

**MODELING GUIDE**  
**Raízen S.A**  
**B3: RAIZ4**

## Disclaimer

This document contains estimates and forward-looking statements regarding our strategy and opportunities for future growth. This information is primarily based on our current expectations and estimates or projections of future events and trends, which affect or may affect our business and the result of our operations. Although we believe that these estimates and forward-looking statements are based on reasonable assumptions, they are subject to a number of risks and uncertainties and are made in light of the information currently available to us. Our estimates and forward-looking statements may be influenced by the following factors, among others: (1) general economic, political, demographic and business conditions in Brazil and specifically in the geographic markets we serve; (2) inflation, depreciation and devaluation of the real; (3) competitive developments in the ethanol and sugar sectors; (4) our ability to implement our capital investment plan, including our ability to obtain financing when necessary and on reasonable terms; (5) our ability to compete and conduct our business in the future; (6) changes in consumer demand; (7) changes to our business; (8) government interventions resulting in changes in the economy, taxes, fees or regulatory environment; and (9) other factors that may affect our financial condition, liquidity and results of operations.

The words "believe," "may," "duty," "estimate," "continue," "anticipate," "intend," "expect" and similar words are intended to identify estimates and statements of future operations. Estimates and forward-looking statements speak only as of the date on which they are made, and we undertake no obligation to update or revise any forward-looking statements and/or estimates as a result of new information, future events or other factors. Estimates and statements about future operations involve risks and uncertainties and are not guarantees of future performance. Our future results could differ materially from those expressed in these estimates and statements about future operations. Considering the risks and uncertainties described above, the estimates and forward-looking statements discussed in this document may not occur and our future results and performance may differ materially from those expressed in these forward-looking statements due to, including, but not limited to, the aforementioned factors. Because of these uncertainties, you should not make any investment decision based on these estimates and forward-looking statements.

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## A. About Raizen

We are an integrated energy company, with a non-replicable platform capable of responding to present and future demands. With an integrated platform, we focus on the production and sale of ethanol, sugar and bioenergy, in addition to distributing fuels to a wide network of Shell service stations in Brazil, Argentina and Paraguay.

Raizen was incorporated in June 2011 as a joint venture between Cosan (50%) and Shell (50%), incorporating assets from both shareholders with a long-term strategic vision, based on the biofuels, renewable energy and mobility market. At the time, Cosan was already positioned as the largest and most recognized producer of biofuels and sugar in Brazil, having also acquired ExxonMobil's fuel distribution assets in the country in 2008, while Shell already had a wide network and fuel distribution infrastructure in place, and a widely recognized brand in the markets where it operates, proprietary technologies, with innovations in the production of cellulosic biofuels.

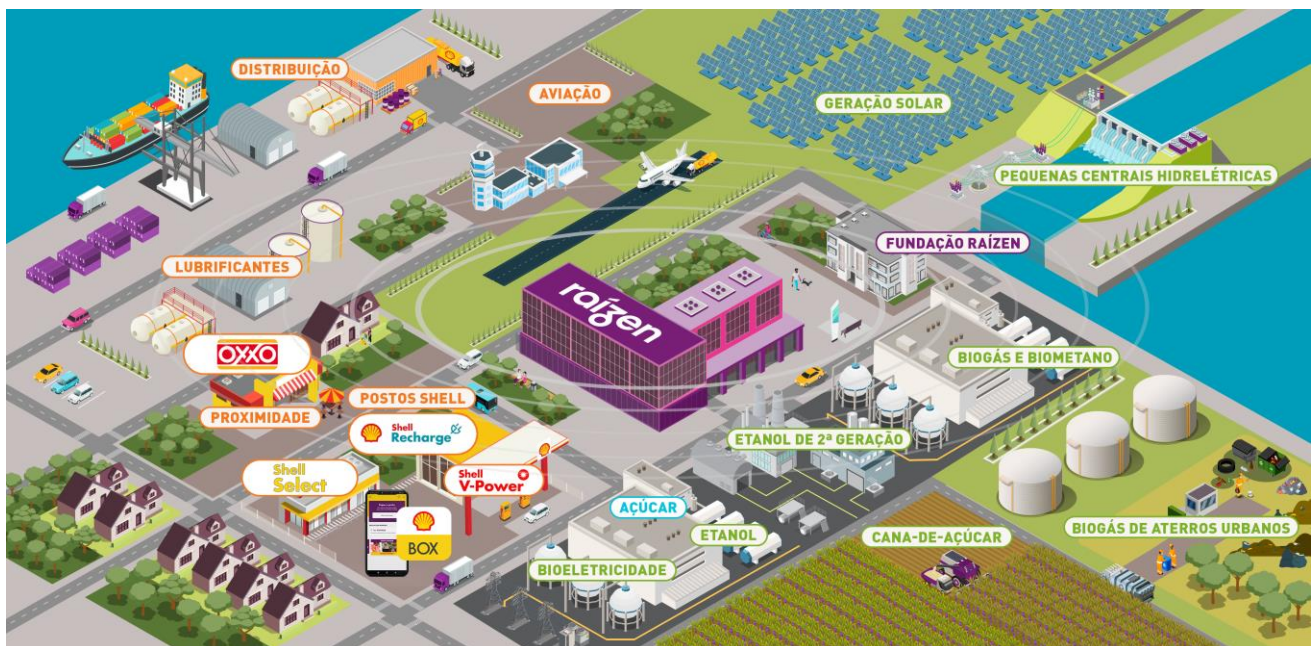
Raizen has established itself among the largest companies in Brazil, with a global scale in its industry, and with a culture based on entrepreneurship, meritocracy, focus on results and strong capital discipline.

In 2023, Raizen became regarded as a world leader in biofuels and a global reference in sustainability, at the forefront of important trends in energy transition with low-carbon solutions.

## B. Our Ecosystem

Raizen's ecosystem is an integrated approach of value creation based on our energy and fuel production and distribution chain.

Our integrated business model ensures control of our raw materials, the biomass for the production of our portfolio of renewable products, as well as its distribution through our commercialization platforms and distribution networks, supported by a unique infrastructure asset base and market intelligence provided by *upstream-downstream* integration.



