomes and impacts:	All together 15 people have now gone through extensive sales- and installation training, after Logstor and Ea Energy secured the transfer of technology of the pre insulated pipe idea to local installers and engineering companies. This provides new job employment opportunities for trained people as the solution provided under this project continues its roll out.					
NCF core indicators	NCF core indicator		Results (quantitative)		Clarifications/Means of verification	
	Number of beneficiaries reached	women	-			Seven consultants were product- and sales trained and eight installers were certified for Logstor installations.
		men	15			
		total	14			
	Number of people with increased resilience to climate change	women				
		men				
		total				
	Number of people with improved livelihoods	women				
		men				
		total				
	New decent jobs created	full-time	women		One Ariya sales manager was hired to help with technical sales and fertilizing the Industrial process market in and around Nairobi along with solar thermal projects.	
			men	1		
			total	1		
part-time		women				
		men				
		total				
seasonal		women				
		men				
		total	15			

Annex 2 Results Framework

See table on page 4.

Annex 3 Pictures



Logstor Academy Instructor Mr. Morten Chemnitz showing how to prepare the installation of a Logstor shrink joint at Iber Africa. Picture by Eg Andersen



Inspection of heat collector at Iber Africa with NCF, Ariya, IA management and EA Energy. Picture by Eg Andersen



Logstor Industry pipe run 6 meters up underneath the CSP throughs. Installed 50% faster than expected. Picture by Eg Andersen



Eight installers from three different companies being trained in installation of fittings, pipes and joints at the training facility. Picture by Eg Andersen



Ariyya technician Leonard Achochi, QUAD installer manager, Logstor Academy Morten Chemnitz and Fraser installer manager. Picture by Tommy Lorentzen



Theory training session at IberAfrica powerplant training center. Picture by Eg Andersen

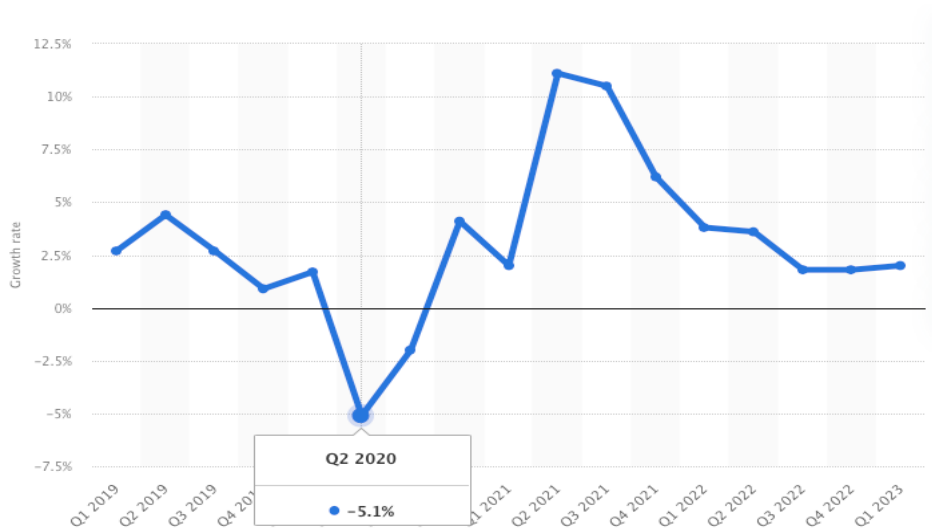


Inspection at Spin Knit factory in Nakuru with SN Technical Director and QUAD management. Picture by Troy Barrie

