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HERE THERE IS A FUTURE.

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FROM PIAUÍ TO THE WORLD

Piauí: a state of many futures

Piauí is implementing the **greatest green hydrogen projects of the whole world** – the energy of the future.

Piauí is among the five Brazilian states with a **higher proportion of students enrolled in full-time schools** – the education of the future.

Piauí is a reference in **telemedicine in the public healthcare system** – the health of the future.

Piauí is investing in technology and services to be **the most digital state of Brazil** – the governance of the future.

Piauí is growing above the Northeastern and Brazilian average and is among the first in the country in terms of job creation.

That's proof we are a **state that offers great future** for those who invest and those who work.

InvestePiauí

GOVERNMENT OF PIAUÍ
HERE THERE IS WORK.
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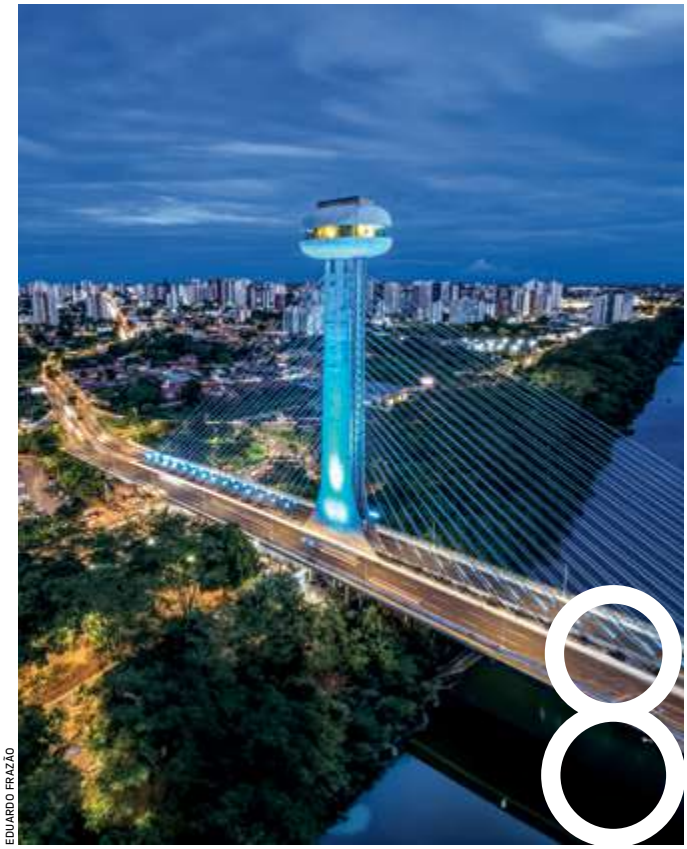

EDUARDO FRAZÃO

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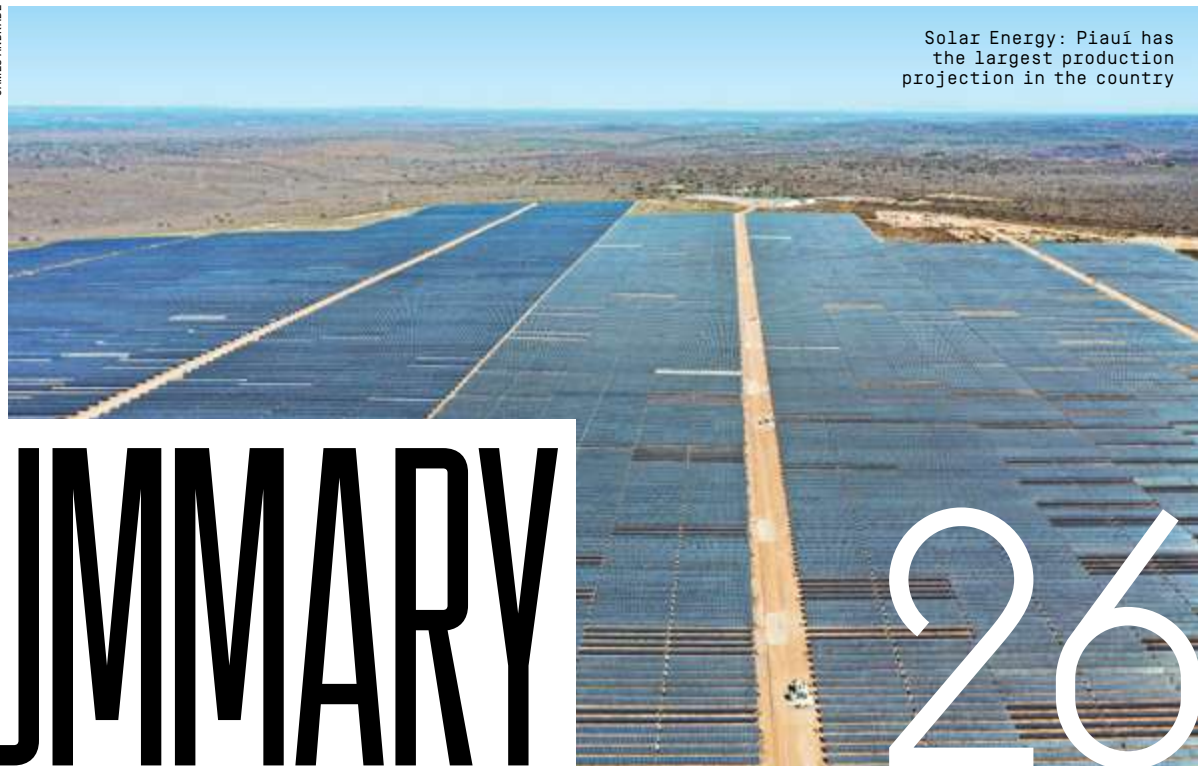
JAMES ANDRADE



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DISCLOSURE

Porto Piauí: first phase of the port complex finished in December, 2023

COVER/ILLUSTRATION: CÁSSIA RORIZ

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THIS SPECIAL AND CUSTOMIZED EDITION WAS PRODUCED BY EXAME LTDA FOR INVESTE PIAUÍ, THE STATE'S AGENCY FOR INVESTMENTS.

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PRINTED AT ESDEVA INDÚSTRIA GRÁFICA LTDA.
Av. Brasil, 1405, Poço Rico, CEP 36020-110, Juiz de Fora, MG

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LEANDRO FONSECA

View of Teresina: Piauí is leaving behind a history of difficulties

The future has arrived for Piauí

A state with a 100% clean energy source and great potential for sustainable growth opens up to the world

Brazil is the country of the future. The aphorism, coined in the 1940s by Austrian author, Stefan Zweig, was born patriotic, but over the years it was succeeded by a complement between reality and cynicism: the problem is that the future never arrived. For some of the country's neediest regions, the future had always seemed even more distant. This is the case of Piauí, a state with 3 million inhabitants and an area in the size of Italy. Located in the heart of the Northeast of Brazil, Piauí has historically ranked as one the last States in terms of Brazil's human development and economic potential. In 1966, Realidade magazine published a report saying that "Piauí exists", contrary to what readers in Rio or São Paulo assumed. This report required a pair of journalists to travel, by jeep, 2,000 kilometers across meadows and caatingas, the extremely dry areas of the region. Almost 60 years later, this special edition of EXAME – the most respected business publication in Brazil – shows that the future has finally arrived for Piauí.

In the past few weeks, a team of EXAME journalists traveled hundreds of kilometers to find a quite different scenario to that reported 58 years ago. The state that never left the past now sees itself as the gateway to a future that combines economic development with sustainability. In a world that invests trillions of dollars to modernize energy sources, Piauí will present, in 2024, a 100% clean energy source — producing six times the energy needed for its own consumption. In this special edition of EXAME, we are showing farms that are champions of productivity, solar and wind energy parks among the most modern in the world, new roads and ports, and educational projects that place the state among the national education highlights. In addition, it has an enormous potential for growth in green hydrogen, the most promising energy source for the future.

Last year, representatives from Piauí had more than 320 international agendas meeetings to connect the state with the world. Expanding these interactions even further and speeding up the attraction of investments to the state is a priority for the coming years of Rafael Fonteles' administration. This edition, produced in partnership with the government of Piauí, shows the size of such potential. The number of challenges is still enormous for a state that continues to live with social and economic indicators far from the most developed regions of Brazil and the world. This edition also addresses these issues and highlights projects that aim to continue reducing those gaps. For a State that until recently was known only for its challenges, the size of opportunities ahead indicates that the future has finally arrived. ●

[RE]INVENTING

EDUARDO FRAZÃO

AGAINST MANY STEREOTYPES — AND SOME PREJUDICES — PIAUÍ HAS STOOD UP. Without the attention of federal governments for decades, infrastructure or obvious comparative economic advantages, the task of generating wealth and seeking a better quality of life for the people who, throughout the 20th century have remained in the shadow of the priorities of other politicians. From 2010 to 2021, the latest data available, the state's Gross Domestic Product grew from 22 billion reais to 64 billion reais in current prices, according to the local Planning State Bureau. This is the most significant economic acceleration in the Northeastern region in the period — one of the poorest in Brazil and where the states are still trying to deal with the losses after years of neglect by poor public management. To some extent, the expansion of Piauí was born modern: with favorable winds and solar irradiation, it is one of the largest generators of renewable energy in Brazil — with still an enormous potential to be explored. It is also being modernized in the countryside, where production has grown by more than 130% in the last decade and is moving towards industrialization. For governor Rafael Fonteles, the State stands out in attracting international investments. "We have enormous potential for sun, wind, water. We have an

PIAUÍ

More and more digitalized, the state moves forward and shows significant social and economic indicators

DANIEL SALLES

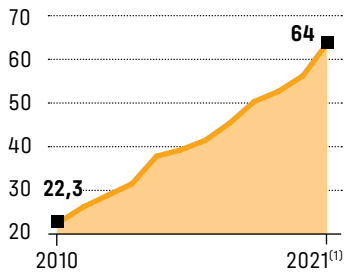
View of Teresina: 100 public services are now offered digitally

Export Processing Zone that reduces investments needed for those industrial plants. And a port under construction. With all these incentives, Federal and State government support, focused on this agenda, there is a lot of attractiveness for investors," says Fonteles in an interview with EXAME. "Piauí will be the greatest green hydrogen producing hub in Latin America — and, who knows, in the world."

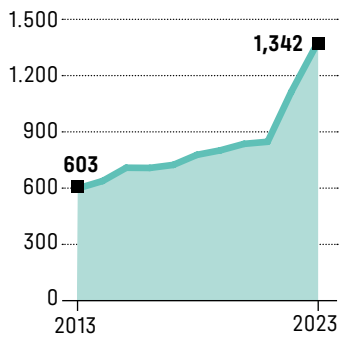
GROWING AND FACING CHALLENGES

Piauí's economy almost tripled from 2010 to 2021, the latest data available, while the state improves its public education

(state GDP, in billions reais)



The state has been growing when it comes to average household income per capita (in reais)



(1) Latest data available in the series.
Source: Piauí Planning Department and IBGE.

The current management wants to reinvent Piauí , with focus on the success of renewable energy and agribusiness as well as by investing in energy transition, innovation, quality education and — obviously — leisure tourism for its beaches and unique archaeological sites in the Americas. An example that seems simple, but reflects this ambition is the Autistic Identification Card issued by Piauí. Until September 2023, families interested in obtaining the document for a relative would have to go to the State Bureau for Inclusion of People with Disabilities (SEID) and undergo lengthy bureaucracy.

To do so, many were forced to leave the house accompanied by the beneficiary person and that usually resulted in enormous stress for everyone. "Look at the size of the nuisance," admits Ellen Gera, CEO of the Piauí Information Technology Company (Etipi). Since September, Piauí has made available a digital version of the same card, that can be requested entirely online. The individual can simply scan the necessary documents, attach them to the Gov.pi Cidadão platform and wait for the process to be analyzed. "In Teresina, 100% of these cards are already issued digitally", says Gera. The document makes identification easier and priority of public and private services, especially in the areas of health, education and social assistance.

DIGITAL ADMINISTRATION

Developed by Etipi, the Gov.pi Cidadão platform is one of the most important brands of the current administration. Launched in August 2023, it offers more than 100 services from more than ten government agencies. Now, the population no longer needs to go to public offices to resolve various problems — from those involving the National Driving License (CNH) to those relating to Motor Vehicle Ownership Tax (IPVA). The platform has an application that can be downloaded, free of charge, on cell phones. "Piauí will not stop offering on-site services," says Etipi's CEO. "With the digitalization of many of them, however, we will be able to give more attention, and with shorter queues, to the portion of the population that does not find it easy to use virtual tools." The State is also concentrating efforts to digitalize services aimed at companies and entrepreneurs of all sizes. Launched in June 2022, the Gov.pi Empresas platform offers 251 digital services. Around one third is related to the Commercial Board of the State of Piauí (Jucepi) and the remainder involves the other seven State organs related to the business world. By 2026, the goal is for all public services to be available digitally to all citizens of the State.

BENCHMARK IN ESTONIA

Estonia was an inspiration for the ongoing digitalization. In that country, considered the most digital on the planet, 99% of public services are available virtually. Piauí was the first state in the Northeast and the second in Brazil to implement the Estonian data sharing technology between government

PIAUÍ WAS THE FIRST STATE IN BRAZIL'S NORTHEAST TO IMPORT A GOVERNMENT DATA SHARING TECHNOLOGY FROM ESTONIA, THE MOST DIGITAL COUNTRY ON THE PLANET

agencies — the renowned X-Road system. In short, it unifies all the digital solutions that State departments have created over the years. "It wouldn't make sense to leave them aside to redesign the entire system from scratch," Gera argues. If digitalization is important to all areas, in healthcare it is literally a matter of life and death. In April 2023, a pilot project of the State's telemedicine program, Piauí Saúde Digital, was launched. About 165 kilometers distant from Teresina, the city of Piripiri was chosen for the testing phase. Until November 2023, the program served 6,450 patients and recorded 8,269 consultations, 4,368 of which were carried out by general practitioners. The others were conducted by professionals from nine specialties — psychology, psychiatry, nutrition, dermatology, gynecology, cardiology, neurology, pediatrics and endocrinology.

In Piripiri's public network, queues for consultations with professionals on this list have been eliminated. And the pilot project involving the city's 31 basic health units, in addition to the Chagas Rodrigues Regional Hospital, resulted in 15,793 medical reports. It is worth noting that the town was granted a Piauí Digital Health unit exclusively for the Indigenous population. In August, the pilot project was expanded to a neighboring town, Lagoa de São Francisco. Currently, 222 towns have already joined the pro-

LEANDRO FONSECA

Piauí School: Teresina is the Brazilian capital with the best public elementary school

SOME SOCIAL INDICATORS HAVE IMPROVED...

Public Education
(national ranking position in high school)

Child mortality rate
(per 1,000 in habitants)

...OTHER INNOVATION INDICATORS

Fastest internet speed in the country, with more than

11,000 kilometers of deployed network

1st Brazilian state to universalize access to **digital health**

(1) Latest available data.
Source: Development Index of Basic Education (Ideb), IBGE e and the State Government of Piauí.

gram. The goal is to offer telemedicine in all 224 towns in Piauí, thus raising the standards of health services offered by the State to another level.

One of the main benefits of the program is disease prevention. With a healthier population, fewer resources are spent and most of the State's health indicators will certainly improve. Currently, Piauí is in 8th place in the ranking of States with the lowest infant mortality rate prepared by IBGE. The most recent edition is from 2020, when the State recorded 13.8 deaths for each 1,000 live births — in 2010, there were 16.8 for each thousand.

There have been advances in other important indicators that cannot hide, however, the enormous challenges that still need to be overcome. IBGE indicates that the average household income per capita in Piauí was 1.342 reais last year. The average income went up from 1,100 reais in 2022, a positive variation of 20%, which ranks the State in first place regarding the increase in average household income per capita among the Northeast states in 2023. In 2013, it was only 603 reais.

Despite the considerable progress, it is still more than 500 reais below the Brazilian average last year, of 1,893 reais. When it comes to public education, there are several reasons to celebrate. In the latest educational ranking of the Basic Education Development Index (Ideb), released in 2021, the state ranked in 9th place — in the previous edition, 2019, it had ranked in 14th. And in 2021, Teresina was appointed by Ideb as the country's capital with the best public elementary education. Determined to universalize full-time education by 2026, the state government promises to allocate 467 million reais this for this purpose.

The goal, by the end of the year, is to expand this model to 351 schools that represent 70% of the state network. According to EXAME, the topic is one of the most important goals of Rafael Fonteles' administration monitoring the work of State Education Secretary Washington Bandeira with a magnifying glass. With a lot of extra workloads, the Department of Education included in the syllabus subjects that go beyond the obvious, such as financial education. The most talked about, and which will be taught this year, is Artificial Intelligence (AI). The result of a partnership with Google *(see mor about this on page 46)*, the discipline will be offered to students enrolled in high school and to the class in the 9th year of elementary school as well. The news is in line with another pillar already set up by this administration in the area: all 640 schools that are part of the Piauí state network offer programming classes.

Last year, Piauí has generated 20,166 formal jobs, a positive

variation of 6.43%, which placed the State in third place in the national ranking and in first among the states in the Northeast. In 2023, it reached 8.1 billion reais in exports, 1.2% more than in 2022. With the sale of soybeans, the most exported raw material, local producers earned around 6.2 billion reais. The second most exported product is corn, followed by soy bran. With a production of 6.5 million tons of grains, the state is the smallest in the Matopiba region— an acronym for Maranhão, Tocantins, Piauí and Bahia, the last Brazilian agricultural frontier. Nevertheless, it is growing at levels much higher than its peers and the Brazilian average over the last 10 years — production went from 2.7 million tons to current supply, according to Conab.

The country that imports the most from Piauí is China, responsible for 62.5% of the total imports. Second place goes to Spain, with 6.03% of exports. A survey by the consulting firm Tendências, requested by EXAME, estimates that the agribusiness GDP in the state has reached 86 billion reais at adjusted prices in 2021 — more than three times the value recorded in 2013.