We are one of the largest – and pioneering – fully integrated energy companies in the world, operating across the entire biofuels and renewable energy value chain: from “ground-to-consumer”.

Raizen's ecosystem comprises various pillars. The starting point is our production assets:

- We control our own raw material – sugarcane – managing the largest agricultural operation in the world (1.3 million hectares of cultivated land).

- We have 35 Bioenergy Parks (30 in operation in the 2023'24 harvest) strategically located and concentrated in the Southeast and Midwest regions of Brazil, close to the country's largest consumer markets and with broad access to infrastructure, including terminals and ports. Formerly called Plants, Raízen's Bioenergy Parks reach a processing capacity of 105 million tons of sugarcane and produce Sugar (all types available on the market: liquid, refined, and crystals, in addition to high polarization sugar - VHP - the type most exported by Brazil), First Generation Ethanol ("E1G") for different applications, Second Generation Ethanol ("E2G"), an energy generation through a Cogeneration process, Biogas and Biomethane, among other by-products, such as steam and molasses, for example. Recently, Raízen also began to diversify our renewable sources by adding solar farms and small hydroelectric plants for distributed generation.

#### Our clients:

- We sell and distribute our products directly to customers through our own distribution network of local/international B2B and B2C outlets and customers – our renewable products already reach the most mature carbon markets in the world (the US, Europe and Japan).
- We also operate proximity retail stores at our service stations, in addition to, in 2019, having formed Grupo Nós, a joint venture with Grupo FEMSA, the largest retailer in the Americas. This partnership explores the convenience store segment more efficiently, with the purpose of operating and expanding our current base of Shell Select stores, in addition to exploring proximity retail, which now includes OXXO stores (the largest global network of convenience stores) across the country.

At the core of our ecosystem, two fundamental pillars support our business model: (a) "Raízen Market Intelligence" which provides us with market knowledge, origination intelligence, customer relationship and product development, and (b) a unique Infrastructure of logistical assets, contributed by the shareholders at the creation of the Company. We have made significant investments in the last decade in modernizing our infrastructure, expanding our capillarity and capacity to serve our customers in Brazil, Argentina and other countries in South America. Our infrastructure assets include multimodal terminals strategically located inside and outside of South America, with inland and port terminals, and an incomparable storage capacity for liquids and sugar. This differentiated base of logistical assets offers us greater flexibility to store, transfer and distribute ethanol, diesel and gasoline between our bioenergy parks and distribution terminals. Combined with our global reach, it also allows us to maximize margins and capture arbitrage opportunities.

This integrated, strategic and synergistic ecosystem is at the basis of the leadership role we play in each segment:

#### Sugar

- We are one of the main sugar producers and exporters in Brazil and worldwide, with approximately 5.0 million tons/year and a 22% share in the global Sugar trade flow<sup>1</sup>;
- We are connected with destinations with scale and competitiveness;
- We created the first fully traceable chain of non-genetically modified ("non-GMO") sugar;
- Our DNA is green. We are recognized as the largest global producer of sustainable sugarcane in the world: our differentiated chain management allows for full geographic traceability of our raw material and the highest standards of sustainability in certified production.
- Bonsucro<sup>2</sup> (40% of all global sugarcane) and 94% of third-party sugarcane covered by the ELO Program<sup>3</sup>.

#### Renewable

- We are the world's largest producer of sugarcane ethanol and the largest global player with a 30% share in the trade flow;

<sup>1</sup> 2022/23 crop year reference period.

<sup>2</sup> For more details on Bonsucro certification, consult our [Sustainability Report](#).

<sup>3</sup> See our [Sustainability Report](#) for more information about the ELO Program.

- 1.5 GW of installed cogeneration capacity. We are self-sufficient in all our Bioenergy Parks and export over 2 TWh per year – enough to supply a city such as Rio de Janeiro for an entire year. We are the largest generator of energy from biomass in Brazil.

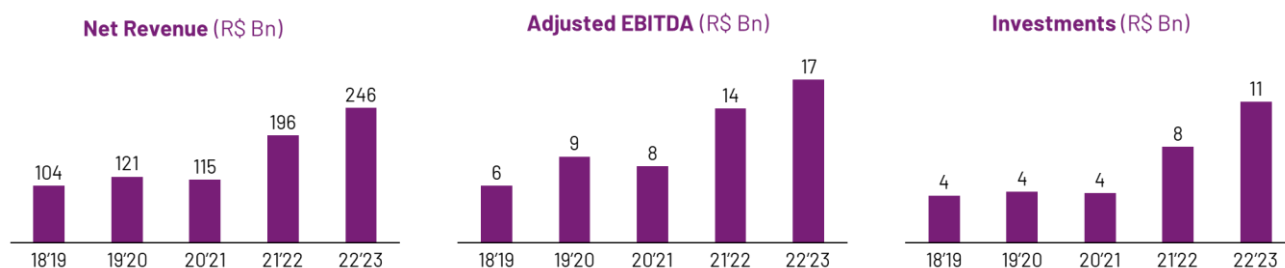
### Mobility

- With more than 8,100 service stations (August/2023), in Latin America we are the second largest fuel distribution network in Brazil, according to data from the ANP, and in Argentina, according to the Ministry of Energy and Mining, leveraging the strong recognition of the Shell brand and developing various relationship initiatives with our customers;
- We reach more than 50 million customers every year in Brazil and Argentina;
- With more than 1,500 Shell Select stores and more than 300 Oxxo markets, we are one of the largest retailers in Brazil and Argentina, leading the market with accelerated and sustained growth;
- With our Shell Box application – a Mobility solution that can be replicated for any location with customer loyalty through a customized offer – we transact more than BRL 7 billion/year, with more than 150,000 transactions/day and a substantial increase in premium (V-Power) volume on the platform;
- With exclusive production plants and a differentiated position in Lubricants, we are the leading brand<sup>4</sup> with automakers in Brazil with growth both in retail and B2B volume and in the premium mix.