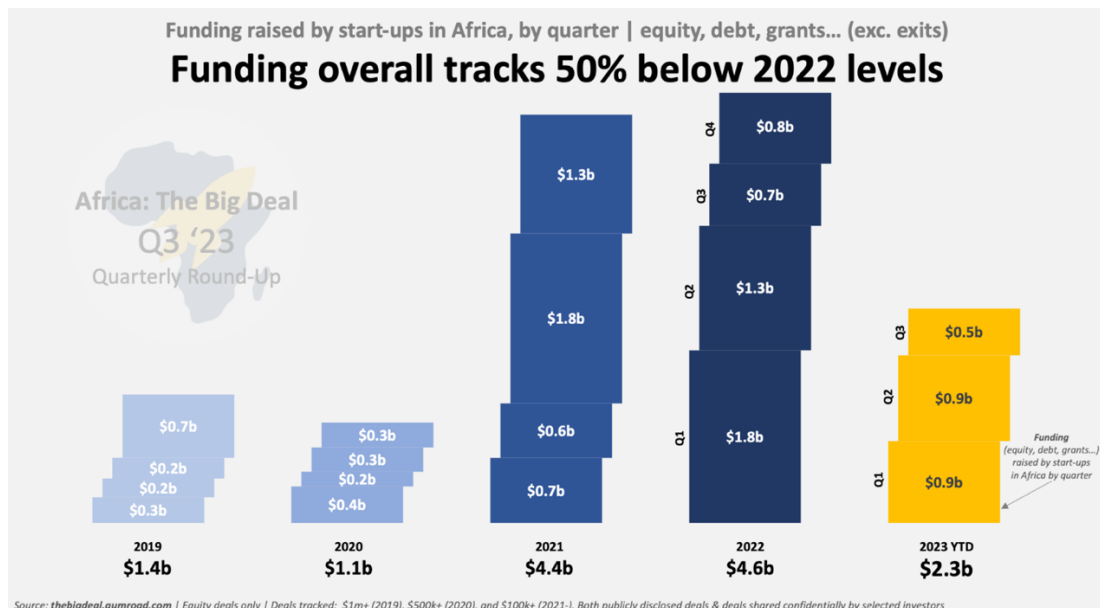


Inspection at Spin Knit factory in Nakuru with SN Technical Director and QUAD management. Picture by Leonard Akohi

Quarterly GDP for Kenya



Funding problems in Kenya



Annex 4 Other supplementary deliverables/documentation/links

Case story from IberAfrica



Ariya Finergy is a Nairobi-based EPC and technology company specialising in provision of seamless integration of power systems to commercial and industrial (C&I) clients across East Africa. We provide environment-friendly energy services that ensure businesses and individuals have access to economically attractive solutions that sustainably impact livelihoods.

Contact Us

3rd Floor, Kalamu House
off Grevillea Grove, Westlands

P.O. Box 525 – 00606,
Nairobi, Kenya

- +254 700 784330
- +254 786 784330
- info@ariyafinergy.com

Social Media



1 Business Case: Solar Thermal at IberAfrica Power Ltd

IberAfrica is one of Kenya's leading Independent Power Producers (IPPs) with a capacity of 52.5MW. They are a Medium Speed Diesel Engine Power Plant located in Nairobi South for the power generation and supply of electricity to the national grid for use in households and industries in Kenya.



2 Power Challenge

IberAfrica faced a notable challenge as they consumed substantial electricity to maintain the warmth of Heavy Fuel Oil during the idle hours of their HFO engines. The imperative to minimise operational costs became evident in light of this energy-intensive process. They therefore sought out a sustainable solution to not only mitigate electricity consumption but also align with their corporate sustainability goals.

3 The Solution





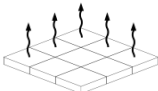

In partnership with Absolicon and Logstor, Ariya Finergy delivered a 330 m² aperture area solar thermal field to IberAfrica Power (E.A.) Limited. The system heats water which is then used to heat HFO, using clean, green energy from the sun. This project is the first of its kind in East Africa. The solar thermal field is elevated at 5.5m from the ground to maximise on the available space and the irradiation on the installation.

To ensure a minimum of energy loss from the hot water product in the collectors to the storage tank, Ariya used pre-insulated pipes from Kingspan Logstor, a world leading industrial process pipe supplier. The pipes used for transporting water are pre-insulated polyurethane(PUR) foam and PE-jacket from Logstor. These pipes provide 60-80% savings from poor installation per year.



4 Impact and Key Figures

The following variables have been used to show savings from heat loss when using Logstor pre-insulated pipes:

	Total pipe length	: 656 metres
	Running Hours	: 1650
	Ambient Temperature	: 20 °C
	Wind Velocity	: 2 m/s
	Energy loss per year (with poor insulation)	: 43.5MW/h
	Energy loss per year (with Logstor PUR insulation)	: 8.3MW/h

www.ariyafinergy.com



Annex 5 Impact story

We all were excited to be approved by NCF and working under the title “Piloting, optimizing and future-proofing high efficiency heat networks in Kenya”.

Ea Energy had been to the EAC some years earlier, and could see the huge need for a better energy solution in a market that was growing rapidly in especially Kenya within the process industry.

Bilateral talks were initiated between Logstor and Ariya, and with the granting from NCF going through, the way forward was clear. The feasibility studies were quite solid, and adding to the equation that the GDP was amongst the highest in SSA, and cost of fossil energy was going up, we started to work on a good business case. And we found it!

IberAfrica, a grid energy company in Nairobi, was working on a alternative to heating up the oil on the plant, and the Logstor pre insulated pipes were chosen for this. We had juggle new hardware, engineering and installation skills on one side, and production, transport logistics and financing on the other side. Not an easy job since we had not tried to combine any of these in one step.

But the project went very satisfying with delivery on time, quality inspection of pipes and fittings without any errors and a installation for the system by Logstor approved installers faster than expected.

The outcome has turned out very well, and we are ready for new projects within the process pipe industry.

We managed to combine Danish production, international transport and custom, local handling and installation and financing. With support and help from NCF along the way, that should not be underestimated.

Furthermore, we see a lot of possibilities for insulation and installation of pre insulated pipes in a growing market especially when instability in Europe and Middle East has come back to normality and we again can grow in a part of the world that need to bring down Co2 emissions and upscale their production. This future looks bright for the advantages that the Logstor pre insulated pipes can bring to the market.