The natural advantages also extend to mining. A subsidiary of Brazilian Nickel, Piauí Niquel Metal indicates the state's potential is to become a reference in the extraction of essential metals to make the necessary and urgent energy transition that the planet needs. In the town of Capitão Gervásio Oliveira, 540 kilometers from Teresina, the company's nickel plant was acquired from Vale —that gave up the business after buying the Canadian company Icon, already mining ore. Today Piauí Niquel Metal produces 600 tons of the metal per year. With the expansion of the plant scheduled to be opened in 2026, at a cost of 6.2 billion reais, there will be 25,000 tons per year. Enough to produce up to 800,000 batteries for electric cars.

Natural wealth naturally can only go so far. Logistics, infrastructure and, above all, simplified processes that make undertakings easier are extremely necessary. One of these initiatives was born in 2022, the Parnaíba Export Processing Zone (ZPE). It stretches over 313 hectares in the town of Parnaíba, 340 kilometers from Teresina — where there is a project under discussion to add another 311 hectares. Zones of this type are industrial districts in which companies interested in prioritizing the foreign market can set up themselves free of taxes.

LEANDRO FONSECA

Only two companies already operate in the Piauí ZPE. One produces ecological wood from vegetable waste and the other operates in the carnauba wax segment. Last year, four more received clearance to settle in the district and another 12 are waiting for the green light. In July, it was announced that the next companies to set up at the ZPE will invest a combined amount 156.9 million reais, and will generate 281 jobs — they produce honey, cashew nuts, cosmetics and agricultural tractors.

The news that two giants in the green hydrogen sector, European companies Green Energy Park and Solatio, will set up operations in the district spread around the world. Together, they promise to inject 200 billion reais over a period of ten years and ge-

TWO GIANTS IN THE GREEN HYDROGEN SECTOR, GREEN ENERGY AND SOLATIO, PROMISE TO INJECT 200 BILLION REAIS AND GENERATE 20,000 JOBS IN PIAUÍ IN THE NEXT YEARS

Teresina Shopping Mall: income increase leads to more business opportunities

INVESTIMENTS ON THE RISE

Expansion has attracted more investments in strategic areas

156,9 MILLION REAIS
This is the contribution that the coming companies will make to the Piauí ZPE

467 MILLION REAIS
Is the amount invested by the Department of Education in 2024 to expand full-time education

986,5 MILLION REAIS
Represent federal investments directed to Piauí in 2023

2,7 BILLION REAIS
Were invested by the state in 2023

6,2 BILLION REAIS
Is how much Piauí Níquel Metal is planning to invest in its new plant

200 BILLION REAIS
Total estimated investment by Green Energy Park and Solatio in green hydrogen in the coming decades in Piauí

Source: State Government of Piauí.

nerate 20,000 jobs *(further details on page 26)*. "Piauí started to attract major global players," says Álvaro Nolleto, CEO of ZPE. "And this is because the state, in recent years, has become more favorable for opening new businesses". He adds, however, that the district is also open to smaller ventures. There are small and medium-sized companies about to set up in the region. A group of 16 startups are already operating in the so-called ZPE technological subdistrict, the first of its kind in Brazil. In the field of innovation, a fundamental axis of what the current administration wants to project for the future, Piauí has 310 startups, according to Sebrae's mapping conducted last year — 34% more than recorded in 2022. To encourage the innovation ecosystem , the government created, in 2023, the Startup Piauí whose goal is helping to create 300 new startups by 2026.

That is no small feat. Just as it is little ambitious to have a plan to reinvent a state that seems distant in the collective imagination of Brazil — and whose name many foreigners struggle to pronounce. But, as Bart Biebuyck, CEO of Green Energy Park, says, be it known or not, Piauí must impose itself through facts — and the economic viability of emerging technologies, such as green hydrogen. "Basically, Piauí is the best place on the globe to invest and produce. It is probably the most affordable hydrogen in the world", says Biebuyck. For the current administration, it is a remarkable thing. It is much more sustainable to reinvent what really exists than to sell empty promises of a promising future. As always, it will be up to Piauí — with the help of investors who understand the advantages shown in the State — to show that it will be successful. ●

LEANDRO FONSECA

Insolo Farm: the state exported 8.1 billion reais in 2023, with soy and corn in the spotlight

RAFAEL FONTELES

GREEN ENERGY AND DIGITAL TRANSFORMATION ARE PRIORITY AGENDAS FOR PIAUÍ

RAFAEL BALAGO

PHOTO: LEANDRO FONSECA

Piauí did not benefit from oil reserves, but from sun, wind and water. With these three elements, green hydrogen can be generated, one of the main bets of the clean energy segment to face the necessary energy transition in the coming years — and that should generate a billion-dollar market. "The State Government is completely focused on this agenda. It is our priority", says Governor Rafael Fonteles (PT). Fonteles, a 38 years old politician who took office in 2023, made this issue his priority. The effort has already yielded results: in December, a project to create a green hydrogen park in the State was announced that could be the largest built in the world ever and is to obtain resources from an European Union program. The bloc is racing to find ways to reduce its pollutant emissions. In practice, green hydrogen serves as a means of transporting clean energy, such as hydroelectric, solar and wind power, over long distances. The Governor received EXAME for an interview at the Karnak Palace, in Teresina, and also talked about digital transformation plans, actions to facilitate agribusiness logistics, the strategy to attract foreign investment and the effects of brazilian tax reform in the State.

Piauí has had many clean energy projects over the last 15 years. What are the plans in this area?

We will make great use of this new era of renewable energy, especially green hydrogen. We have plenty of sun, wind and water. We have an Export Processing Zone that reduces the costs required for these industrial plants, as well as a port under construction. With all these incentives, Federal and State government support, all focused on this agenda, there is a lot of attractiveness for investors. Piauí will be the major green hydrogen producing hub in Latin America — and maybe, in the

In an interview, Rafael Fonteles, Governor of Piauí, breaks down projects that connect Piauí to the world, such as the green hydrogen park, the new corn ethanol plant and priorities for economic development.

world. This is the Government's priority agenda. I've already held several meetings in Europe in cities like Lisbon, Berlin, and Brussels to present our plan to investors. I have also visited several other countries, such as Japan, South Korea, China, the United States, India, Singapore and Australia. The State of Piauí must connect to the world, especially to countries at the technological forefront of this industry or those who will become consumers.

And how are the ethanol projects going?

Piauí is within Matopiba, Brazil's last agricultural frontier. Agriculture represents a lot of development, but when it moves to the agribusiness factories phase it will bring more employment and income opportunities to our people and that is what interests us the most. We have created many agendas in Brazil to attract investors to biofuels and meatpacking plants. We have potential in animal protein. We have already laid the cornerstone for a beef and goat slaughterhouse. Soon, we will launch a poultry refrigerator. In biofuels, we have a biodiesel plant in Floriano, a soybean crusher in Uruçuí and there is a natural tendency to invest in corn ethanol. We have already defined the place for the plant and construction will begin in June. One of the largest grain producers in the region partnered with businesspeople from Mato Grosso who have the expertise. It's a perfect match. The first step is to be self-sufficient in production. We have a sugarcane ethanol plant in the north of the State and will have a corn ethanol plant — and there is room for others. Within Matopiba, the closest place to the capitals of the Northeast is this region of Piauí. The geographical

Karnak Palace, in Teresina: in addition to green energy, the government of Piauí wants to

LEANDRO FONSECA

transform agriculture, focusing on agroindustry

position favors ventures to supply ethanol to the region's metropolitan areas.

Still on agriculture, there is this issue of logistics. How has the State sought to improve the flow of production?

We are making huge investments in existing highways to restore them and in new highways, such as the Transcerrados Road. There is also the PI-247, being completely restored, and the PI-392, with a section already completed and another one in progress. We managed to place the BR-330 within the PAC [infrastructure investment plan] and we will have the entire soybean ring area fully completed in a short time. We want to advance the Luís Correia port project. The cargo currently exported from Piauí goes through the port of Itaqui, in São Luís do Maranhão, but then will be exported through the port of Luís Correia in Piauí, via road, as it is today, but also via waterway. All rivers in the state flow into the Parnaíba. In the past, this river was navigable, and we have advanced studies for a grain waterway operation. It will be a much cheaper and environmentally sustainable path that will protect the river and its banks.

Is there a scheduled date for the expansion of the Luís Correia Port?

In less than six months, we have placed the draught in the range of seven to nine meters, with an investment of 62 million reais. We are bidding on the part to increase this draught to 11 meters. This would allow for 50,000-ton ships. The stage is already planned to reach 14 meters, which is ideal for ships of 100,000 tons or even larger, focused on the grain and iron ore agenda in the northern region of Piauí. There is already considerable iron ore extraction in Piripiri, and the hydrogen project is coming. So, there would be three large terminals: a bulk terminal, an ore terminal and a green fuel terminal. The fishing terminal will be opened this semester, for a fish canning industry. By the end of next year, the grain port could be operational, for ships weighing 50,000 tons. By 2027, we will have a full draught of 14 meters.

How has the state sought to provide other incentives for agricultural and industrial production?

We have a modern incentive legislation for the industry, and we won't lose to anyone. This is an agenda that, with the tax reform

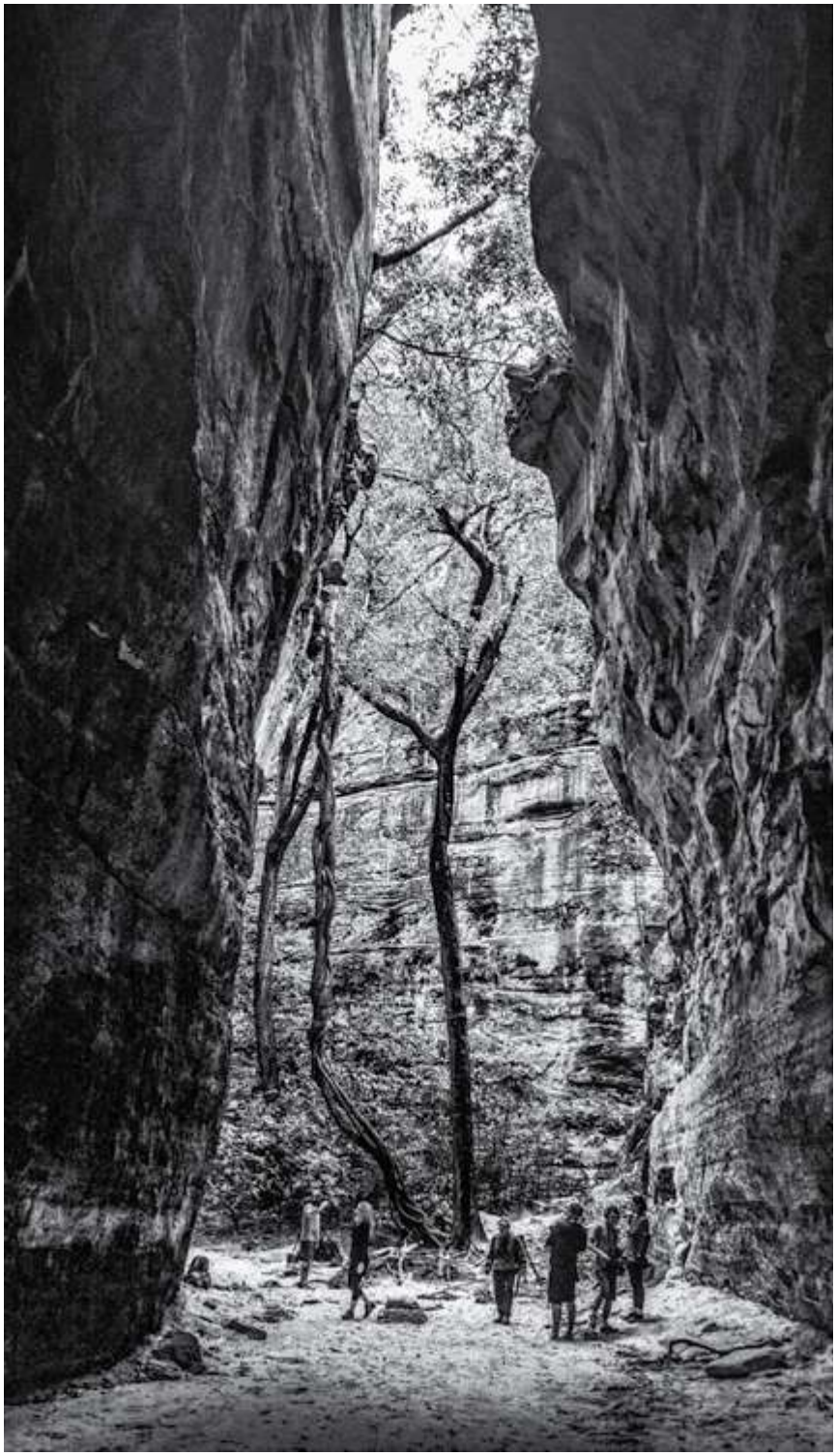
Agriculture represents a lot of development, but when moving to the agroindustry phase brings much more opportunity of work and income for our people, what interests us most

[unifying the Brazilian tax system into a single value-added tax for states and municipalities], is doomed to end. But for this moment of transition, we have one of the best legislations in terms of tax incentives. The demands we receive mostly from producers, in addition to infrastructure, are land regulation and energy supply. We have made a lot of progress in this regulation: there is much greater legal certainty. In terms of energy, we have also improved, but it is still a bottleneck. We have worked closely with the distribution concessionaire, Equatorial, to meet demands. Now in this phase of implementation of agroindustry, energy demand is much greater. These industries normally produce their own energy, but they must be connected to the grid to put the excess energy [back].

Should the Brazilian tax reform benefit or harm Piauí in any way?

It will certainly benefit. I was a very strong supporter of the tax reform; I was president of Comsefaz [which brings together State Finance Secretaries] and I was very happy about it. It is a reform that has been expected for 40 years. It will cause a lot of improvement because it will be a much more secure legal system. The exporters will receive their tax credits in a faster and more automated way, relieving investment and exports. Even though it will be transitioning for the taxpayer of eight to nine years, the mere perspective that there will be a safer system already counts on investment decisions.

You mentioned that you visited several countries to seek investments. There are questions abroad about



AURELIANO MULLER/CCOM

Serra das Confusões, in the southwestern region of the state: Fonteles bets on expanding the air network to attract tourists interested in ecology and adventure

how Brazil can reconcile agricultural production and the fight against deforestation. How do you respond to these questions?

At this point, Piauí is a great highlight. In the first place, because 100% of its energy source is clean. Second, outside the Amazon region, Piauí is the State that has the most preserved native vegetation — it exceeds almost 70% in the two main biomes, Cerrado and Caatinga. And, last year, it was the state of Matopiba region [agricultural frontier in the North and Northeast of Brazil] that reduced deforestation the most. In 2023, illegal deforestation fell by 70% compared to 2022. We have strict environmental regulations, and we have already broken productivity records. It is not an easy task, but Piauí has managed to reconcile both agendas.

Another international issue is the agreement between Mercosur and the European Union that has been debated for many years. If approved, could it help the State to expand exports?

It will bring benefits to the entire country and Piauí is in this context. We hope that these negotiations move forward. It is not easy because it's not just a bilateral negotiation. There are several countries with different interests within the European Community, so it is not a simple agreement. We hope that President Lula and President Ursula Von der Leyen, of the European Commission, will be able come to an agreement on this agenda.

In attracting foreign investment, Piauí is a great highlight, says Fonteles. "Firstly because 100% of its energy source is clean. Secondly: except for the Amazon region, Piauí is the State that has the most preserved native vegetation," he says.

Like Piauí, many Brazilian States seek investments abroad. How can Piauí stand out in this race?

As Brazilians, we hope the whole country grows and in an equal way. The Northeast has a lower income per capita than the national average. It is almost 29% of the population and less than 14% of GDP. Piauí has advanced in the international agenda because we believe that, since Brazil is continental, each State must behave like a country to defend their own interests. We have conducted several international missions. We dare to open offices abroad. There are executives in Lisbon and the United States. We are now opening an office in China. We have one in Estonia, at a time when digital government was being implemented, which is another absolute priority, the digital transformation of the Government and society, with heavy investment in IT within the government and also outside.

In the missions, is there also a focus to attract more tourists to the state?