Over the years, we have expanded our ecosystem and operations with a solid financial track record and execution capabilities:

- Revenue growth of more than 2x since 2019, with R\$ 246 billion in revenue in the 2022/23 crop year;
- EBITDA growth of more than 2x in the last 5 years;
- Strong returns, with 20% ROACE in the 2022/23 crop year;
- One of the Brazilian companies rated *Investment Grade in the 3 rating agencies (Moody's, Standard & Poor's (S&P) and FITSH)*.

We oriented our investments towards expanding our operations, in line with Raizen's business plan. Our capital structure is sound and with prudent levels of liquidity, average debt term and leverage, in an intense cycle of investments to expand the business in Renewables.



### C. Operating Segments reported<sup>5</sup>

Information by Operating Segments is presented consistently with the internal reports provided to the Company's President (CEO) and Board of Directors for decision-making on the resources to be allocated to the respective segments, as well as the evaluation of their performance. The Company's Operating Segments are:

- **Renewable Sources:** (a) production, origination, commercialization and trading of ethanol, (b) generation and commercialization of bioenergy, (c) resale and trading of electric energy, (d) production and commercialization of other renewable products (solar energy and biogas) and (e) electric charging stations (electric charging).

<sup>4</sup> Source: Fenabrave Registrations: 75% agricultural, 91% heavy vehicles and 54% light vehicles (accumulated 2022).

<sup>5</sup> For further information, see Explanatory Note "Segment information" in Raizen S.A.'s Financial Statements.

- **Sugar:** production, origination, commercialization and trading of sugar in the domestic and foreign markets.
- **Mobility:** (a) distribution of fuels and lubricants under the Shell brand and licensing of convenience stores under the Shell Select brand in Brazil, Argentina and Paraguay, (b) operation of proximity markets in Brazil under the Oxxo brand (result of equity in the Corporation), and (c) oil refining in Argentina.

## D. Our Products

### Portfolio of Products Renewable Sources

Raizen’s portfolio of renewable products is very diversified and focused on sustainable and low-carbon solutions.

Sugarcane has an unparalleled capacity to store solar energy in the form of biomass. Raizen’s focus over the past ten years has been to develop new technologies and products from unused energy stored in sugarcane. We are a global reference in renewable energy from sugarcane bagasse. We recognize the attributes of sugarcane as a versatile raw material, capable of producing a range of other renewable products and contributing to a cleaner energy matrix.

Sugar and First Generation Ethanol (main by-products produced by Brazilian mills) are produced using the sucrose content of sugarcane (known as TRS – Total Recoverable Sugar). In terms of energy content, TRS represents 35% of the total energy stored in sugarcane. The remaining 65% of the energy stored in sugarcane is divided between bagasse, straw and filter cake, which become raw materials, fertilizer and other components used by industry and in the field. At our Bioenergy Parks we extract the most of our biomass, producing:

- Ethanol
- Cellulosic Ethanol (Ethanol de Second Generation - “E2G”)
- Biogas
- Biomethane
- Bioelectricity

### “Raizen Bioenergy Parks”: a true circular economy complex



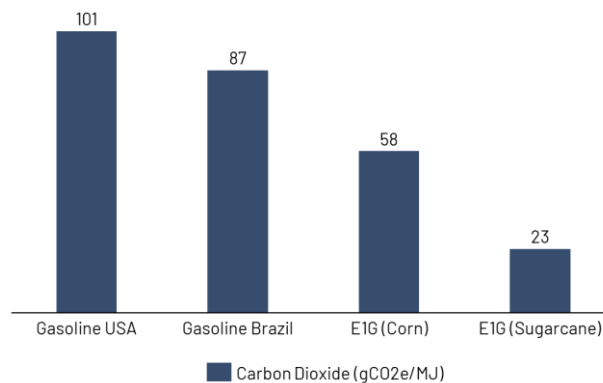
## Ethanol

Brazilian Ethanol, produced mainly from sugarcane, is an important source of renewable energy. Brazil stands out on the global stage for producing Ethanol with advanced technology, being one of the world's largest producers and exporters.

Sugarcane is the main raw material for ethanol production in Brazil. The abundance of arable land and the favorable climate make the country ideal for growing this plant. The Ethanol production process involves grinding the sugarcane to obtain the juice, which is fermented and distilled to obtain Ethanol.

In addition to being renewable, Ethanol is also a cleaner energy source. This is because its production emits up to 80% less greenhouse gases (GHG) when compared to gasoline. The increasingly ambitious targets for reducing carbon emissions in different markets (in Brazil and abroad) make ethanol an attractive and scalable option.

**Graph "Carbon dioxide emissions": sugarcane ethanol has a much lower carbon index (CI) compared to other fuels**



Source: USDA / UNICA / BTG Pactual Research

## Types of Ethanol and its Applications

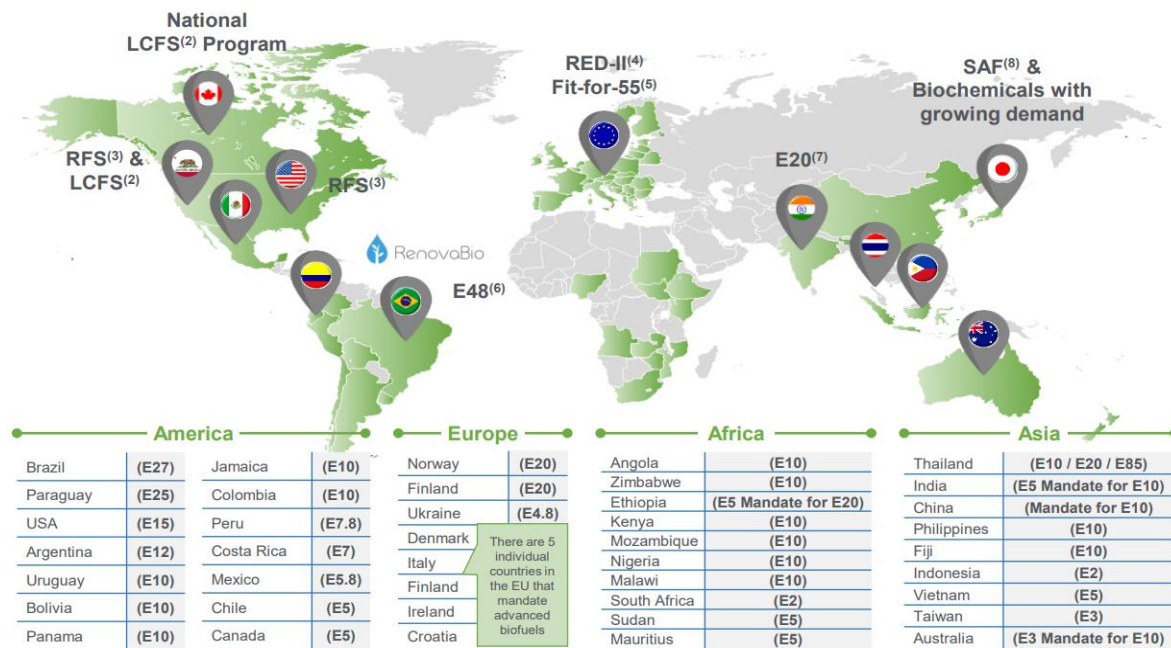
Raizen produces and markets a vast portfolio of Ethanol for different markets and applications:

- (i) **Anhydrous:** characterized by its low water content (less than 1%). It is used in gasoline blending. Recently, renewable fuel mandates, which determine ethanol should be blended with gasoline, were revised in several countries around the world, with the aim of reducing dependence on fossil fuels, carbon emissions and encouraging the production and use of sustainable fuels.

Countries set specific blending targets, determining the proportion of biofuels that fuel distributors must add to their products. Currently, Brazilian law, for example, authorizes in the mixture a range of 18% to 27% of Anhydrous Ethanol in gasoline. Through the RenovaBio program, approved by Law No. 13,576, Brazil aims to expand the production and use of biofuels in the energy matrix to meet the commitments under the Paris Agreement.



**Biofuel mandates worldwide**



Source: IHS Markit, Corsia, IMO/UN, EPA/USA, EC/EU, METI/Japan, Raizen Trading Intel, European Parliament. Notes: (2) Low carbon fuel standard. (3) Renewable fuel standard. (4) Revision of the renewable energy. (5) "Fit-for-55" is part of the European Green Deal, which aims to put the EU firmly on the path to climate neutrality by 2050. (6) Demand weighting of E27 and E100. (7) 20-80 Ethanol-Gasoline blend fuel aimed at halting a surge in oil imports for the Government of India, announced at India Energy Week 2023. (8) Sustainable aviation fuel.

- (ii) **Industrial Anhydrous:** industrial uses include the manufacture of detergents, cleaning products, textiles, solvents, paints, varnishes, aerosols (insecticides, insect repellents, fungicides) and cosmetics (perfumes, deodorants, creams and hygiene products in general);
- (iii) **Neutral Anhydrous:** used in products that cannot have residual substances and produced in a molecular sieve, this type of ethanol is intended for the pharmaceutical and food industries (drinks, vinegar, vaccines, antibiotics and antiseptics);
- (iv) **Hydrous Fuel:** widely known as ordinary ethanol, found at fuel stations in Brazil to supply vehicles known as "flex fuel." It has between 95.1% and 96% of ethanol in its composition, with the remainder being water;
- (v) **Special Hydrous – REN and COREIA (KOREA):** the production of special ethanols follows the specifications required by specific types of products. Currently, the foreign market demands products with designations: REN, COREIA 24, COREIA 40. Numbers 24 and 40 refer to the maximum quantity of higher alcohols allowed;
- (vi) **Industrial Hydrous:** industrial ethanol is used in products that do not involve human consumption. Its quality depends on the specific needs of each application, but in general, a minimum alcohol content of 94.0% m/m (96 °GL) and relatively low levels of impurities are required;
- (vii) **Neutral Hydrous:** intended for nobler applications (human or veterinary use). It is a product that requires a high degree of purity.

## Second Generation Ethanol “E2G” (Cellulosic Ethanol)

Second Generation Ethanol (“E2G”), also known as Cellulosic Ethanol, is an advanced biofuel produced from lignocellulosic biomass (e.g. rich in cellulose, hemicellulose and lignin). Our operating model at Raízen uses biomass residues from sugarcane processed in the Bioenergy Parks to produce E2G.

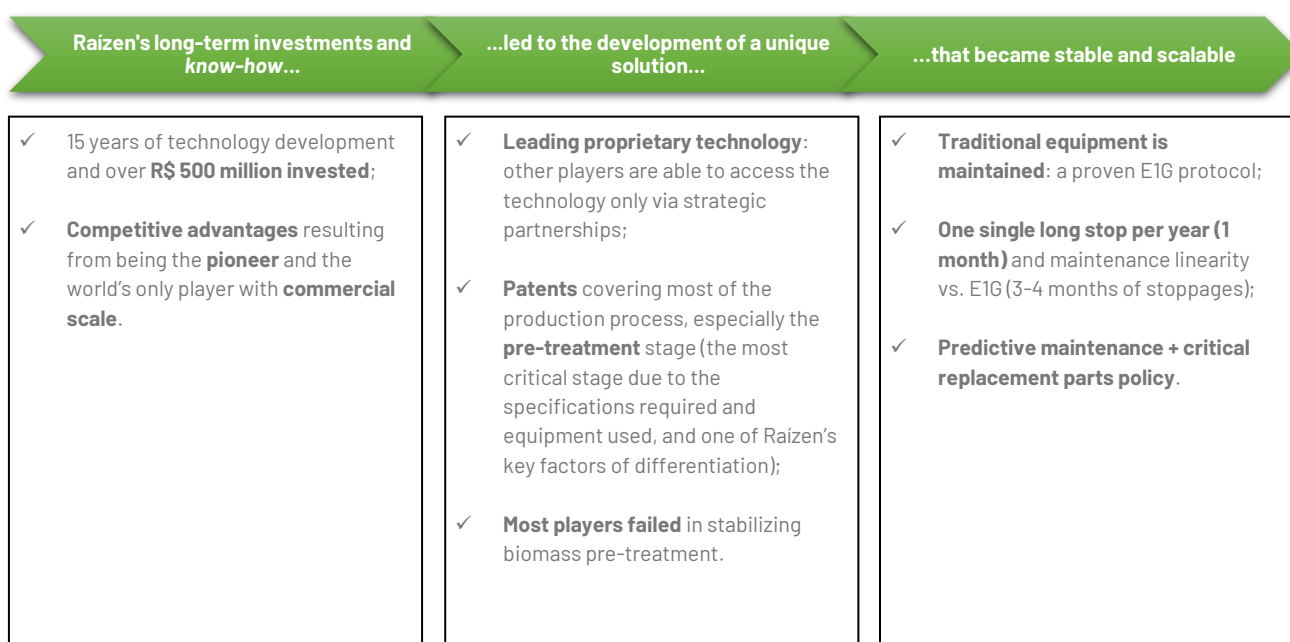
Raízen’s E2G is made from sugarcane bagasse and straw (waste from the production of E1G and Sugar). We have a proprietary technology that allows us to use sugarcane residues to increase our Ethanol production by 50% (without expanding the planted area) that emerges as a solution for sectors that are difficult to decarbonize (“hard-to-abate”), such as aviation or the maritime sector, in addition to not competing with food production.