Tourism is still at an early stage. Piauí is a State that has a strong vocation for ecological, adventure and experience tourism. Our coastline is small, but fantastic. It has many options over only 66 kilometers. There is also a huge potential in Serra da Capivara for adventure and experience tourism. On the international agenda, we are promoting these two poles. They can multiply [the volume of tourists] five or ten times as long as an excellent promotion job is done. We have seen many hotels being created. But, aviation is a bottleneck. We have structured more than 30 small aerodromes. We have at least seven or eight medium-sized airports where commercial flights could fit on planes with 40 or 70 seats. One of the goals is to operate weekly regional flights in them, and increase flights to large airports, notably Teresina, Parnaíba and São Raimundo Nonato. And who knows, in the future we can dream about international flights. The short-term focus is to expand flights at the Teresina airport that has been granted and is being expanded to be able to receive many more flights. The one in Parnaíba was also granted by a state PPP, and the concessionaires have been negotiating a lot with the airlines to increase flights. We have a great opportunity ahead of us in Tourism. ●

A UNITED KINGDOM OF OPPORTUNITIES

Piauí is showing to the world that investment opportunities in the State can lead to the production of green hydrogen

SOUTHWEST PIAUÍ

1 Uruçuí, 2 Ribeiro Gonçalves, 3 Baixa Grande do Ribeiro, 4 Santa Filomena, 5 Bom Jesus: southwest Piauí is already a force in agricultural production and is now aiming at process industrialization

6 São Gonçalo do Gurgueia: town with the highest solar energy generation in the State that representing photovoltaic potential that should expand greatly in the next decade

7 Parque Nacional da Serra da Capivara: a UNESCO heritage site, this park has more than 2,000 cave paintings dating back to 30,000 years and the tell the story of the human species

8 Dom Inocêncio: The town with the highest wind energy generation in the State symbolizes the strength of the Piauí winds, with the highest capacity factor in Brazil

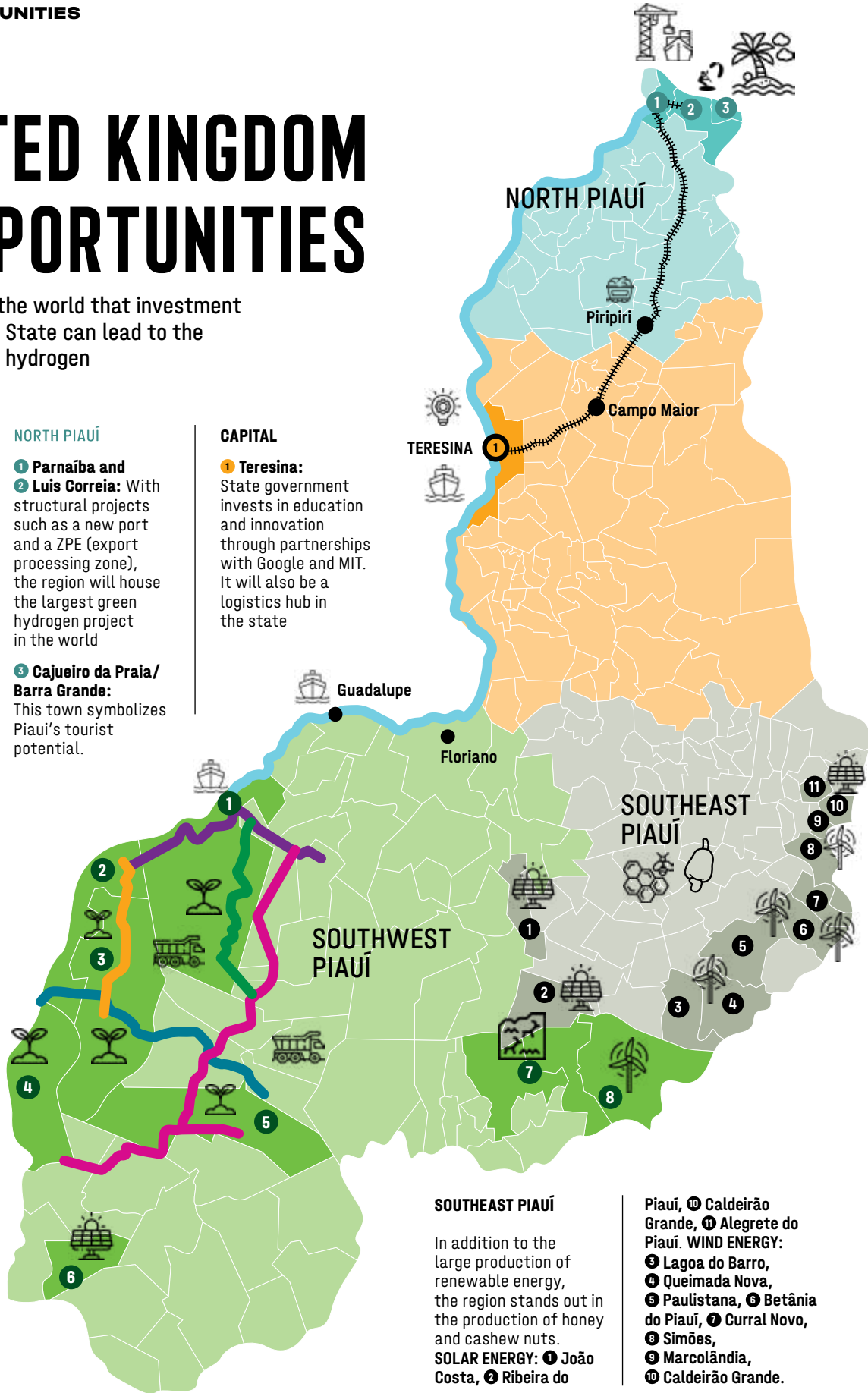
NORTH PIAUÍ

1 Parnaíba and 2 Luis Correia: With structural projects such as a new port and a ZPE (export processing zone), the region will house the largest green hydrogen project in the world

3 Cajueiro da Praia/ Barra Grande: This town symbolizes Piauí's tourist potential.

CAPITAL

1 Teresina: State government invests in education and innovation through partnerships with Google and MIT. It will also be a logistics hub in the state



SOUTHEAST PIAUÍ

In addition to the large production of renewable energy, the region stands out in the production of honey and cashew nuts. **SOLAR ENERGY: 1 João Costa, 2 Ribeira do Piauí, 10 Caldeirão Grande, 11 Alegrete do Piauí. WIND ENERGY: 3 Lagoa do Barro, 4 Queimada Nova, 5 Paulistana, 6 Betânia do Piauí, 7 Curral Novo, 8 Simões, 9 Marcolândia, 10 Caldeirão Grande.**

WITH AN AREA LARGER THAN THE UNITED KINGDOM, Piauí offers opportunities in many areas, according to what has been said and what will be said in this special edition of EXAME in partnership with the State government. There are 251,000 square kilometers in which wind, sun and water abound. The same elements that provide a natural green energy hub — which, it is estimated, could be one of the largest in the world — also allow food production to be thriving — and leisure options to go from the paradisiacal beach in Barra Grande in the north of the state, to the adventurous, Serra da Capivara National Park. The latter is a source of national pride: there are thousands of cave paintings that date back 30,000 years and tell a little about the history of our species on the planet. The current administration of the state wants to use history to think about the future and diligently stimulate education and innovation. And Investe Piauí, the State's investment promotion agency, has the responsibility to seek investors interested in the local strengths. On the following pages, the reader will find special reports on the main hubs that the state wants to develop. ●

SUBTITLES:

- Agriculture
- Cashew nut
- Wind energy
- Solar energy
- Innovation
- Honey
- Mining
- Port
- Archaeological site
- Tourism
- Railroad Teresina — Luis Correia
- Parnaíba Waterway
- Waterway terminals
- Soy road belt
- PI-392
- BR -330
- PI-397/PI-262
- PI-247
- PI-391

PIAUÍ'S SIX HUBS OF ACTION TO ATRACT INVESTMENTS

1 RENEWABLE ENERGIES AND TRANSITION ENERGY

With a history of success in generating renewable energy, Piauí brings together natural and administrative advantages that may turn the State into a major player in the global green hydrogen market.

2 AGRIBUSINESS

As "The youngest" of Brazilian agribusiness, the State quickly catch up with its regional peers, with growth levels well above the national average in the last decade. Now, it aims at the industrialization and added value to fresh honey and cashew nuts.

3 EDUCATION

With the capital with the best public education in the country and on the way up to national indicators, the current administration has turned education into its priority. Most schools have coding classes, and Piauí will be the first State to have Artificial Intelligence classes in an unprecedented partnership with Google.

4 INNOVATION

Members of the local government have visited the MIT, in the USA, and Tallinn, in Estonia, and signed partnerships to bring the best practices of innovation, entrepreneurship and digital government to Piauí.

5 TOURISM

Piauí has the smallest coastline in Brazil. But, as the saying goes, the best perfumes come in small bottles. The local, paradisiacal beaches are ready for investment and the Serra da Capivara national park, the largest archaeological site in the Americas, is still an uncut jewel to be explored.

6 THE NEW MINERAL FRONTIER

Considered Brazil's new mineral frontier, Piauí has vast reserves of iron ore, especially in Piripiri, and nickel, a mineral essential for the energy transition.

FROM PIAUÍ

LEANDRO FONSECA

Victor Hugo Almeida, CEO of Investe Piauí: global agenda to bring investments to the State

TO THE

The first concrete result of trips to the United States, Europe and Asia is the investment of 110 billion reais in green hydrogen on the coastline

ÉRICA POLO

FEBRUARY 2024 WAS BUSY IN THE PREMISES OF INVESTE PIAUÍ, a state government agency for attracting investments. From meeting to meeting, agents from the Piauí government and Spanish, Portuguese and Dutch investors sealed details of the first billion-dollar investment that the state will receive in green hydrogen — one of the most promising areas of investment in Piauí. The European companies Solatio and Green Energy Park closed the deal to build, as of October 19th, the first phase of a project that will consume 110 billion reais by 2028 on the coastline of Piauí.

The deal was announced at the end of 2023 by the President of the European Union, Ursula von der Leyen. This is the first concrete result of the work done by the administration of Piauí in 2023 – the first year of Rafael Fonteles' (PT) term – to 'sell' the state around the world, says Victor Hugo Almeida, CEO of Investe Piauí, an agency to attract investments to the State. "They have a master plan, with several phases that aims to generate 11.4 GigaWatts (GW) of green hydrogen in the long term. But this first phase is expected to yield 1.9 GW. Only the first phase yields the energy consumed today throughout the state," says Almeida. The potential of the complete project is to generate energy above the current consumption of the entire Northeastern region.

Over the past year, Fonteles and the board of Investe Piauí toured around Europe, United States, and Asia with studies that present indicators and available opportunities in the State. The list of countries included Portugal, Estonia, Spain, Germany, Sweden, the United States, China, Japan, Korea and Croatia. There were seven missions, organizing events to attract investments. The staff also participated in the 28th United Nations Climate Conference (COP 28), hosted by the United Arab Emirates at the end of 2023. Work abroad was a priority for strategic reasons. "Our Sate still has an extremely negative perception in the collective imagination in the country. So, the governor decided to start with the international market," says Almeida. "He often says that it is one thing to sell something that no one knows about. The other thing is to deconstruct an image and then sell it."

Investing in events held in the cities visited, the main idea the Piauí public authorities had was to seek potential businesses while, at the same time, allying with internationally recognized actors (such as companies, universities or hubs of expertise) in the five sectors that Piauí wants to develop: renewable energy, agriculture, education, innovation and tourism. This was aimed at gaining approval before beginning a similar journey throughout Brazil, a movement that will begin in 2024 aiming at the São Paulo market. The first foreign events called Summit Piauí Europe, focusing

WORLD

on green hydrogen, were held in Lisbon, Portugal, and Berlin, Germany. In Portugal alone, 12 memoranda of understanding emerged for potential projects. "We managed to highlight Piauí in the speech of the president of the European Union when she announced the project on our coastline," says the director of Investe Piauí. "It is about benchmarking and credibility. It shows that the State is on the right path."

The green hydrogen project will also produce ammonia and will be settled down in an Export Processing Zone (EPZ). ZPE is an industrial district where companies can set up with benefits, such as tax exemptions – a type of Manaus Free Zone. But in these cases, they are export-oriented businesses. Piauí ZPE already existed and was recently linked to the management of Investe Piauí. In addition, there is only one Brazilian ZPE, located in Ceará. The third is in the process of being structured, according to the executive, and will also be authorized by the Ministry of Development, Industry, Commerce and Services (MDIC) – a government body that links the functioning of these areas. The ZPE is one of the state agency's strategies to encourage the setting up of companies.

Piauí is also planning to build business parks to attract companies that serve the domestic market. There is a geographic logic behind this: these are areas close to infrastructure modes. The first will be set up in the towns of Piripiri, Floriano, Picos, and Ribeiro Gonçalves. The bid to build the condominium (companies set up and pay rent) in Piripiri should come out soon, as the engineering project in this case has already been completed. The Business Parks, as they will be called, will house industries, distribution centers and service providers. They are

MEL MUSTO/BLOOMBERG/GETTY IMAGES

MIT Campus: partnership with the American University shows the ambition in innovation in the State of Piauí

part of one of Investe Piauí's strategic structural operating guidelines. The infrastructure axis also includes other initiatives, such as the construction of the Port in Luís Correia. The people of Piauí have been waiting for this port for more than a century, and the first stage of the Port was launched on December 13th, 2023. It consists of dredging a 3,5 km long and 7 meters deep channel at low tide and 9 meters at high tide, land clearance and bids for the needed work in internal areas such as lighting, administrative center and goods storage yards. A fishing terminal is scheduled to operate in the port's first berth. The following steps include the installation of grain and fertilizer, general cargo and green hydrogen and ammonia terminals.

The State's master plan came about after dialogs with universities and the identification of activities that could benefit from the use of the structure – mainly agribusiness and industry. The Vale do Parnaíba Intermodal project is under study and will connect the south and north of Piauí through highways and waterways. This ambitious project, assesses the State government, will guarantee the necessary infrastructure for transporting grains, ore and other products from the south of Piauí to the port. For Victor Hugo Almeida, while Intermodal is not operative it is possible to move grains from the south to the port via highways. "In other words, the Grain and Fertilizer

Terminal will be viable even before the waterway because we have roads," he says. In fact, the state's road infrastructure is already helping transportation to other ports, producers say. "It was chaos more than a year and a half ago. But in just one year, the improvement was great," says Cornélio Sanders, owner of Grupo Progresso.

DIGITALIZATION FOCUSING ON INNOVATION

In addition to infrastructure works, another objective of Investe Piauí's activities is improving the digital environment for business. For this reason, one of the three offices that the public company has set up outside the country is in Tallinn, Estonia – a country recognized for its innovative potential in the digital world. Today, highlights Victor Hugo Almeida, Piauí occupies the national leadership in the ranking of states that most facilitate the opening and operation of companies, according to the Freedom to Work Report, from the Liberal Institute of São Paulo. The State has a digital environment, with the Gov.Pi Empresas and Gov.Pi Cidadão platforms and invests in the digitalization of public services — the goal is to make them all available digitally by 2026. The third activity is the operating model between public and private services. The agency can establish specific purpose companies (SPEs), a legal constitution that allows maximum speed in associations with actors from the private sector in projects considered positive by the State Government for economic development. Another targeted city for the physical installation of Investe Piauí was Boston, USA. There, they formed a partnership with the Massachusetts Institute of Technology (MIT), with an eye on developing projects related to entrepreneurial education and innovational ecosystems for business. Some programs have already emerged from this relationship, such as startup acceleration programs and Startup Edu scheduled to be set up in public high schools in 2024. The entrepreneurial education program is based on the methodology of The Martin Trust Center, at MIT, one of the most influential hubs for innovative entrepreneurship, says Almeida, from Investe Piauí. The pilot project will initially cover 20,000 students, who will now have the subject of innovative entrepreneurship in the school syllabus. Governor Rafael Fonteles' idea is to end his term in 2026 with classes spread throughout the state network.

Investe Piauí was founded in 2021 by Fonteles, before his election in 2022 which enabled him to occupy the position of governor of Piauí. It was his idea to create the agency when he was still charge of the State Treasury Department. In addition to the above-mentioned projects, a range of other ones are already underway within the scope of the structure. Another short-term challenge is launching the State's food brand. Derivatives from the fishing industry will be the first to use the 'made in Piauí' label, an identity being developed by the impact economy startup Polvo Lab, owned by businessperson Ana Maria Diniz, daughter of late Abílio Diniz.

Those have been three intense years for Investe Piauí, with results that are beginning to bubble up into billion-dollar investments. It is a good start for anyone who wants to change the collective perception of Piauí and its future project. ●

EXPLORING NEW AREAS

Investe Piauí tries to get closer to the most important markets in areas such as digitalization, innovation and investment attraction

3 INTERNATIONAL OFFICES

→ **Tallinn,** Estonia: searching for the best digital governmental practices

→ **Lisbon,** Portugal: access to European investors, aiming at energetic transition

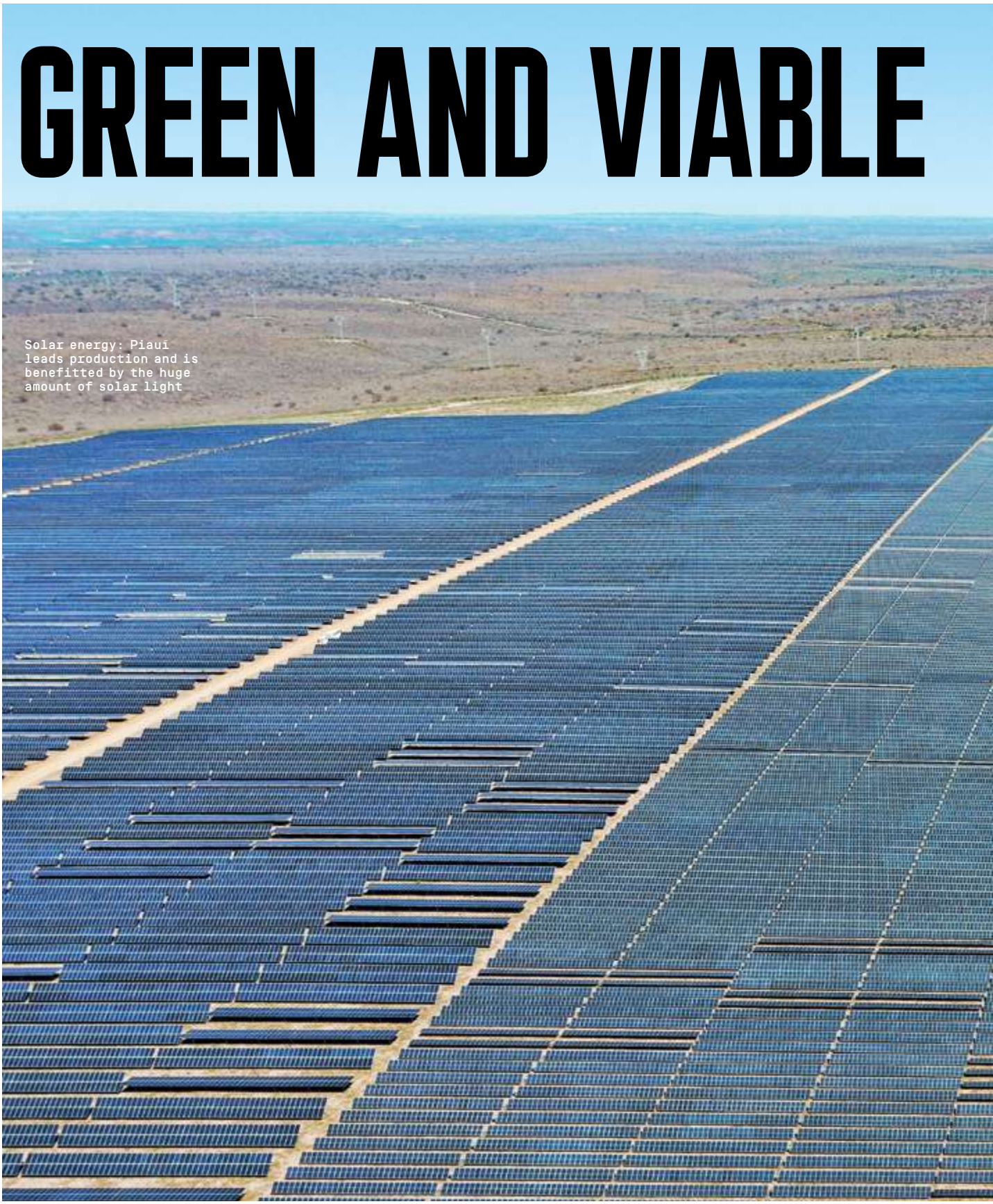
→ **Boston,** USA: access to American investors searching for the best innovation and technology practices along with MIT

3,9 U$ BILLION

is the volume of **ongoing public and private contributions,** in projects that the agency has captured: TUP[1] in the port of Piauí, fishing terminal, ammonia terminal and on the waterway on Parnaíba river

(1) Private Use Terminal.
Source: Investe Piauí.