Raízen currently operates the largest E2G plant in the world at the Costa Pinto Bioenergy Park, and we have established ourselves as the largest global producer and marketer of Cellulosic Ethanol, with 80% of the volume sold in long-term agreements, in addition to being the only company in the world operating at a commercial scale, with a contracted demand portfolio of 4.3 million cbm for E2G.

The credibility we earned on its technology, with our operational capacity and development of the Ethanol market provides our customers with advances in meeting their decarbonization targets and reinforces Raízen’s leadership role in the global energy transition through biofuels, with effective value creation.

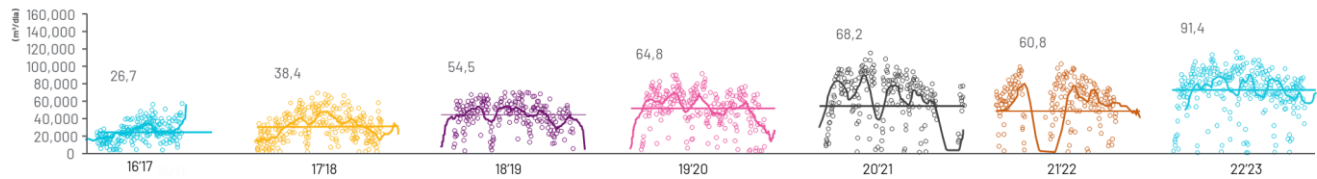
### Advanced technology for product and process

Raízen’s long-term investments and know-how led to the development of a unique solution and differentiated positioning in the biofuels industry.



Plant #1, our pilot plant, was installed in the Costa Pinto Bioenergy Park (COP1) in Piracicaba (SP) and gradually improved its indicators until reaching 30,000 cbm of E2G in the 2022/23 crop year.

## E2G Production Process and improvements year after year\*



### Melhorias na produção do E2G

16'17	17'18	18'19	19'20	20'21	21'22	22'23
<ul style="list-style-type: none"> <li>Inovação em tecnologia de processo de fermentação (Fluxo C5)</li> </ul>	<ul style="list-style-type: none"> <li>Aprimoramento da tecnologia de hidrólise utilizando coquetéis enzimáticos de segunda geração</li> <li>Melhoria no processo de filtragem com decantadores</li> </ul>	<ul style="list-style-type: none"> <li>Melhoria do coquetel enzimático</li> <li>Processo de separação de lignina melhorado para evitar perda de açúcar C6</li> <li>Ajuste fino do plano de manutenção (tempo de atividade)</li> <li>FIFO manipulação de bagaço</li> </ul>	<ul style="list-style-type: none"> <li>Aumento da capacidade de fermentação</li> <li>Instalação de tanque de compensação (estabilidade do processo)</li> <li>Melhoria do decantador</li> </ul>	<ul style="list-style-type: none"> <li>Aumento do tempo de atividade da planta com estratégia de peças de reposição para pré-tratamento crítico e equipamentos de separação C5/C5/lignina</li> <li>Aumento da capacidade de evaporação</li> </ul>	<ul style="list-style-type: none"> <li>Aumento do desempenho da planta devido à instalação de filtros rotativos em substituição aos decantadores</li> <li>Hidroclone para remover impurezas minerais (melhor tempo de atividade e menor custo)</li> </ul>	<ul style="list-style-type: none"> <li>Alta disponibilidade e estabilidade pré-tratamento</li> <li>Aumento da capacidade do filtro</li> <li>Plano de manutenção padronizado</li> <li>Peças de reposição de equipamentos críticos de longo prazo de entrega</li> </ul>

\* cbm/day considering 335 days in the crop year (30 days stoppage for maintenance).

Recently, we announced the construction of another five units, to be installed in the Bioparks of Bonfim (Guariba/SP), Barra Bonita (Barra Bonita/SP), Univalem (Valparaíso/SP), Vale do Rosário (Morro Agudo/SP), and Gasa (Andradina/SP). Each new plant will have a capacity for 82 million liters, with an estimated CAPEX of R\$ 1.2 billion per plant and leading to improvements in processes and efficiency in relation to Plant #1. After more than 15 years, bottlenecks in the supply of equipment have been resolved, allowing for accelerated expansion with reduced implementation risk, greater scalability and synergies in maintenance.

With the construction of the new plants, Raizen will achieve significant gains in scale and volume expansion. By 2030/31, we plan to reach 20 E2G plants, with an installed production capacity of approximately 1.6 million cbm/year.