GREEN AND VIABLE



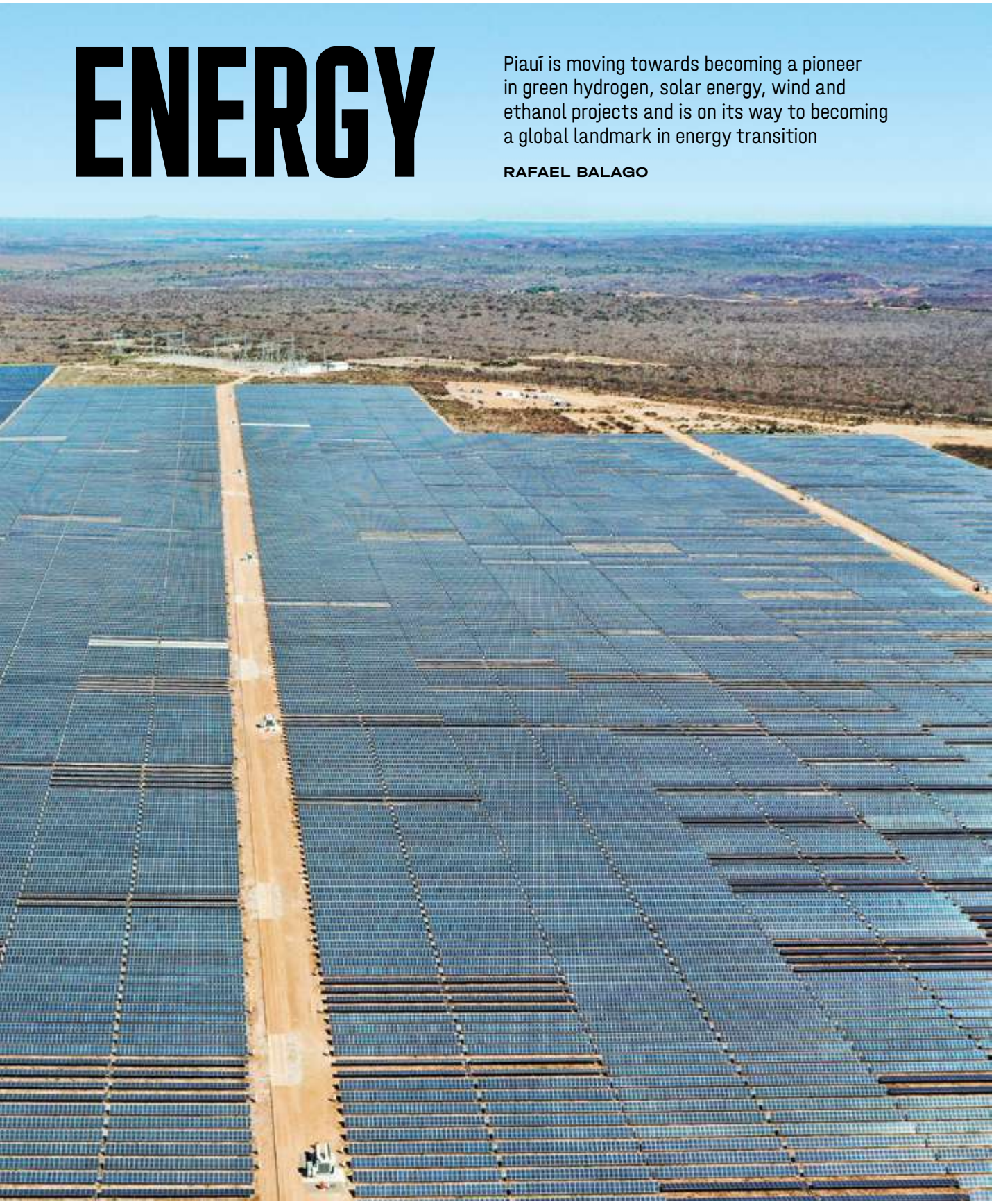
Solar energy: Piauí leads production and is benefitted by the huge amount of solar light

JAMES ANDRADE

ENERGY

Piauí is moving towards becoming a pioneer in green hydrogen, solar energy, wind and ethanol projects and is on its way to becoming a global landmark in energy transition

RAFAEL BALAGO



Ursula Von der Leyen, European Commission President: the organism is to aide other countries to set up green hydrogen plants

October 19th is a public holiday in Piauí. On this date, in 1822, the Village of Parnaíba joined the independence of Brazil, proclaimed in São Paulo 42 days earlier. Although the country's separation from Portugal is generally seen as a peaceful process, in Piauí there was a war to expel Portuguese troops who wanted to keep the territory under control. More than 200 years later, on October 19, 2024, Piauí will have another important milestone: on this date, the construction of its first green hydrogen production plant is scheduled to begin. This is a product with enormous potential to change the history of the State. If everything goes as planned, Piauí will be the largest producer of green hydrogen in Latin America and one of the largest in the world. Two projects, announced last year, envisage creating factories to produce the material and its derivatives, used in a series of industries and functions. The initiative will have two industrial plants from European companies Solatio and Green Energy Park. The expectation is that these companies will invest 200 billion reais over the next decade, creating 20,000 jobs

GREEN HYDROGEN IS A BET FOR THE FUTURE

New emerging clean energy generation technology is a global bet for decarbonization and achieving the goals of the Paris Agreement by 2050

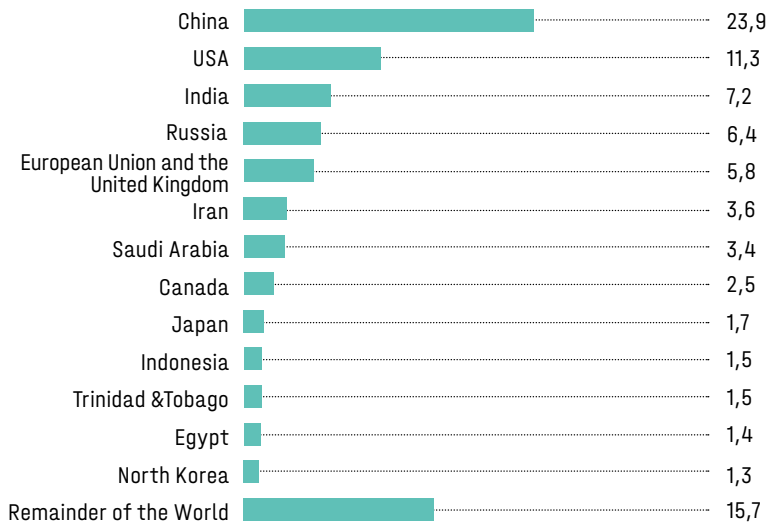
WHAT IS IT?

Hydrogen gas (H2) is used in several industrial processes and can also be a fuel to move cars, trucks, and planes. There is a lot of research throughout the world to create engines powered by H2, which is pollution free.

To manufacture hydrogen gas, electrical energy is used in a process called electrolysis.

If electrical energy used in the process comes from a clean source, such as solar or wind, then the H2 generated in the process is called green hydrogen.

The product has great international demand...
(in million tons)

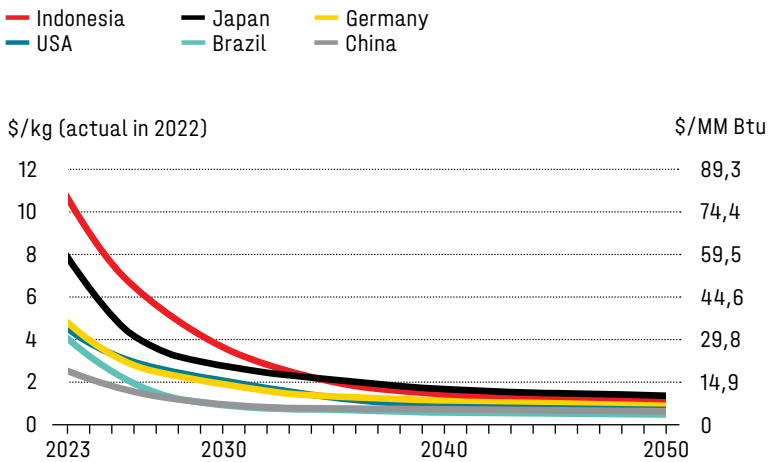


Source: Giz, 2022.

LEANDRO FONSECA

COSTS ARE DROPPING

Today, the cheapest green hydrogen is from China. However, by 2030, Brazil, will probably have the cheapest green hydrogen available in the world (in dollars per kilogram)



Source: BloombergNEF.

and more than 20 Gigawatts (GW) of generated power. In addition to the desire to lead the energy segment of the future, apparently the State offers the ideal conditions for green hydrogen to be economically viable — a point that is the current Achilles heel of the new energy technology.

"Hydrogen production works. There is no technical challenge per se to be solved. The point is to find all the conditions to make things financially viable. Energy costs need to be right. And most projects around the world suffer from the question of how to be economically viable, because they are competing with hydrogen made with

fossil fuels. And these are much cheaper than renewables", says Bart Biebuyck, CEO of Green Energy Park, which has decades of experience in hydrogen research and projects and has invested in the state, which will have a green hydrogen production park. "The conditions we have found in Piauí, may enable us to break this cycle and resolve the issue. We still must prove that it will be viable, but it looks very promising. Around the world, there is plenty of advertisements and PowerPoint presentations, but only a few get to reach other stages and the final investment decision."

The Green Energy Park plan, with capacity to generate 10.8 GW, has decided to continue with the investments confirmed in 2023 and is now in the engineering project preparation phase. Biebuyck came to Piauí and personally confirmed exactly what the initial numbers showed. "Basically, Piauí is the best place on the globe to invest and manufacture. It is probably the most accessible green hydrogen in the world", he says. Now,

PIAUÍ TAKES THE LEAD IN SOLAR ENERGY

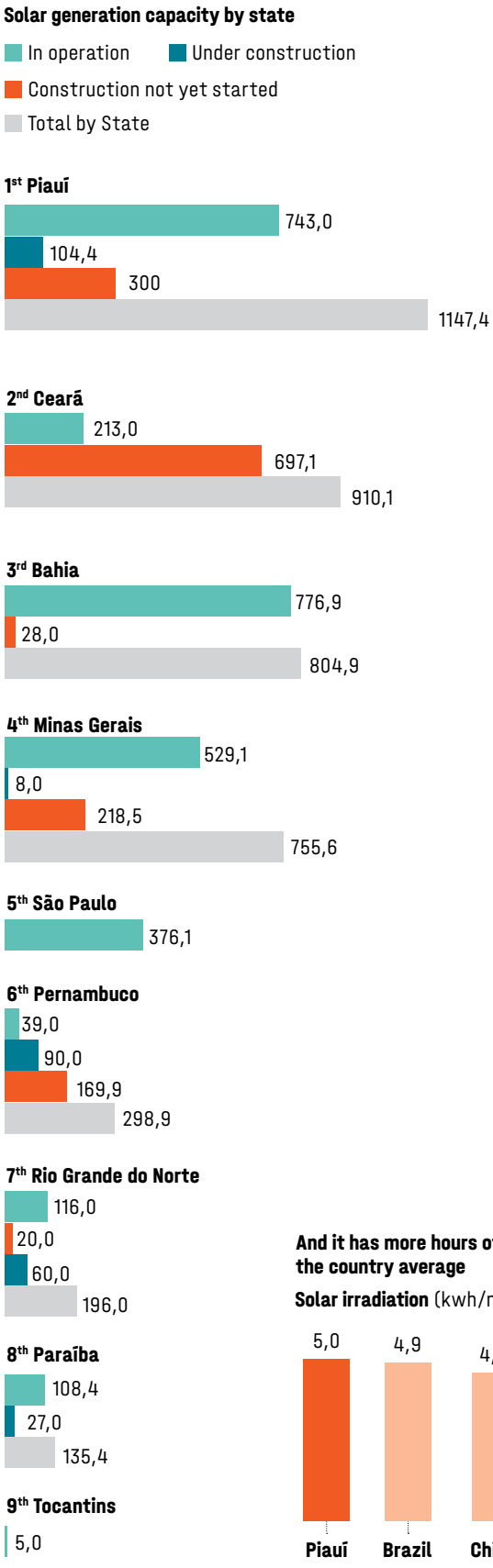
State benefits from the long Sunny days throughout the year and from being in the middle of the solar belt

Pedro Vaquer: Solatio's CEO, works to set up the green hydrogen plant will begin in October, 2024

LEANDRO FONSECA

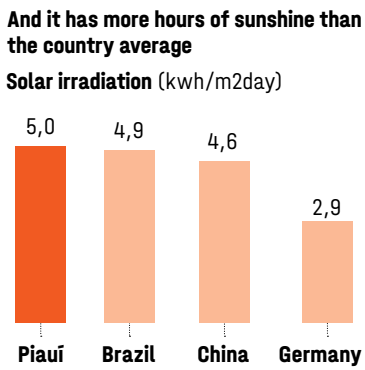
DISCLOSURE

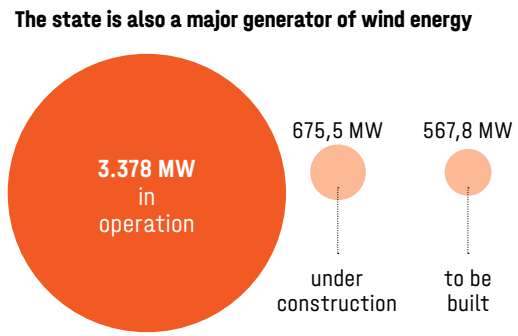
Bart Biebuyck, Green Energy Park's CEO: Piauí is the best place to invest and manufacture green hydrogen



the race is on to find suppliers of all the necessary equipment. The expectation is that works will begin in 2026 and production will begin in January 2028, with 1.8 GW of energy generated by green hydrogen in the first stage. The final stage will be concluded in 2035.

The other hydrogen park project is by Solatio, a firm that has been producing solar energy for more than 20 years and has been in Brazil since 2009. On October 19, 2024, earthmoving work will begin on the land where the first plant is going to be built. At the beginning of 2025, work will actually begin. The Solatio project comprises six phases, with 1.9 GW of hydrogen production in each of them, reaching a total of 11.4 GW. The ambition and scale are gigantic. Today, for example, the world produces enough new electrolyzer each year to generate 3.5 GW. "The difference is having found a totally different government, with respect to other states. This administration is practi-





Fontes: Aneel and Absolar.

cal, operative and with a developing mind and this has given us total confidence", says Pedro Vaquer, president of Solatio. "We had projects underway in other states, but we can say that they have been paused so that we can focus 100% on Piauí."

A break is needed here to explain some scientific issues. The raw material for producing hydrogen gas is water — whose molecule, as we recall our science classes, is made up of two hydrogen atoms and one oxygen atom. Through an electrolysis process, which uses electrical energy, the hydrogen that makes up water is separated from oxygen. If the origin of the energy used in this process comes from clean sources, such as solar, wind or hydroelectric power, the product receives the green hydrogen seal. Thus, whoever buys green hydrogen is purchasing clean energy, a product that is more and more attractive and draws interest around the world. It is as if Europeans could import energy generated by the sun and wind to use in their countries — where natural conditions do not guarantee maximum renewable energy. Af-

PIAUÍ WILL HAVE A GREEN HYDROGEN PARK

The project announced in December 2023 will be built in partnership with two European companies, Solatio and Green Energy Park

Informed Investments	**R$ 200 BILLION**
Location	**PARNAÍBA**
Deadline	Work will begin in 2024 and the first stage should begin operating by 2028

Source: Government of the State of Piauí.

JORGE BASTOS/CCOM

ter the war in Ukraine, European countries have been trying to stop using Russian natural gas, and hydrogen and their derivatives emerged as an option. A clear sign of this interest came at the end of 2023, when the European Commission announced support for the green hydrogen project in Piauí. The Brazilian State was included in a 2 billion euros program to stimulate the production of green hydrogen in the world. It has not yet been defined how much of those resources will get to Piauí.

Biebuyck, from Green Energy Park, has been closely following this evolution and has worked to expand this technological frontier. For seven years, he worked at Japanese automaker Toyota to create hydrogen engines for cars. He then went to the European Commission, where he headed an agency to encourage the adoption of clean hydrogen. "Last year, I left the commission because I want to demonstrate that the hydrogen economy can be a reality," he says. He traveled the world: he went to the USA, China, India and other countries until he found what he considers the best opportunity in Parnaíba, the village that rose for independence in 1822 and today has become a city of 162,000 inhabitants on the coastline of Piauí.