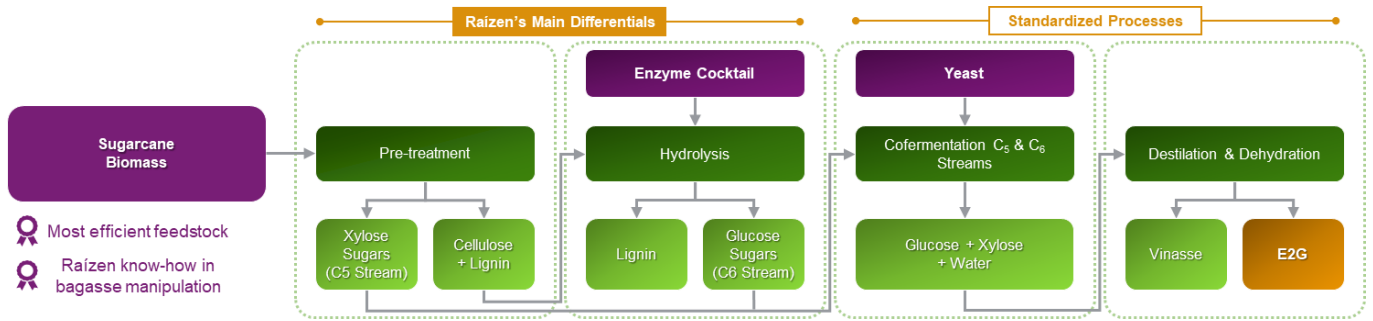
### Differences between E1G and E2G

E2G has the same chemical properties as E1G. The difference lies in the raw material used and in the production process. At Raizen, E1G and Sugar are produced from sugarcane, while E2G is made from sugarcane straw and bagasse under a more complex process than E1G.

Our E2G plants are designed to process sugarcane bagasse using acid and thermal pre-treatment combined with enzymatic hydrolysis. Basically, production process involves the following steps:

- Pre-treatment:** the biomass is pre-treated so that the cellulose is fractionated. At Raizen, the process is chemical, mechanical and thermal.
- Hydrolysis:** is the breakdown of cellulose and hemicellulose into sugars – glucose and xylose, respectively. There may be chemical hydrolysis (cheaper and faster, but with lower yields) or enzymatic hydrolysis (more selective and can reach high yields, but reaction is slower). Through here, the process is enzymatic.
- Fermentation and distillation:** these are the main processes, similar to the E1G production process. The difference is that xylose sugar fermentation requires the use of a genetically modified yeast.

**“E2G Raizen”: production process flowchart**

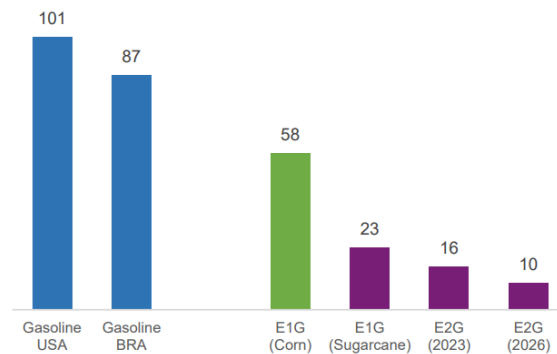


**The advantages of E2G**

E2G is mainly recognized for its sustainable attributes. Below are some characteristics that make its production and commercialization advantageous:

- **Low carbon footprint:** a carbon footprint is a measure of how much a production process emits carbon (CO<sub>2</sub>) or another equivalent gas into the atmosphere. Our business is fully integrated to reduce costs and environmental impacts. E2G has a 30% smaller carbon footprint compared to the first generation, 70% smaller compared to US corn ethanol and up to 80% smaller compared to fossil fuels such as gasoline. Therefore, in addition to being renewable, E2G is considered a clean fuel, because it emits less CO<sub>2</sub> into the atmosphere.

**Lifecycle Emission of Greenhouse Gas**  
As of Sep/22 (gCO<sub>2</sub>e/MJ)



- **Waste reuse:** by using E1G and Sugar by-products, E2G leads to greater energy use of the plant (sugarcane), which results in greater agricultural efficiency. It also brings logistical advantages and contributes to the circular economy.
- **Increased productivity:** by using biomass residues from sugarcane processed in the Bioenergy Parks, we can increase our biofuel production capacity by around 50% without any increase in planted area. In addition, E2G resolves a dispute present in the agroenergy sector over the use of arable land.
- **Non-food raw material:** E2G uses waste/by-products as raw material. This eliminates direct competition with food production, avoiding the use of crops that can also be used for food. Using residual biomass as a feedstock also helps reduce pressure on natural resources such as water and land, which are essential for food production. The more sugar produced, the more biomass available and the more E2G produced!

## E2G Certification

The E2G business model and Raizen’s commitment to best environmental and sustainable practices are highlighted by our Sustainable Certification Strategy.

### Main Certifications

- **Bonsucro**: global multi-stakeholder initiative, dedicated to **reducing the E&S impacts of sugarcane production while recognizing the need for economic viability**
- +300 members from more than 50 countries
- **Bonsucro Production Standard is the first global sugarcane standard**
- Credible, metric certification process to demonstrate commitment to environmental and social sustainability in sugarcane

- **International Sustainability and Carbon Certification (ISCC)**
- **Independent multi-stakeholder initiative and leading certification system** supporting sustainable, fully traceable, deforestation-free and climate-friendly supply chains
- **ISCC EU**: European Commission recognition to demonstrate compliance with RED II
- **ISCC CORSIA**: certification of CORSIA-eligible sustainable aviation fuels.

## Global decarbonization initiatives drive growth in demand and premiums

According to the International Energy Agency (IEA), global demand for biofuels is expected to grow by 20% between 2022-2026, reflecting the sector’s growing emphasis on lower carbon-intensive feedstocks and renewable fuel initiatives.