Extremely near is Luis Correia, where the State of Piauí is preparing the construction of a port with a terminal dedicated to the export of hydrogen and ammonia, products that will be manufactured in the new factories. The region also has an Export Processing Zone (ZPE), with less bureaucracy in the export of goods abroad. In addition to procedural innovation, Piauí has natural advantages: located in the northeast of Brazil, the state is physically closer to the USA and Europe, two hydrogen consuming hubs. By ship, the cargo takes seven days to reach Miami and eight days to get to Rotterdam and Amsterdam, gateways to Europe. The convenience of export is precisely one of the main attractions of using hydrogen as a fuel. In gas format, it can be compressed and liquefied to be stored in tanks.

Wind energy: Piauí has one of the largest production parks in the country

THOSE WHO BUY GREEN HYDROGEN ARE ACTUALLY BUYING CLEAN ENERGY, A PRODUCT THAT IS MORE AND MORE ATTRACTIVE AROUND THE WORLD

GREEN HYDROGEN POTENTIAL

One of the greatest qualities of hydrogen is its versatility: it can be used as fuel, in cars, buses and even planes, in which it can be used to heat boilers and blast furnaces for steel production (which will get green label if made with clean fuel), and to produce SAF, sustainable aviation fuel, whose current demand is high and production is very low. The global airline sector has committed to neutralizing carbon emissions by 2050, and the only viable path to achieve this is to switch from kerosene to more sustainable, clean-sourced fuels. In addition to SAF that can be made from various plant sources and contains hydrogen in its composition, hydrogen itself could be used in airplanes in the future. Airbus, the world's largest commercial aircraft manufacturer, is willing to bring the first hydrogen-powered aircraft to the market by 2035.There are two possible paths: burning hydrogen in the engines, thus generating combustion, or using cells capable of transforming the gas into electrical energy, which would be used to move the engines. These two options

are also used in cars and other hydrogen vehicles, such as trucks and buses and are being evaluated in several countries around the world. The technology breakthrough goes hand in hand with regulation, as the adoption of a new model also depends on a broad supply network, something that does not yet exist, but that can change in the coming years. An agreement between European countries, for example, determined that there will be mandatory hydrogen charging stations on the main roads and cities from 2030 onwards increasing demand for the product might favor the emergence of an ecosystem around the product. "We can help other countries in the energy transition based on the potential of green hydrogen.But we do not want it to be another commodity. We want to use this energy to transform our raw materials, to generate new products and materials", said Marina Silva, Minister of Environment and Climate Change, during a G20 event in February 2024.

Ecosystem is also a keyword in the Piauí hydrogen project. It is not enough to just build facilities and buy equipment: it is necessary to attract professionals and form teams from various areas, including actions to encourage partnerships with local universities, for example. "If you want to build something, you need to have people to maintain the facilities. If not, you have fantastic facilities, but if something goes wrong no one knows how to fix it," says Patrick Cnubben, founder of Hydrogen Architects, a company in the Netherlands that helped Piauí's administration to put together a plan to create the green hydrogen park. He points out that the construction of the hydrogen park in the state also paves the way to stimulate regional performance and improve the way of living of people living of Piaui's population in the state. Other elements of this ecosystem come from more positive characteristics of Piauí's nature: the state has great availability of sunlight and wind, which favors the production of solar and wind energy, which in turn, will be used in the production of hydrogen. "More than 60% of the cost of hydrogen is related to energy", says Biebuyck. A Bloomberg study points out that Brazil could produce the cheapest green hydrogen in the world: in 2030, the price could reach US$ 1.47 per kilogram. As production grows, the value could reach 0.8 dollars per kilogram in 2050, and Piauí, due to the large amount of clean energy, can reach these levels very easily. The State also has the potential to take advantage of the coastal winds, by installing wind turbines at sea, the offshore model, whose regulation is at its final stages by the Brazilian Congress.

One of the companies that integrate this green ecosystem in Piauí is Enel, which operates the São Gonçalo solar energy complex and the Lagoa dos Ventos wind energy complex. "The government of the state of Piauí invested in the development of a favorable business environment for the implementation of renewable energy generation projects through tax incentives, improvement of institutions and state licensing, inspection and control organs", says Bruno Riga, responsible for Enel Green Power in Brazil. "There we found solid institutions and legal security, key elements to attract and maintain investments in a territory." At the São Gonçalo complex, which underwent a second expansion in 2023, more than 2.2 TWh (Terawatt-hours of energy) are generated per year, which prevents the emission of around 1.3 million tons of CO2 into the atmosphere every year, according to Enel. In comparison, total energy consumption in Brazil in 2022 was 509 TWh, according to data from the Electric Energy Statistical Yearbook. Enel also assesses modern technologies there, such as bifacial solar modules capturing energy from both sides of the panel. "Another innovative solution was the use of smart glasses in the construction of the second expansion of the São Gonçalo solar park. This technology allowed the sharing of images, documents and recordings, in real time, between operators in the field

SPEEDING UP ETHANOL PRODUCTION

New plant in Piauí will be capable of producing per year

220 MILLION

LITERS OF CORN ETHANOL

and remote teams, speeding up processes and decision-making during the construction of the project," says Enel's executive.

The use of solar energy is also advancing in large farms throughout the state. "We have recovered our investment in solar panels in just five years," says Cornélio Sanders, from the Progresso farm, producing soy, cotton and corn and the solar energy on large scale. This year, Sanders will start investing in another source of clean energy: ethanol. The producer teamed up with other businesspeople to create an ethanol plant, which began operating in November 2023. Production should begin in 2026. "The plant will produce 220 million liters of ethanol per year. Today the state consumes 260 million liters and produces only 43 million liters. This new industry will practically meet Piauí's needs", says Sanders. Piauí already has another ethanol plant in the north of the state, produced from sugar cane and, with the increase in production, it could become an exporter of the fuel and lower its price for Piauí residents. "We hope that what happened in Mato Grosso happens here too: the reduction in the price of ethanol and gasoline, which contains ethanol in the mixture", says Governor of Piauí, Rafael Fonteles, who has placed the green energy agenda as a priority in his administration. The state's developments on several fronts Brazil will open new paths in the area. "If you manage to create a good green hydrogen project in Piauí, you can replicate the model in other states. It is especially important for Brazil's potential", says Patrick Cnubben, from Hydrogen Architects. Thus, Piauí will be able to help the country achieve yet another independence, this time from fossil fuels, and place Brazil as a reference on the map of the global clean economy. ●

Supply to Europe: the continent will have more hydrogen filling stations in the coming years

JEREMY MOELLER/GETTY IMAGES

WAY BEYOND SOY AND CORN

Proteins, fruits, nuts, honey and other chains are part of the agricultural economy of Piauí, with a projection of 86.5 billion reais this year

ÉRICA POLO

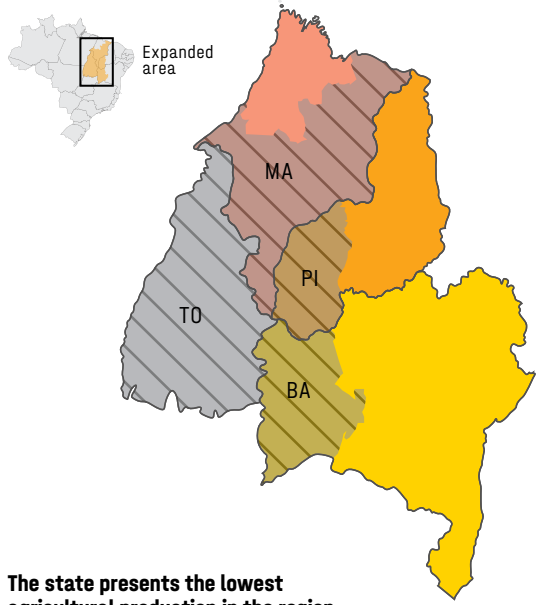
Cornélio Sanders, from Grupo Progresso: traditional soy and corn group now invests in a corn ethanol plant to add value to production

EDUARDO FRAZÃO

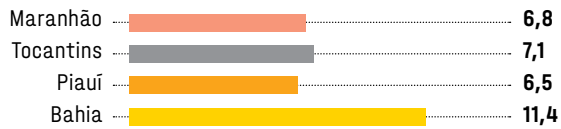
f Brazilian agribusiness were a family, Piauí would be the youngest among the country's largest producers. The "pi" in "Matopiba" – an acronym for Maranhão, Tocantins, Piauí and Bahia, the most recent Brazilian agricultural frontier – entered the big agricultural game in the early 2000s. Although it is still the lowest producer among its peers – although close – Piauí's grain harvest grew 134% in the last 10 years – almost three times the national average. And it is expanding rapidly. Although soybeans are the flagship, Piauí's agribusiness is not only made up of soybeans and corn. The state has other potential segments such as cotton, meat and leather, nuts, sesame, organic honey, fruits, fish, to name just a few. The sum of results from chains, many of them expanding, results in a sectoral economy projected at 86.5 billion reais in 2024, according to the economic consulting firm Tendências. The growth potential is great: the federal government projects that Matopiba will increase grain production by 37% by 2033. "Piauí is within Matopiba, Brazil's last agricultural frontier. Agriculture represents a lot of development, but when it moves to the agroindustry phase it brings much more jobs and income opportunities to our people, which interests us the most," says governor of Piauí, Rafael Fonteles (PT). "We have created many agendas within Brazil to attract investors to biofuels and meatpacking plants."

GROWING AND SPEEDING UP IN THE FIELD

Piauí is part of the region known as MATOPIBA — an acronym for Maranhão, Tocantins, Piauí and Bahia — expansion's last frontier

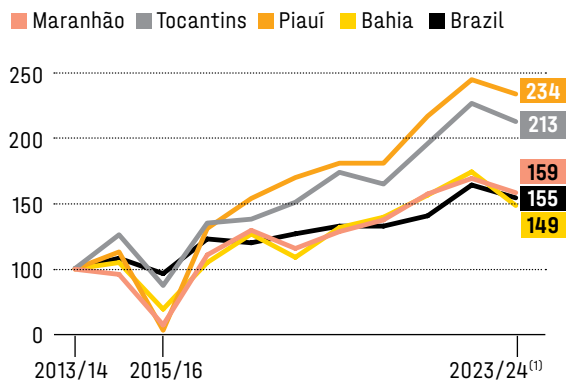


The state presents the lowest agricultural production in the region...
2023/24 Harvest[1]
(in millions of tons)



But, in ten harvests, grain production more than doubled in Piauí — at a speed well above the national average

Growth of agricultural production in Matopiba and Brazil
(Basis 100, harvest 2013/14)



(1) Forecast. **Source:** National Supply Company (Conab) crops of soybeans, corn, cotton, beans, rice, peanuts, sorghum.

LEANDRO FONSECA

Ricardo Faria from InSolo: logistics infrastructure needs a lot of improvement, but it has made progress in the last year

Soybean is responsible for most of the growth in the segment's Gross Domestic Product (GDP) from 28 billion reais to 86 billion reais from 2013 to 2023, according to Tendências. In the same period, grain production went from 2.7 million tons to 6.8 million tons. Of the total revenue of 1.6 billion dollars from agricultural exports recorded by Piauí in 2023, 1.3 billion dollars come from the soybean complex.

Local businesspeople are optimistic and are getting investments to expand crops and, in some cases, take the first steps towards industrialization. Each project has a distinct cause. All of them, however, is being aided by the gradual reduction in interest rates and the improvement on state highways infrastructure last year, large producers in Piauí report. In meat, dairy and honey, the minimum estimated contribution to ongoing projects is 700 million reais.

For example, the state's first medium size meatpacking industry is under construction. A new dairy will be inaugurated in April 2024. The owners of the only cashew nut industry in Piauí have plans to modernize the factory, and, in the countryside, the construction of the first corn ethanol industry from Grupo Progresso is underway – one of the largest local grain producers. There is still intense work in the organic honey chain to add value to the exported product and distribute income to thousands of beekeeping families.

In terms of farming lands, in addition to the work to improve productivity per hectare of soybeans and corn, cotton is reemerging as a bet — the planting of cotton plume is still exceedingly minor compared to other commodities. According to Conab, the last harvest (2022/23) yielded 70,000 tons of cotton and plume. The product loses to soybeans, corn, rice and beans grown regionally. For the current cycle (2023/24), the projection is a little higher: 85,000 tons of shreds and seed cotton are expected. The most recent investor

in cotton plantation is the Franciosi Group, from Bahia that settled Piauí in 2004.

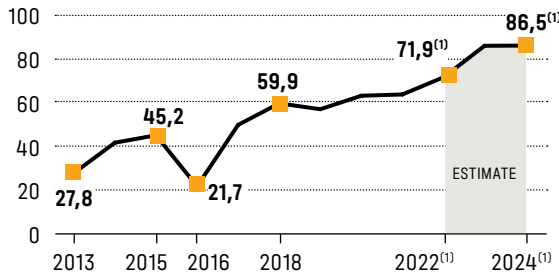
Since then, the focus of Fazenda Confiança, in the town of Baixa Grande do Ribeiro, has been solely soy. Last year, after the first structural investments in irrigation, the farm began planting cotton after the soybean harvest. It is a way of obtaining two harvests per year on the same hectare. "But we are choosing irrigated cotton, which is risk reducing," says João Antônio Franciosi, one of the group's founders. "Producing just waiting for the that comes from heaven rain from Heaven can generate losses that are more difficult to recover."

The cost of growing one hectare of cotton is around 16,000 reais. According to producers in the region, the fiber requires investments three times larger than in soybeans – the profit, however, is greater in the same ratio. The Franciosi group's first cotton harvest in Piauí will be conducted in 2024. It should yield 4,847 kilos per hectare, what the group already traditionally harvests in Bahia – 5,140 kilos per hectare. The irrigation structure is being implemented on the farm totalizing 16,000 cultivated hectares. In 2024, 8,000 hectares of fields will be irrigated and, in 2025, 12,500 hectares will be irrigated as well. This investment also brings benefits to soybeans in periods of drought. While the average oilseed harvest is estimated at 70 bags per hectare in areas without irrigation, in this cycle, in irrigated areas, it can get up to 80 bags.

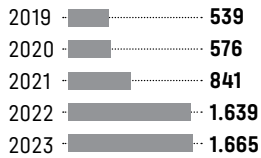
ABRIBUSINESS GDP

In the last decade, the value of agribusiness has more than tripled in Piauí

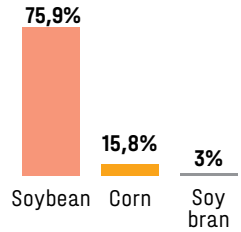
Agro GDP in Piauí (in billions of reais)



Agricultural exports from the state have also grown
Value exported by agriculture (in millions of dollars)



Top 3 most exported products (of Piauí's total exports)



(1) Estimate of added gross value at 2021 prices.
Source: Tendências Consulting Company.

Polvo Lab Gabriella Marques and Ana Maria Diniz, in partnership with Comapi: initiative seeks to expand exports of organic honey using the Piauí brand

DISCLOSURE

EDUARDO FRAZÃO

Euroalimentos production line, of the Arrey Group: the only cashew nut plant in Piauí plans new investments to cope with the demanding Middle Eastern market

At the Sanders Group, producer of soybeans, corn and cotton, the strategy at this moment is to add value to the corn and cotton chains. The family group owns five properties in Piauí and one in Minas, and the beginning of the construction work of a corn ethanol plant is scheduled for April this year. Cornélio Sanders, founder of the group, focuses on the potential for fuel consumption to optimize profits from the corn he grows. This is because cereal production is growing more than demand, even with the potential for exports to China that opened the market for brazilian corn in 2023. The industry plans to crush 1,500 tons of corn and sorghum per day. "Each ton [of corn] crushed will yield 420 liters of ethanol and 280 kilos of DDG [source of protein used in animal feed] and 9 liters of crude oil," says Sanders. The volume exceeds that of consumption and internal production of fuel in the state. According to the businessperson, the activity could help lower the value of local ethanol, also benefiting the environment since it is not pollutant. The start of industrial activity is being projected for 2026.

ADDING VALUE — AND SUSTAINABILITY

It is in the hands of Ani Sanders, a businessperson who runs Grupo Progresso with her husband Cornélio and their children, the latest project that aims to add value to cotton produced in Piauí. Through Instituto Cultivar Progresso, founded in 2022, Ani recently became partners with northeastern designer Martha Medeiros, whose focus is handmade lace, and the textile industry Vicunha. The first collection should be launched in February 2025. The pieces will be made aiming at a high-income audience and will bear the history of the production process presented in a QR Code. All cotton produced by the group is certified and follows ESG practices required in the world. Traceability will deliver this information and the history of the clothing, such as the universe of 450 lacemakers involved in the process and where part of the lace is destined. Vicunha pays a premium when purchasing cotton, and the money goes to the institute.

The institute's umbrella of activities is broad, says Ani, and for now, the construction of a teaching clinic aimed at supporting children with disabilities, which should be opened in 2025, and two vocational courses focused on agriculture already launched with partners, including the state Department of Education. "In parallel with the institute we created the women of fiber movement connecting women not only in agriculture, but in health, fashion, influencers and political players," says Ani. The idea is to bring together expertise from female perspectives to create solutions to local problems.

But all the productive and project effervescence will not be worthwhile if logistics do not contribute to the flow of goods. The improvement of state highways over the last year has created an environment of optimism for investment. "The infrastructure still needs to improve greatly. But I have seen progress during the last year and a half that I have been here," says Gilmar José Cadore, CEO of InSolo, another local grains giant. "I travel a lot on the road and the machines that make improvements to the highways call my attention all the time."

The state's grain exporters use the ports of Arco Norte, especially Itaqui, in Maranhão. This recent infrastructure significantly reduced the logistics costs of local producers, who in the past had to send all their production to Santos, in São Paulo. The government is studying feasibility for a waterway in the Parnaíba River, to link Uruçuí, in the south of the state, to the Port of Luís Correia. The Port's first stage finished December, 2023 and has three more planning stages. It should have a fishing terminal, another for grains and fertilizers, general cargo, and green hydrogen and ammonia. The port is Piauí government's big bet to boost the state's exports, especially grains and minerals. Public authorities started the debate to listen to private companies in the segment. The Port project has been well evaluated by the Association of Soy Producers of Piauí (Aprosoja-PI). "I am optimistic about the discussion of projects like the port," says Alzir Neto, president of the entity and one of the partners in Piauhy slaughterhouse. "A lot of things were shut down due to political lack of interest, lack of dialog with businesspeople."

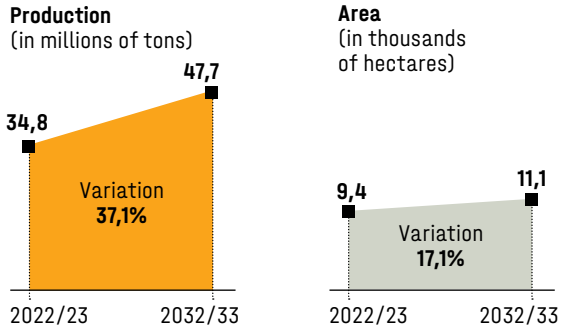
Structural improvements will positively impact the first meatpacking industry under construction. According to Neto, there were only small slaughterhouses. "The state has never had a meatpacking industry," he says. The investment

Grupo Progresso farm in Piauí: in addition to corn and soy the Group also invests in cotton

EDUARDO FRAZÃO

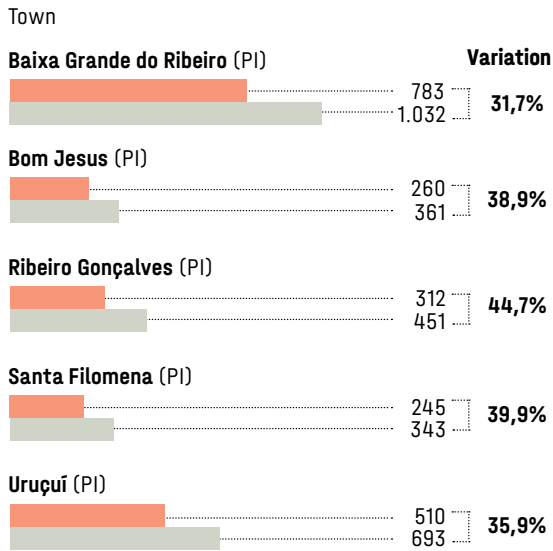
POTENTIAL FOR EXPANSION

Matopiba should grow in the next 10 years



The Map estimates variations above 30% in production in the main agricultural towns of Piauí

(in thousands of tons) 2022/23 2032/33



The expansion goes beyond soybean and corn

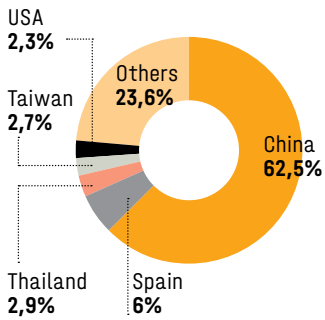
Estimated increase of **21%** in **cotton** production in 2024

2nd producer of **cashew nuts** in Brazil

1st exporter of **fresh honey** in Brazil

31% of **honey** exported comes from Piauí

Countries that imported the most from Piauí



Source: Ministry of Agriculture and Livestock, Companhia Nacional de Abastecimento (Conab) (National Supply Company).

LEANDRO FONSECA

Josep Arrey, managing partner of Grupo Arrey: with a gradual decrease in interest rates the goal is to get investments off the ground

of 140 million reais will allow the slaughter of 400 heads per day, the capacity of a medium-sized slaughterhouse. In comparison, the average slaughter by large units is around 1,000 heads per day. Under construction, the Piahuy group plant should begin to operate by the end of 2025. The state has cattle, sheep and goat herds – the latter, one of the largest in Brazil. But the quality of the meat needs improvement. The group has initiatives to encourage crossbreeding that provides high-quality meat, says Neto.

Regarding proteins, another project is Laticínio Vale do Gurgueia. The cornerstone should be inaugurated in April 2024 and the plant will have a capacity of 300,000 liters per day when operating at full capacity, by mid-2026. The investment in the factory amounts to 500 million reais. Afonso Rodrigues Junior, one of the partners, says that the facility is viable because of a state government program to encourage milk production on family properties. This project is aimed at increasing the income capacity of 1,500 families. Junior says that Piauí currently produces only 140,000 liters per day, and imports most of the milk it consumes. "The state's consumption capacity exceeds our installed capacity," he states.

The factory's production line, belonging to Vialat, an industry based in São Paulo and with activities in Minas Gerais, will combine powdered milk, mozzarella, cream cheese, special cheeses (such as curd) and liquid chocolate. The production of a special cheese from the region is being studied to create a brand for the Gurgueia Valley. The idea is to do something like what exists in Serra da Canastra, in Minas, a region with internationally awarded cheeses.

CHESTNUTS, FRUITS AND HONEY

Piauí stands out for its production of cashew nuts, the second largest producer in the country. The Arrey Group, for example, processes between 7 and 10 million kilos – a third of the cashew grown in the state. The only local cashew nut industry has been in the hands of the Spanish group for 30 years, and trey are planning to modernize it in 2024. The idea is to buy equipment to reduce nut breakage. "We focus on quality rather than quantity" says Manuel Arrey, CEO of the group that also has businesses in shrimp, eucalyptus and civil construction in the state. The modernization project will come out of the drawer, mainly because of the gradual reduction in interest rates in Brazil. According to Josep Arrey, managing partner of the group, the movement will help cashew nuts from Piauí land in Middle Eastern markets via Dubai – a market that requires nuts with less breakage, for example.

The honey chain, a product in which Piauí is the country's largest exporter, is working to add value to the organic product. According to many local producers, the biggest challenge today is to remove the product from a commodity status. Most beekeepers export in gallons, at prices defined by the external market, in a market movement like grains. Ranked in 11th position in the world, Brazil exported 28,500 tons in 2023, to the United States, Germany and Canada. To stand out among global honey exporters, the strategies are aligned with the project.

DISCLOSURE

Honey in Piauí: the State is the largest exporter in Brazil and now wants to add value to its production

At Grupo Sama, one of the largest in Piauí, the focus is innovation. "We are launching new honey-based products, such as hot honey [honey with pepper], compound honey and mono florals," says Samuel Araújo, CEO of the company. Over the last two years, the company has been studying flowering plants with scale potential to be destined for the foreign market. Another aspect of his work is strengthening the sales teams in the international market. Sama's objective is to double foreign sales in 2024 as to top the 300 containers shipped last year.

There is honey production in the South, Southeast and Northeast, but Northeastern honey has competitive advantages, say sector agents. There are specific productive characteristics in the biome (contributing to flavors) and the distance from monocultures – something that prevent bees from landing on flowers from crops that contain

traces of chemical agents, for example. Araújo explains that they are characteristics in the caatinga biome belt, comprising Piauí, Ceará, Maranhão, and part of Bahia. "This is a tremendous commercial advantage for us," says the CEO of Sama.

The possibility of producing organic honey without traces of chemicals and with the potential to distribute income for regional development caught the attention of Polvo Lab, an impact economy startup led by Ana Maria Diniz, daughter of Abílio Diniz, and Gabriella Marques. Since 2021, the company has been in partnership with the Comapi Beekeepers Cooperative that covers beekeepers from the Simplício Mendes microregion. "The beekeeper, himself, is a protector of nature," says Janete Dias, director of the cooperative. The project reaches 250 families and should expand to 600 very soon. Part of Polvo Lab's work is to contribute to the added value of the product, marketed as 'Honey for Real'. "The brand is a provocation since there is a lot of products mixed with syrup being sold to consumers," says Gabriella Marques. The brand should reach the foreign market as "Honey for sure!" . The pots have already arrived in some supermarket chains. In São Paulo, for example, they are on the St. Marche network. Value-added sales increase the beekeeper's income by 25%.

At Casa Apis, a center for beekeeping cooperatives, one of the strategies has been to reduce crop losses. As the region suffers from drought in the summer that can lead to losses of up to 50% of beekeepers' production due to the death of trees, producers are cultivating more resilient species. Reforestation involves at least eight species, with the goal of planting 211,000 trees on 315 hectares by 2026. The program was granted the award for the best beekeeping project on the planet at the World Beekeeping Congress held in Santiago de Chile, says Wellington Dantas, general manager of Casa Apis.

Piauí's agriculture has the challenge of expanding production without affecting forest areas. According to Investe Piauí, a development agency, it is the state with the largest vegetational cover outside the Legal Amazon region. By state legislation, producers must set aside at least 30% of the total area of their properties for preservation. "We preserve even more than what the law requires," says Tom Prado, CEO of Itaueira, expected to harvest 39,000 tons of fruit, including melons, this next harvest. For the youngest in agribusiness, growth was accelerated. The challenge is to maintain the pace and add value to what comes from the ground. ●

Port in Piauí: new infrastructure will reduce transportation costs

DISCLOSURE

INNOVATION

ARTIFICIAL INTELLIGENCE (AI) IS LEARNED AT SCHOOL. AT LEAST IN PIAUÍ'S EDUCATION SYSTEM. As of 2024, students enrolled in high school enrolled in the State's school network, in addition to those in the 9th year of elementary school, will have AI classes taught with the help of a Google platform. "We are excited about the possibility of supporting the Piauí's government in educational strategies to prepare students in high demand areas in the job market," said Google through its press office.

For example, students will attend classes, in machine learning, ethics related to the use of AI, and automation-based programming. The goal is that students incorporate AI into their study routines and encourage teachers to use it as a teaching resource in the classroom. The new subject will be offered to around 120,000 students in the State network. "Only 11 countries have included this kind of teaching in the basic education syllabus. Brazil is now the 12th", highlights Washington Bandeira, State Secretary of Education of Piauí. "We want to prepare our young people for the professions of the future and foster Piauí's innovation ecosystem," he adds.

How does the state get its first unicorn? "Education is the basis for everything else," responds the secretary. Bill Gates' trajectory suggests that Bandeira's thought is correct. The American fascination for programming began when he was only 13, when his school bought the first computer terminal. In 1975, as we know, Gates founded Microsoft

RESERVE

Efforts to make Piauí increasingly attractive for new startups and businesses in general involve everything from the universalization of technology education to the digitalization of public services

DANIEL SALLES

LEANDRO FONSECA

Liceu Piauiense in Teresina: around 120,000 students in the state network will be given AI classes as of 2024

that made him one of the richest men in the world.

With an eye on the potential that big techs have to offer, in 2023, Bandeira and the governor of Piauí, Rafael Fonteles, visited the headquarters of Google and Amazon in the United States. With the first, the duo signed a partnership that involves teaching AI in high school and the 9th year of elementary school. With Amazon, they signed a partnership to offer technical courses in cloud computing using the American platform.

MORE PROGRAMMERS

Piauí was a pioneer in adopting technology teaching in the public school system. More than 350 schools that are part of the state network offer classes in game programming, systems development and digital marketing — Fonteles wants to transform the state into the largest breeding ground for programmers in the country. "The goal is to train 10,000 professionals per year, who could help boost the number of startups installed in the state", says the state Secretary of Education. A total of 18,000 students are enrolled. And the AI discipline is being implemented in all high schools as well as in the 9th year of elementary school, amounting to 120,000 students.

These subjects originated from the traditional syllabus are linked to the State government's plan to expand the provision of full-time education. "With more course loads, we will be able to include

new subjects such as financial education," explains Bandeira, adding that subjects considered obsolete are being eliminated. Last year, when Fonteles government began, the number of full-time schools jumped from 96 to 200. The goal for this year is to add another 151 units to the list.

By the end of 2024, therefore, Piauí will have 351 schools adapted to this model, representing 70% of the state network in high school. With this new leap, requiring an investment of 467 million reais, 178 of the state's 224 towns will now have at least one full-time school. And the number of students benefiting from it will reach 69,000 — equivalent to 65% of the total students enrolled. "This model enhances the teaching and learning process of our students," stated the Governor in January of 2024. The objective is to universalize the format in the state by the beginning of 2026.

PARTNERSHIP WITH MIT

To boost local education, the government also teamed up with the Massachusetts Institute of Technology (MIT), in the United States. The partnership with the renowned institution paved the way for the creation of a course on entrepreneurship for students from the State of Piauí's network. The methodology used was developed by Bill Aulet, Executive Director of the MIT Entrepreneurship Center and author of the book "Disciplined Entrepreneurship: 24 Steps to a Successful Startup."

In terms of public education, Piauí ranked 9th in the latest available data from the Basic Education Development Index (Ideb) for high school. In the previous edition, in 2019, it ranked 14th. "We are working to reach first place in the next rankings," says the state Secretary of Education. In 2021 Teresina was named, also by Ideb, as the country's capital with the best public elementary education.

In addition to expanding the offer of professional courses, including off-the-chart subjects in the regular syllabus, increasing student work-

THE STATE WAS RANKED IN 9TH IN THE LATEST IDEB RANKING FOR SECONDARY EDUCATION, ISSUED IN 2021. IN THE PREVIOUS 2019 EDITION, IT RANKED 14TH

BLOOMBERG/GETTY IMAGES

Known as Europe's Silicon Valley, Estonia was an inspiration for Piauí's digital transformation

load and establishing strategic partnerships, the Department of Education also invests in infrastructure. This year, the bureau promises to allocate around 500 million reais to renovate the schools in the network. The measure is essential to allow the expansion of the full-time teaching model. Currently, around 150 schools already have the ideal infrastructure for students to stay there for a long time.

INSPIRED BY ESTONIA

Developments in education are intertwined with another achievement of the Piauí administration: the State's digitalization. Not surprisingly, a large part of the 215,000 enrollments made in the state education network in 2024 was made online — the goal was to reach 200,000. The final number is expected to increase when enrollments in the Youth and Adult Education (EJA) program are tallied. "The current government aims to bring innovation to all areas," recalls Bandeira.

Considered as the most digital country on the planet, Estonia, in the North of Europe, served as inspiration for Piauí's digital transformation. In the nation bathed by the Baltic Sea, also called Europe's Silicon Valley, 99% of public services are available digitally. This led Piauí to implement the Estonian data sharing technology between government agencies — it was the first state in the Northeastern region and the second in Brazil to do so.

Another unique feature: last year, Piauí set up a physical representation in Estonia, the Investe Piauí Estonian Trade Office. Located in the capital, Talín, the office's mission is to make life easier for Piauí companies interested in venturing into the Old World. Furthermore, the office serves as support for other Brazilian states interested in following the same path as Piauí's. "Estonia knew how to use digitalization not only to improve the provision of public services, but to transform itself into a high-income country," says Raphael Fassoni, one of the founders of the Estonia Hub, a 2019 company with the goal of opening doors of the European country to Brazilian startups and public organisms. Last year, the company welcomed 200 Brazilian including representatives from 22 states. "We have a lot to learn from Estonia," adds Fassoni, who moved to Talín in 2019.

STARTUP INCUBATOR

In addition to the Estonian office, Investe Piauí set up one in Lisbon and another one in Mas-

FULL TIME SCHOOL

Expanding this type of education is one of the plans of the current government

For this purpose,

467 million reais

are being invested The result by the end of 2024

...351 high schools

(which represent 70% of the state secondary education network) will offerfull-time teaching. Today there are only 200.

...178 of the State's towns

will have at least one school with infrastructure for the extended stay of students.

... 69,000 thousand students

(65% of the total) will benefit from the change

sachusetts — located, not by chance, on the outskirts of MIT. The state company is responsible for attracting foreign investment. Furthermore: it is committed to boosting the development of local startups that have a lot to gain from any exchanges established in Europe or the United States.

In 2023, Sebrae mapped 310 startups settled in Piauí, most of them in Teresina. This is a 34% jump compared to the previous year, when they identified 230. Established last year, Startup Piauí has the mission of multiplying these numbers. Determined to support up to 400 companies of its kind, the accelerator has established this goal: it wants to help get at least 300 new startups off the ground by 2026. Another objective is for 75 to start earning revenue from this year onwards.

One of the best-known startups in the state is Bipp. Founded in 2017, the fintech offers payment services, receivables management, integration of marketplaces and sales channels on digital platforms for micro and small businesses. Another prominent startup is Ubiz Car, a type of Uber. Active since 2018, it focuses on serving small towns, which are not usually on the Californian giant's radar. Currently, Ubiz Car operates in more than 50 towns in Minas Gerais, Tocantins, São Paulo, Maranhão, Bahia, Rio Grande do Sul, Espírito Santo, Goiás and Ceará, in addition to Piauí.

DIGITAL ADMINISTRATION

The State's digitalization that gained strength with the partnership signed with Estonia, drives the development of more startups and makes life easier for the general population, among other benefits. Launched in September 2023, the Gov.pi Cidadão platform enables access to more than 100 services from over 10 government agencies. Now, people from Piauí no longer need to go to public of-

Computer laboratory at Escola Darcy Araújo, in the capital: the 640 schools in the state network offer programming classes

LEANDRO FONSECA

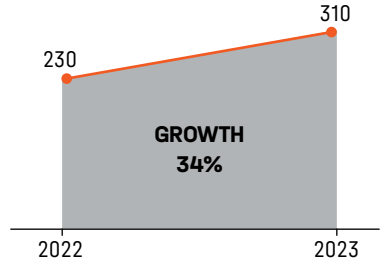
fices to solve a lot of problems. This is the case, for example, of many of the issues related to the National Driving License (CNH) and the Motor Vehicle Ownership Tax (IPVA), among others.