Initiative	Region/Country	Description
<b>Renewable Energy Directive II Program (RED II)</b>		<ul style="list-style-type: none"> <li>• Commitment to becoming carbon neutral by 2050</li> <li>• Part of European Union’s Green Deal</li> </ul>
<b>Fit-for-55</b>		<ul style="list-style-type: none"> <li>• New regulatory proposal that aims at cutting overall GHG emissions by 55% by 2030</li> <li>• Reinforces existing legislation from 14% to 26% of renewable energy in transportation sector, hence nearly doubling current blending mandates</li> </ul>
<b>Renewable Fuel Standard Program (RFS)</b>		<ul style="list-style-type: none"> <li>• Aims to increase the share of cellulosic ethanol within the transportation sector</li> <li>• Higher premium remuneration to E2G than other biofuels (D3 RIN vs. D4, D5 or D6 RINs)</li> </ul>
<b>Clean Fuel Regulations (CFR)</b>		<ul style="list-style-type: none"> <li>• National clean fuel program with a goal of 10% blend rate for ethanol and 5% for biodiesel by 2030</li> <li>• Started in 2023, with investments in infrastructure and operational improvements expected at USD 6.3 bn by 2030</li> </ul>
<b>Low Carbon Fuel Standard (LCFS)</b>		<ul style="list-style-type: none"> <li>• Incentivize low carbon solutions through a price premium paid per ton of CO<sub>2</sub> avoided</li> <li>• California, Oregon and British Columbia have their own LCFS programs with regional incentives</li> </ul>
<b>Willingness-to-Pay Curves</b>		<ul style="list-style-type: none"> <li>• Renewable tickets that can be converted and traded to comply with existing mandates</li> <li>• HBE (Netherlands), THG (Germany), RTFC (UK), RIN (USA), LCFS (LCFS States)</li> </ul>

## Sustainable Aviation Fuel (“SAF”)

Sustainable Aviation Fuel, also known as SAF, is produced from renewable sources (biomass, vegetable oils, animal fats, among other raw materials). SAF can be mixed with conventional aviation kerosene in a proportion of up to 50% for use in aircraft, significantly reducing carbon emissions in a sector that is difficult to decarbonize. SAF is fully compatible with existing aircraft and fueling infrastructure, having the same properties as traditional aviation fuel. The carbon intensity of SAF production varies according to the routes and raw materials used.

There are currently seven types of certified SAF production, among which we highlight HEFA and AtJ:

- **HEFA (Hydrotreated Esters and Fatty Acids)**: production of SAF through the HEFA process involves the transformation of vegetable oils, used oils and other fats into aviation fuel through hydroprocessing. The raw material undergoes a (a) pre-treatment to remove impurities. Next, the oil or fat is subjected to a process of (b) hydrogenation. In this step, hydrogen is added to the oil or fat to break unsaturated bonds and saturate the hydrocarbon molecules, making them more stable and suitable for use as jet fuel. After hydrogenation, the process involves (c) oligomerization, where hydrocarbon molecules are combined to form larger, more complex molecules, similar to those found in conventional jet fuels. Finally, the product undergoes a (d) hydrotreatment step to remove remaining impurities and ensure that it meets the quality

standards and specifications required by the aviation industry. HEFA has a maximum mix ratio of 50% and poses scalability issues, as the required raw materials are in limited availability and there is significant demand from other competing industries.

- AtJ (*Alcohol-to-Jet*): the production of SAF through the AtJ process involves converting ethanol into jet fuel through a series of chemical reactions. First, there is (a) dehydration, which consists of removing the water molecule from ethanol, producing an olefin. Next, (b) hydrogenation takes place, a step in which hydrogen is added to the olefin to saturate its double bonds, transforming it into a stable hydrocarbon. Next, (c) oligomerization, whereby several smaller hydrocarbon molecules are combined to form larger and more complex molecules, similar to those present in conventional jet fuel. Finally, there is (d) hydrotreatment, where the resulting hydrocarbon is treated to remove impurities and ensure that it meets the quality standards and specifications required by the aviation industry. After these steps, the SAF resulting from the AtJ process is ready to be mixed with conventional aviation kerosene, reaching a maximum mixing ratio of 50% depending on regulatory specifications.

Recognizing these benefits, support for SAF has improved significantly over the past two years. More than 10 global airlines currently have a target to replace at least 10% of their jet fuel demand with SAF by 2030, while the UK and Japanese governments have also adopted targets over the last two years for low carbon fuels to account for 10% of jet fuel demand also by 2030. Upon passage of the IRA (*Inflation Reduction Act*), there is a credit benefit of ~\$0.30/gal for refiners to pursue SAF sold in California.

Today, SAF corresponds to less than 1% of the fuel used in global aviation. For the industry to achieve its decarbonization targets, SAF supply should scale materially.

### **Biogas and Biomethane**

On October 2020, Raízen inaugurated its first biogas plant, where it uses by-products from the industrial process (vinasse and filter cake) to generate biogas. Located at the Bonfim Unit, in Guariba (SP), it is one of the largest biogas plants in the world. With 21 MW of installed capacity, it is a plant dedicated to the production of electricity. Vinasse and filter cake allow the plant to generate up to 135.000 MWh/year of electricity.

The capacity of biogas to be stored throughout the day and promptly dispatched, combined with the hourly price of energy, ensures better arbitrage for the product. After treatment, the biogas feeds the generators responsible for producing electricity, which can be made available for distributed generation, the free market, or auctions.

Biogas can be converted into both electricity and biomethane gas. Biomethane is a gas composed of at least 90% methane, and is capable of reducing up to 95% of greenhouse gas emissions. This fuel has characteristics that make it interchangeable with natural gas and suitable for replacing diesel and LPG.

Raízen has a second plant under construction at the Costa Pinto unit, in Piracicaba/SP. This unit will process filter cake and vinasse, producing biomethane for supply to Yara Fertilizantes and Volkswagen.

## Bioelectricity

We generate electricity for our own consumption and sell it to distribution networks. Leading the energy transition, we continue to invest in the expansion of solar, hydroelectric, and biogas plants with the certainty that we will have the best value proposition and supply of channels for opening up the energy market. We offer energy with international I-REC certification, which ensures that the consumed electricity comes from renewable sources.

Nowadays, Raizen's integrated offer serves all customers with multiple sources of generation – biomass, solar, biogas, and PCH (small hydroelectric power plants), and we continue to expand at an accelerated pace. We are the one stop shop with the largest and most complete renewable energy portfolio in Brazil.

**Production of Electricity:** We produce electricity by burning sugarcane bagasse and straw, which has its peak production precisely in the driest period of the year, when the water matrix is under more pressure. We consume part of this production in our Bioparks, making the unused energy available on the grid.