Developed by the Piauí Information Technology Company (Etipi), the platform has an application that can be downloaded free of charge. "We have mapped 380 services that need to be digitized", says Ellen Gera, Etipi's CEO, summarizing the challenges that still need to be overcome. "It is not enough to simply computerize services that are offered in person. In the digital world, they must be made available in a very intuitive and user-friendly way. This is the only way that even those who are not familiar with technology can solve their problems without leaving home."

Before Gov.pi Cidadão, the state gained an equally revolutionary platform, Gov.pi Empresas. This is linked to the Commercial Board of the State of Piauí (Jucepi), which had been digitalizing its services since 2015. "At that time, there were cases of new companies having to wait up to three years to obtain all the necessary documentation," recalls Alzenir Porto, Jucepi's President. "This is not acceptable and does not contribute to the emergence of new businesses." Now, all services offered by the agency are digital and the opening of companies in the state is 100% online — all through Gov.Pi Empresas.

STARTUPS IN PIAUÍ

How the state is expanding innovation ecosystem



GOAL: get at least
300 new startups
off the ground by 2026
(75 of them already earning revenue in 2024)

THE GOV.PI COMPANIES PLATFORM PROVIDING 251 DIGITAL SERVICES, TRANSFORMED PIAUÍ INTO THE STATE FROM THE COUNTRY THAT SETS UP COMPANIES IN LESS TIME

DEBUREAUCRATIZATION

With this new development, Piauí became the state in the country that sets up companies in the shortest time. According to the ranking of the National Network for the Simplification of Registration and Legalization of Companies and Businesses (Redesim), getting a company off the ground in the state took eight hours in December, 2023. What was the national average? One day and ten hours. "Today, with good internet, one can set up a company in Piauí in a few minutes," says Alzenir, from Jucepi. She refers to the commercial registration, which does not include the stages of address viability in city halls and licensing.

To reduce bureaucracy in the process of opening new CNPJs, Fonteles' administration published a series of decrees that classify 909 minimal risk economic activities. As a result, new companies conducting one of these activities are exempt from obtaining permits and prior operating authorizations. From January to December 2023, almost 29,000 companies were opened in the state, of which 20,398 are in the hands of individual microentrepreneurs (MEI). All in all, Piauí began 2024 with 276,747 active companies.

Currently, Gov.Pi Empresas provides 251 digital services. Just over a third go to Jucepi and the rest involves the other seven public agencies related to the business world, such as the Finance and Environment departments, Health Surveillance and the Fire Department. "A more favorable environment for the emergence of new businesses helps to heat up the economy," recalls Jucepi's President. "And this is what will boost the creation of jobs for our students and the emergence of new startups." And, why not, a new unicorn? ●

A LOGISTI

Piauí Port: after decades of waiting, Piauí's first port complex was opened in December 2023

CAL LEAP

DISCLOSURE

With its first phase completed, Porto Piauí is a key player in the success of Intermodal, one of the most innovative infrastructure projects in the country

CARLA ZIMMERMAN

Conceived in the 1960s, one of the Piauí administration's most ambitious projects has finally taken off. In December 2023, Governor Rafael Fonteles (PT) opened Porto Piauí – also called Porto de Luís Correia, because of the town in the north of the state where it is located – the first maritime port complex in the State. "Piauí was the only state with a coastline that did not have a port, and this certainly undermined our development," says Fonteles.

Neighboring the Export Processing Zone (ZPE) of Parnaíba, a free trade area, the port – operated and managed by Investe Piauí – brings some advantages due to the fact that it includes, from the beginning of the works, structures that lead to the future of the economy, such as fishing, grain and ammonia terminals – a big step towards transforming the region into a global hydrogen hub.

The first phase was granted 110 million reais in investments. The fishing terminal was the first to be delivered, as well as access for small, medium and large vessels, the administrative center and the entire lighting, energy, water and urban roads infrastructure. "With this fishing terminal and a fishing industry plant, we will more than double Luís Correia's GDP. And when we have all terminals completed, it is impossible to anticipate the impact all this will generate", says the governor.

HERE COMES INTERMODAL

The port is a key feature to the completion of another project, even bigger and even more audacious: the Vale do Parnaíba Intermodal, which will interconnect the entire state through road, rail,

waterway and sea. The initiative also includes the ZPE, where 18 companies already installed (16 of them, startups), and form the country's first technological district in an Export Processing Zone. “The port’s potential is immense covering agribusiness, mining and renewable energy industries, with a focus on sustainability and new businesses,” says Maria Cristina de Araújo, CEO of Porto Piauí.

Green hydrogen plants have already announced investments of 110 billion reais (go to page 26 for details) in the construction of industrial plants at ZPE Piauí. The idea is to transport fuel, obtained from the electrolysis of water carried out through renewable sources, to Europe. The European Union is expected to import around 10 million tons of green hydrogen, which is part of the bloc's energy transition agenda, by 2030.

But it is not just the coastal area that has been making progress in transport logistics. In the countryside work continues at full steam on the roads. The PI-397 highway, also known as Transcerrados, an important grain transport route, has already received investments of around 300 million reais for paving and other improvements through a Public Private Partnership (PPP). The modernization project includes the Palestine Road (PI-262). “There are only 6 kilometers left to complete 100% of the 273-kilometer Transcerrados highway,” says Fernando Simões, CEO of Simpar, holding company that includes CS Infra, a concession management company in charge of recovering highways in Piauí. “We are satisfied with the initiative of Piauí’s administration regarding the region’s road and logistics complex, all of which will contribute to the flow of agribusiness products.”

The works on Transcerrados and Palestine Road is part of a

comprehensive project that should enable the implementation of innovative logistics throughout Piauí. The new infrastructure, consisting of a ring belt formed by a set of highways, also includes a waterway on the Parnaíba River and a railway between Teresina and the port. “It is important to highlight that the Intermodal project will provide integration between the Southern and Northern regions of Piauí, in addition to providing access to the sea, putting the state on the map of Brazilian maritime trade and global too,” says Washington Bonfim, State Secretary of Planning state.

The project was designed to boost transport logistics, ensuring more competitiveness in the production sector, and to attract investments. As soon as the economic feasibility studies are completed, which should happen in the first half of 2024, public notices will be released to select companies that will carry out the work on the waterway on the Parnaíba River that will connect the south of the state (from Uruçuí) to and from Teresina to Parnaíba, in the north, for grain drainage; and the railway connecting the mineral production hub, in Piripiri, to the port. “It makes a lot of sense for the same company to operate a terminal at the port and one of the transport modes. A mining company, for ex-

ROMÁRIO DIAS

Extraction of iron ore in Piripiri: a railway will facilitate transport to the port

duction is going up in Piauí is expected to fall by almost 30%, going from around 128 reais per ton to 93 reais per ton, according to data from a study of economic viability. It is particularly important even more so when one considers that the commodities and export sector survive in tight margins – in which every penny counts.

And not only competitiveness of companies and rural producers should increase. In a scenario of increased production and the opening of new markets, the flow of goods can be transported in a safer and more economical way. In this context, the numbers are impressive. Considered the new Brazilian agricultural frontier, the Matopiba region (a region formed by Maranhão, Tocantis, Piauí and part of Bahia) is expected to get a production of 47,7 million tons of grains in the next ten years, 37% more than in 2023, according to the Ministry of Agriculture and Livestock. In the last decade, the harvest of corn and soy in the region increased by 92%, from 18 million tons to 35 million tons. Two towns in Piauí – Uruçuí and Ribeiro Gonçalves – should lead the production ranking along with Riachão das Neves and Jaborandi, in Bahia. In the next ten years grain production in Piauí should more than double, reaching 14 or 15 million tons per year. "Today, transporting goods in Brazil, transported mainly by road, is expensive and there are many losses, with negative impacts on the environment. It is about time to change that especially because our commodity production is going to grow immensely," analyzes Oliveira.

STRATEGIC LOCATION

State will be able to export production more quickly to the other states

Distances to other countries and states

- Ship travel time
- Airplane travel time

Source: Giz, 2022.

ample, might be interested in operating the mineral terminal and the railway, which has a natural vocation for transporting this type of cargo," says attorney Rodolpho Santos de Oliveira, technical leader of the team hired to conduct studies on the Intermodal project.

MORE COMPETITION

With the option of transport by waterway and railway, the cost of transporting grain, whose pro-

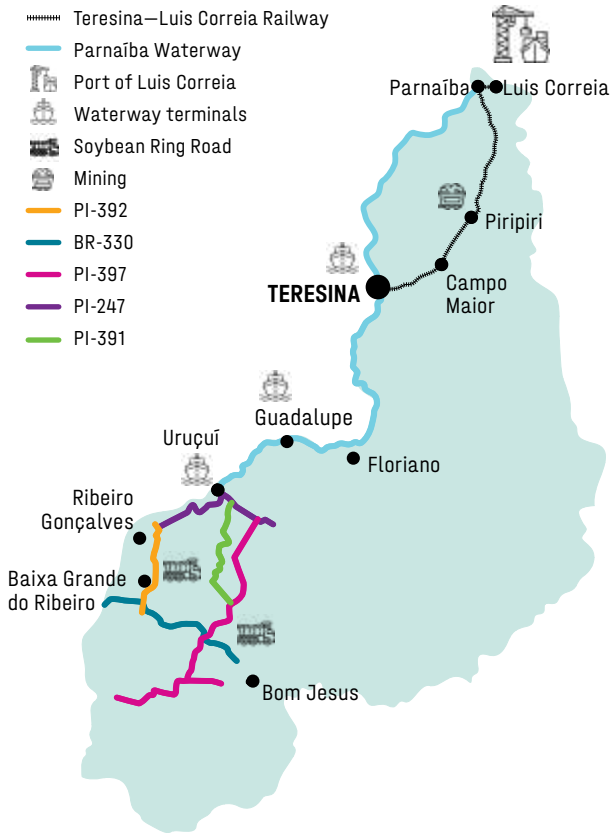
Not surprisingly, Vale do Parnaíba Intermodal, especially regarding waterway and rail transport, will serve locations such as Uruçuí and other areas known for agricultural production. Today, companies that transport commodities such as soybeans end up using the ports of Itaqui, in Maranhão, hundreds of kilometers away, from Uruçuí, to export their product. "Intermodal should also

DISCLOSURE

Transcerrados: the soybean road has been paved

ON THE DEVELOPMENT PATH

Known as one of the government's most daring projects, Intermodal Vale do Parnaíba plans to connect the State by land and sea - and use the largest river in the Northeast to revolutionize transport and infrastructure in Piauí



attract a series of industries to the south of the state due to its convenience and logistical flow capacity," says Bonfim. Large slaughterhouses from Mato Grosso and Goiás are in discussion with the Piauí government to install production units in Piauí (see more on page 36), which should benefit from the creation of jobs, increased revenue and development rates. "The region is a large producer of grains and is one of the most important ingredients of livestock and poultry food. With the new logistics system, companies can combine business with pleasure, relying on the supply of inputs and efficient cargo transportation," says Bonfim.

NEW ORE RESERVES

Not only agribusiness is doing well in the State. Piauí is also considered the new mining frontier, especially about iron ore and nickel – the latter, essential to produce equipment needed in the energy transition. Recently, iron ore was found in the town

BENEFITS

MORE COLLECTION → Piauí will start collecting taxes with exports through the local port. Today, a large part of the State's production is transported through Maranhão and Ceará.

ATTRACTION TO → industries due to the easy and logistical capacity of flow, the State should attract new export-oriented industries, such as meatpacking plants, green hydrogen producers and mining companies.

COST REDUCTION → By using the Parnaíba River to connect the southern and northern regions of the State, the expectation is to reduce the cost of transporting grain from Uruçuí by 30% and benefit transport from the mineral production hub, in Piripiri, to the port.

NEW INVESTMENTS → With the integration of modes, green hydrogen plants have already announced billion-dollar investments for the construction of industrial plants in the Piauí ZPE. The intention is to take fuel to Europe.

Source: Planning Department of the State of Piauí.

DISCLOSURE

Fernando Simões, CEO of Simpar: bet on Intermodal to ease the flow of agricultural products

MINING

Investments in logistics combined with large mineral reserves have been attracting large mining companies to the State

Mining	Where	Production	Status
Lion Mining	Piripiri (PI)	1 million tons of iron ore/year by 2025 and 3 million tons/year by 2027	In operation, transporting production by highway to Ceará ports of Pecém and Mucuripe
Piauí Níquel	Capitão Gervásio Oliveira (PI)	600 tons of nickel per month	Intends to invest R$6 billion in a new unit to expand production to 25,000 tons in the coming years
SRN Mining	São Raimundo Nonato (PI)	Iron ore reserves of 637 million tons and production of 2 million tons/year	Obtaining necessary licenses to begin extraction in 2024
Bemisa	Paulistana (PI)	Iron reserves with an estimated reserve of 1.2 billion tons	Studying logistics of production flow. No forecast available to start operating

Source: Investe Piauí.

of Piripiri, 166 kilometers from the capital Teresina. The mining company Lion Mining, already operating in the region, intends to expand the exploration of reserves. The company is conducting geological research in an area of 22,000 hectares in Piripiri. For comparison purposes, today the mining company explores 50 hectares, extracting around 5,000 tons of iron ore per day. "There is considerable potential of finding new reserves in the region," says Jader de Oliveira, general director of Lion Mining. "And of course, we are very excited about the fact that we will have a railway passing approximately 15 kilometers from the mineral reserve, connecting the extraction site to the seaport."

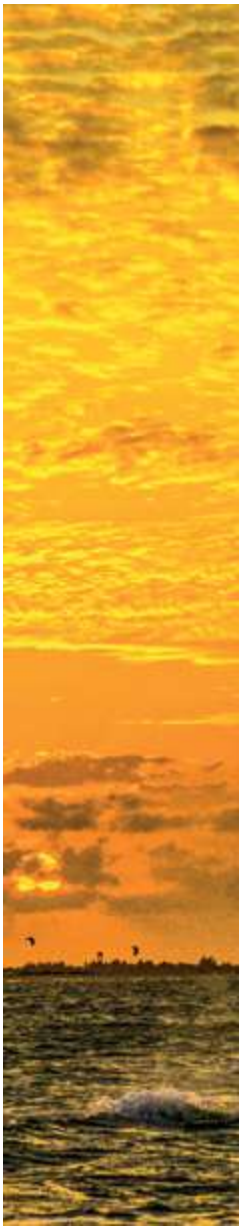
Coveted on a global scale for its use in the manufacture of batteries for cell phones and electric cars, among other applications, nickel is one of the metals with greatest demand worldwide. With an estimated reserve of almost 100 million tons, Piauí should stand out in nickel exploration. The company Piauí Níquel Metais, located in the town of Capitão Gervásio Oliveira, has already announced that it intends to expand production from the current 600 tons per month to 25,000 tons in the coming years with the construction of a new production unit in which 6 billion reais will be invested. "We intend to serve the emerging market for electric cars batteries by offering high-quality nickel, available in Piauí's reserves," says Marcelo Rideg, director of sustainability at Piauí Níquel Metais. "It is also important to emphasize that the company is investing in advanced ESG concepts, with the idealization of an operational unit in which there will be no dams and where rejects will be reused."

Companies involved in new initiatives in the State remember that projects of this magnitude require not only financial resources, but also efficient logistical support, capable of guaranteeing speed, cost reduction and predictability in transport. In other words, an adequate infrastructure so that everything runs smoothly. It is quite a leap. ●

WITH TOURIST ATTRACTIONS RANGING FROM BEAUTIFUL BEACHES TO NATIONAL PARKS SUCH AS THE SERRA DA CAPIVARA PARK, PIAUÍ ATTRACTS ENTREPRENEURS, DIGITAL NOMADS AND, ALSO, TOURISTS LOOKING FOR ADVENTURE OR PEACE AND QUIET

DANIEL SALLES

CARLOS MARANHAO/GETTY IMAGES



AURELIANO MULLER/CCOM

FROM ARCHEOLOGY

Serra da Capivara and Barra Grande: symbols of a state that is an invitation to the spirit of adventure

B

elgian chef Hervé Witmeur did what many tourists dream of doing when visiting Piauí: staying there forever. A kitesurfer, he set foot in the state for the first time in 2011 to visit Barra Grande — the beach, 350 kilometers from Teresina, is one of the most suitable for kitesurfing in the country. He got to know the region along with his wife, educator, Marie Stas-Witmeur, with whom he returned two more times before deciding to say farewell to Brussels, Belgium. The city of Brussels is where his father's well-known restaurant is located, and where Hervé improved his talents. “We simply could not resist the idea of living amidst nature,” he says, justifying his decision to live in Piauí.

In 2012, the couple settled in Barra Grande, and at that time the place was still unknown throughout Brazil and with extraordinarily little infrastructure for tourism. The following year, they set up a restaurant, the La Cozinha (The Kitchen), just a few yards from the sea. In 2016, the project expanded into a charming guesthouse with seven bungalows. Hervé admits that it took him about four years to surrender to the local ingredients, which today make up the majority of what he uses at La Cozinha. “In the beginning, with my head still very much tied to European cuisine, I preferred imported products, which didn’t make any sense,” he recalls.

TO KITESURFING

Today he is an enthusiast of the so-called natural cuisine favoring local products and advocates preparing ingredients with as little intervention as possible. The vegetables are harvested from a vegetable garden that the chef set up near the kitchen. "I really like using ingredients that I grow myself," says he, who remains faithful to the French culinary techniques learned in Europe. In 2016, he founded, in partnership with a friend, David Saey, La Reserva.

La Reserva is a farm of organic fruits, vegetables and greens. This is the case of moringa, acerola and turmeric, classified as superfoods. With 14 hectares, La Reserva is located in the town of Parnaíba, 70 kilometers from Barra Grande. It is managed according to the precepts of permaculture, agroecology and syntropic agriculture — all to reduce the impact on the soil and avoid the use of pesticides. The farm supplies La Cozinha, neighboring businesses and Éllo, a restaurant that Witmeur set up in Jericoacoara, Ceará.

The chef and his wife have witnessed the transformation of Barra Grande like few others, and today it is synonymous with sustainable tourism and one of the most popular destinations in Piauí. "When we settled in the region, there weren't even streetlights," the chef. "But we were sure it would develop. There were, at most, half a dozen restaurants and accommodation options. Today there are dozens of them."

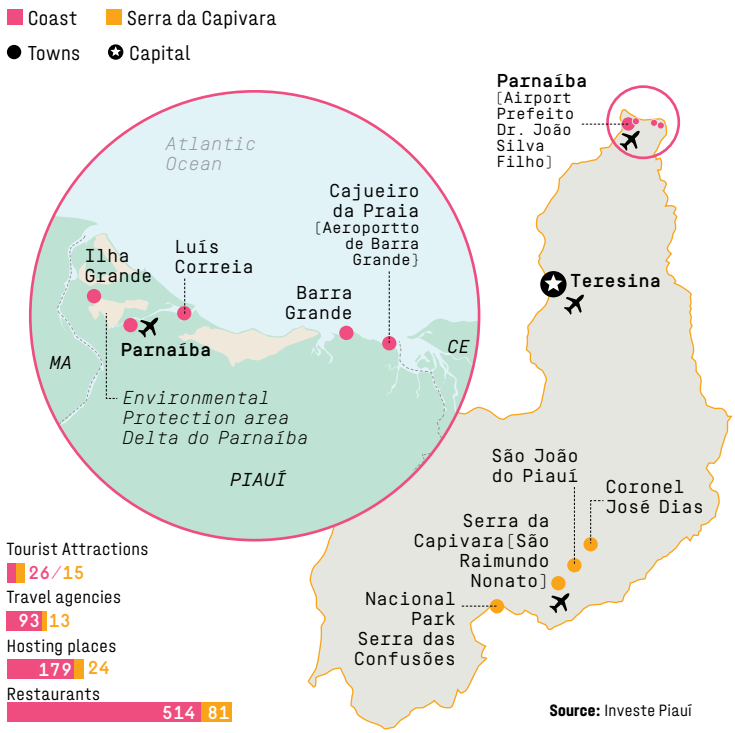
Barra Grande's success among kitesurfers is due to the constant winds, which have also attracted kayakers and stand-up paddleboarders. For those who are not fans of water sports, the main attraction is the place's atmosphere, maintained to this day and replicated all over the old fishing village. The beach belongs to the town of Cajueiro da Praia, and the name is attributed to a cashew tree that has always called the attention to everyone who came to the shore. Nowadays, however, the most successful tree in the city is another one, considered the largest in the world of its species and it spreads over 8,810 square meters and is called Cajueiro Rei (Cashew King).

Since 2023, getting to Barra Grande has become easier. That was when the State administration completed the construction of Cajueiro da Praia airport, opened last December. With night markings, the runway is 1,500 meters long and 25 meters wide, allowing aircraft to land and take off for up to 40 people. The new feature has a passenger terminal and has cost around 16 million

James Andrade, of Grupo JAP: investment in the tourist potential of Serra da Capivara

EDUARDO FRAZÃO

THE MAIN TOURIST CENTERS IN PIAUÍ



Source: Investe Piauí

DISCLOSURE

Inn next to La Cozinha, in Barra Grande: seven bungalows welcome visitors from Brazil and the world

DISCLOSURE

Belgian chef Hervé Witmeur: after opening a restaurant, he set up a farm focused on organics

reais. It should do for Barra Grande what the Jericoacoara airport, opened in 2017, did for the Ceará resort. Previously, anyone visiting that destination had to travel long hours on the road from Fortaleza.

ROUTE OF EMOTIONS

There are many similarities between Barra Grande and Jericoacoara, another well-known haven for kitesurfers. Not surprisingly, both destinations are considered strategic for the Route of Emotions. It is a tourist route of 500 kilometers long across Ceará, Maranhão, and Piauí, in a total of 14 towns. The Ceará cities included are: Jericoacoara, Barroquinha, Camocim, Chaval and Cruz. Maranhão includes Barreirinhas, Paulino Neves, Araióses, Tutóia and Santo Amaro do Maranhão. Parnaíba, Ilha Grande, Luís Correia and Cajueiro da Praia represent Piauí.

In the last four years, more than 70,000 people have explored the Route of Emotions with the support of tourism agencies. Tourists reserve 8 to 15 days to explore the route, which involves the Jericoacoara National Park, the Delta do Parnaíba Environmental Protection Area, in Piauí, and the Lençois Maranhenses National Park. In Cajueiro da Praia, observing manatees up to four meters long and weighing 800 kilos

is one of the most recommended programs — the town is strongly committed to preserving this species. And the region is also known for its profusion of seahorses. There is even a specific tour for those who want to observe these lovely creatures.

DIGITAL NOMADS

The success of Barra Grande, today the best-known beach in Piauí, has fueled the emergence of several bold developments — from boutique hotels to resorts. A large part of the high occupancy rates recorded by the majority is attributed to the so-called digital nomads. These are professionals who gave up their fixed address to work anywhere in the world — preferably in heavenly destinations like Barra Grande. All these professionals need is a good internet connection and the willingness of their bosses not to put an end to their remote work.

Just a few steps from the beach, Village Barra Grande is one of the most recent developments in the region. Still under construction, the residential condominium will consist of ground floor apartments with gourmet balconies and duplex cabins with a private rooftop pool. The first ones, measuring 79 square meters, are being sold for 460,000 reais. The cabins, measuring 159 square meters, start at 690,000 reais. The common leisure area will have swimming pools for adults and children and two gourmet areas with barbecue facilities.

Among the peculiarities of Piaui's coastline, there is a most striking one: there are only 66 kilometers of beaches. They belong to three towns: Parnaíba, Luís Correia and Cajueiro da Praia. The short coastal strip — the smallest in the country, considering all the states that are sea bathed — is offset by crystal clear waters, dunes, mangroves and Instagrammable lagoons and uninhabited stretches.

TRAVELERS ON THE RISE

There is no doubt that local tourism has a lot to grow. Last year, according to the Municipal Office for Economic Development and Tourism of Teresina, the capital of Piauí received 587,000 visitors representing a jump of 25.5% compared to 2022. With tourism, the city obtained 535 million reais in 2023 — 42% more than in the previous year.

These are figures that boost not only hotels, restaurants and similar businesses but also local design and crafts brands. This is the case of Trapos&Fiapos, (rags

Barra Grande, on the coast of Piauí: sports, restaurants and observation of manatees, seahorses

AURELIANO MULLER/CCO

& shreds) a store is in Teresina. Active since 1984, they specialize in rugs made from buriti straw, among other similar materials. "Many tourists, interested in buying something that represents Piauí, purchase our products," celebrates Nara Melo, one of the brand's partners, who has become a darling to enthusiastic architects from the Rio-SP connection. With 90% of sales made by residents of other states, either through e-commerce or through representatives, Trapos&Fiapos also sells placemats, cushions and blankets.

If the coast of Piauí owes much of its fame to its magnificent beaches — which invite both *dolce far niente* and the practice of water sports — the Serra da Capivara National Park marks its southeastern region. Created in 1979, it protects the largest concentration of prehistoric sites in the country. There are more than 2,000 — 1,200 of them in Boqueirão da Pedra Furada alone, one of the most beautiful spots in the place. When you get there, get ready to see cave paintings that date back to people who lived in the region some 30,000 years ago. French-Brazilian archaeologist Niède Guidon, who began research in the park in 1978 and is largely responsible for the discoveries of prehistoric riches, she is sure however that there are paintings that record the presence of man in the place some 100,000 years ago.

Designated as a World Cultural Heritage Site by UNESCO, the park covers more than 100,000 hectares and is more than 540 kilometers from Teresina. Getting there has been easier since 2023, when the closest airport, located in São Raimundo Nonato, started receiving regular flights. The result was that in 2023, the flow of visitors to the park increased by 28%.

Another guaranteed attraction in the region is the Museum of the American Man and its purpose is to disseminate the importance of the cultural heritage left by prehistoric people that lived there. The permanent exhibition comprises more than four decades of research conducted at the Serra da Capivara National Park.

"The tourism potential of this area is enormous," says James Andrade, director of Grupo JAP. "A tremendous amount of people would like to visit the region, and the only thing left to do was improve the local infrastructure." Grupo Jap teamed up with another company, DMDL, to reopen the Serra da Capivara hotel built in the 1980s on state owned land. Closed for many many years, it underwent a 9 million reais renovation and will have 50 suites, six more than before — the reopening is scheduled for April. "We expect 80% occupancy in the first twelve months", Andrade reveals.

LEANDRO FONSECA

Nara Melo, partner at Trapos&Fiapos: crafts sought after by enthusiastic architects from the RJ-SP connection

Further south, in the hinterlands of Piauí, the Serra das Confusões National Park (Hills of Confusion) spreads over more than 823,000 hectares — and is the largest reserve in the caatinga biome in the country. It houses magnificent archaeological sites, caves and rocks. The park was named like that because visitors are often confused by the mountains changing color as the sunsets.

Going north, the Sete Cidades National Park (Seven Cities National Park) is another option for those who love putting a backpack on their backs and immerse themselves in nature. With 6,200 hectares, it covers a transition area between the caatinga and the savanna. The park was named after seven sets of mesmerizing rock formations. It has trails, cave paintings, natural pools and a beautiful waterfall. It does not usually induce visitors to stay in Piauí forever, but this risk cannot be ruled out. ●

JORGE BASTOS/CCOM

A LOOK TOWARDS THE FUTURE

The State has just three years to complete a bold goal plan. The bottlenecks: time — and not leaving anyone behind

ÉRICA POLO

THE LIST OF GOALS FOR THE 2024–2027 MULTI-YEAR PLAN DESIGNED by the current public administration of Piauí is extraordinarily long – and there will be plenty of bottlenecks in the way to achieving objectives. Among economic indicators, the administration of Rafael Fonteles (PT) wants to reduce the Gini Index that measures income inequality (the closer to 1, the more unequal the region), from the current 0.518 to 0.497 in Piauí by the end of his term in 2027. The guidelines include a package of actions designed at a strategically and tactically to cover health, education, infrastructure, environment, and public management.

Renewable energy in Piauí: Attracting investment in energy is a promising path to reducing income inequality

Just like income inequality, life expectancy is also there: the average person from Piauí lives 68 years. The idea is to take the current level to 73 years. Changing structural frameworks through such a broad strategic plan depends on the accommodation of public and private interests – and strong political articulation. This last task is quite complex under normal conditions of temperature and pressure in public management – let alone in the current polarized Brazil. And 2026 is right around the corner.

One critical element is time, says Victor Hugo Almeida, CEO of Investe Piauí, the state's investment attraction agency. The State Planning Secretary, Washington Bonfim, in turn, lists three challenges. One of them refers to the Gini Index. "We are made up of 12 territories, with different economic and environmental characteristics, the jump in some can mean certain difficulties for others", he says. He explains. Piauí is made up of territories with quite different potentialities. Some are more dynamic, others are more "traditional" and there is still a 30% of rural population. According to Bonfim, there is a risk of less dynamic regions falling behind, losing qualified labor to other regions and deepening their own difficulties. "Without mitigation actions, this can turn out as an unwanted reality. This will be the big challenge. One of the governor's principles is not to leave anyone behind," says the Secretary of Planning.

Another issue on Bonfim's list is advancing in a result-based management culture, reconciling various social and economic development actions, such as the universalization of full-time, with professionalization, in education. "[This] requires close coordination between the Department of Education (Seduc) and training institutions, as the number of students is extremely large," states the secretary.

Finally, Bonfim talks about the changes in the business environment. According to him, Fonteles has given the topic full priority. "We are expanding the portfolio of PPPs [Public-Private Partnership] and, since the last administration, we have been firmly working on more flexible and secure regulation in relation to business openings in an integrated digital environment," he states.

All changes taking place in the economic environment contribute to attracting investors. It is a strategic move that will contribute to indicators such as people's real average monthly income. The plan is to reach 3,017 reais by the end of the term. The IBGE indicates that the average household income per capita in Piauí was 1,342 reais in 2023. The average income went up from 1,100 reais in 2022, showing a positive variation of 20%, placing the State in first place in the average household income increase per capita among the Northeast states in 2023. In 2013, it was 603 reais. The sectors with the greatest potential for attracting investment – and the State government's focus are renewable energy, tourism, innovation, education and agribusiness. As a result of actions in 'selling' Piauí around the world, the state signed a contract with two European companies – Solatio and Green Energy Park – to work on a green hydrogen project on the coastline – potentially one of the largest of its kind in the world – that will generate around 4,000 jobs in phase 1 by 2028, according to Investe Piauí.

Piauí's multi-annual plan also intends to disseminate professional and technological education following global trends. The ratio of enrollments in integrated secondary education (with comprehensive and professional education) is currently 21%, in relation to the total number enrolled in secondary education. The objective is to universalize the model for the state network in the next three years. Piauí currently ranks first in Brazil in technical education: 35% of students are enrolled in this model. This is a difference of 19 percentage points ahead of Ceará in second place, where this figure represents 15%.

Amid the climate emergency, environmental preservation cannot be left out. Growing without leaving green behind (yes, flying over the caatinga in the summer is a surprise for unnoticed São Paulo residents who would expect brown vastness) is one of the biggest challenges for public and private actors. Piauí has the largest vegetation coverage outside Legal Amazon – with 73.9% of its territory covered by native forest, according to data issued by Mapbiomas platform. State legislation determines the preservation of at least 30% of the farming area. Some of grain and fruit process, such as Itaueira (fruits) and Grupo Progresso (grains), say they can get a little more than this percentage. According to state planning, environmental education is also a priority in the public network and actions to reduce fires and illegal deforestation are included in the plan.

Focusing on social, environmental and governance (adjustments in public management are included in the program), the state has ESG (acronym in English for good social, environmental and governance practices) on its economic agenda, which continues to expand. Now it is a race against time. ●

LEANDRO FONSECA

View of Teresina shows the relationship between modernity and nature: capital is Piauí's gateway to welcoming investors, entrepreneurs and digital nomads. One of the fastest growing and most investment-attracting states, Piauí is also one of the most connected to global opportunities. Partnerships with companies like Google and governments like Estonia create an intense exchange of ideas and change the local landscape.●

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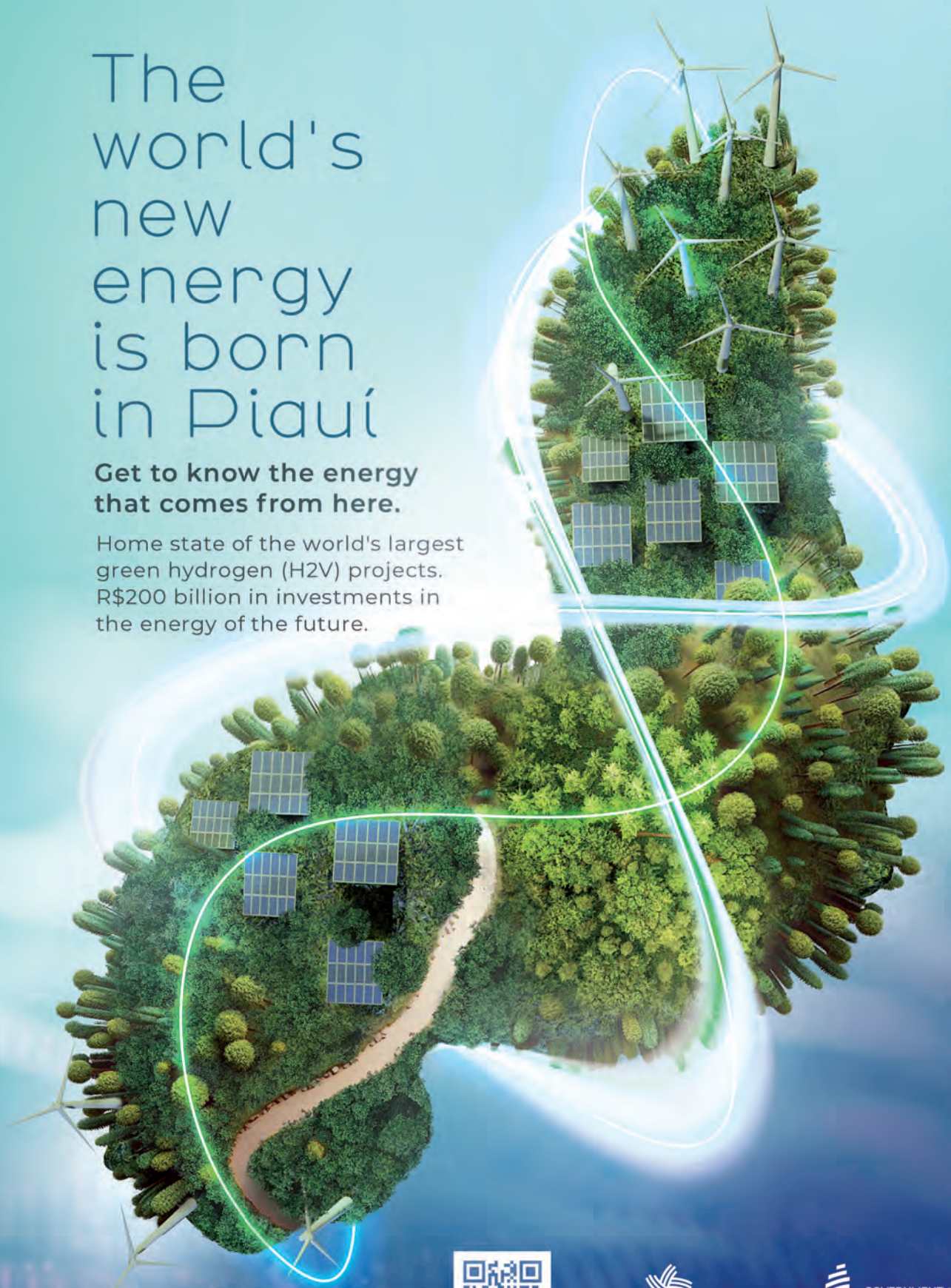

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