We offer energy solutions through the following options:

- **Distributed Generation:** sustainable solution that reduces business costs (invoices are up to 20% cheaper), since energy is generated in solar plants throughout Brazil<sup>6</sup> and then injected into the electrical grid. In other words, Raizen Power builds and develops photovoltaic solar plants that inject energy into the electrical grid. Our customers receive credits that will be calculated by the distributor as a discount applied directly on the total amount to be paid on the energy bill. Companies from different segments of the country benefit from our energy: hospitals, schools, retail stores, and large services.
- **Free Market:** in this market, the customer (contracted demands above 500kw – such as shopping malls, hospitals, and industries) is free to choose its energy supplier, with cost reduction and predictability such as, for example, having a single cost energy service with no differentiation in tariffs (peak and off-peak hours), and flexibility in commercial conditions. Through Raizen Power, customers can optimize their energy contracting by identifying the best source (we have certified renewable energy), the volume to be contracted, and customizing contractual conditions according to their needs and profile.
- **Management of energy efficient equipment:** reduction of energy consumption through active and digital management of all equipment via telemetry systems.
- **Charge aggregation:** condominiums that do not have enough demand to migrate to the free market can carry out the aggregation of the charges of all condominium members and social area.
- **Electric charging:** charging stations for electric vehicles with the Shell Recharge solution, using 100% clean and renewable energy, certified by the I-REC Standard.

## Sugar

Raizen is the largest producer and exporter of cane sugar in the world. We produce several types of sugar: liquid, refined, crystal and organic, in addition to VHP (Very High Polarization) – which is raw sugar, used as raw material for refining and several other processes and has the potential to be transformed into by-products in industries from all over the world. Our sugar is present in over 50 countries. Industries that use our sugar:

- **Food:** in the production of refined, crystal and demerara sugar for direct consumption. As ingredients in the manufacture of chocolates, candies, chewing gum, cakes, cookies, ice cream and cereals.
- **Pharmaceuticals:** as a raw material for the production of syrups, oral medications and nutritional products.
- **Beverages:** as ingredients in soft drinks, juices, energy drinks and alcoholic beverages.

Currently, we produce 40% of all sugarcane globally with Bonsucro certification, the most recognized certification in the industry, and we have 94% of third-party sugarcane covered by the innovative ELO Program, to assure best practices in supply chain. This strategy positions us as the largest global producer of sustainable sugarcane

<sup>6</sup> Visit our [site](#) to know where our plants are located.



A globally recognized certification, Bonsucro is an important tool to assess and measure the sustainability of the sugarcane chain and promotes improvements in production. The Bonsucro seal is a solid and voluntary international certification that aims to guarantee the effective fulfillment of environmental, social and economic criteria for the cultivation of sugarcane and the production of its co-products through a reliable and transparent process, assuring rights human rights and compliance with labor standards.



The ELO Program is an unprecedented initiative in the global sugarcane production chain and aims to promote the sustainable development of Raízen's suppliers and covers aspects focused on people, cultivation, the environment and business. It is recognized by the Economic Commission for Latin America and the Caribbean (ECLAC), it includes third-party verification by Imaflora and implementation in partnership with NGOs with international credibility and recognition.

In addition, Raízen is a pioneer in the creation of the first global chain of raw sugar supply and commercialization that is 100% traceable, produced from non-genetically modified sugarcane ("Non-GMO"), which ranges from sugarcane planting to the raw sugar arriving at the refinery, ensuring product traceability and integrity through its processes, infrastructure and technology. This means control and tracking of all raw materials and production, in addition to the specialized operation of the logistics system, allowing the delivery of a product with greater added value and expanding our business in the value chain with sustainable solutions on a global scale.

### Mobility

**Fuel Distribution:** we distribute and sell fuel to service stations, airports and to customers in the B2B market. In Brazil, we operate in all regions of the country through 69 supply bases located at airports and 70 fuel distribution terminals. With optimized processes and the use of CIF Logistics, we ensure the integrity of the product along the way, such as punctuality and end-to-end traceability until delivery.

- **Retail:** we distribute Shell, Ethanol, Gasoline, Diesel, CNG and a premium stations mix with Shell V-Power, Shell V-Power Racing, Shell V-Power Ethanol and Shell Evolux Diesel;
- **B2B:** we serve audiences from different segments – cargo and passenger transport, agriculture, mining, rail, and industrial – and we invest in solutions, such as Shell Empresas, which seeks to understand the business and meet the needs of customers, proposing the best solutions both regarding the type of fuel in terms of supply, aiming at reducing costs and better managing expenses, and Shell Box Empresas, a 100% digital solution for controlling and managing fleet expenses;
- **Aviation:** we supply some of the main airlines in Brazil and Argentina, with quality and safety. We also operate in executive aviation, providing scale to operations;
- **Lubricants (Raízen Lubrificantes):** established to offer an even more complete portfolio of premium brands in the lubricants segment and industrial technological solutions for B2B customers, the Shell service station network, other consumer channels and the main automakers in the country. Our Shell Helix, Shell Advance and Shell Rimula products are developed to meet the requirements of the world's leading vehicle manufacturers.
- **Shell Box:** a secure payment application that does not require the use of cards or cash and reduces consumer waiting time. It was created to offer the best consumer experience at Shell service stations. Integrated with programs of advantages, benefits, miles and rewards for users, today it is present in most Shell Select stations and stores throughout Brazil and Argentina, improving our share of wallet.

**Proximity:** Grupo Nós was created through a partnership between Raízen and Femsa to operate in the proximity and convenience market in Brazil, with the Shell Select brands in convenience, and OXXO for proximity markets.

- **Shell Select:** the convenience store network at Shell service stations offers a simplified operation and is focused on the consumer experience and in providing increased profitability for franchisees, offering quality products. In 2023, we brought Shell Café stores to Brazil that follow the "mandatory stop" concept, providing customers with not only coffee, but also a wide variety of side dishes and products. The objective of this model is to create a functional space offering convenience, comfort and service similar to those of a conventional store, but in an inviting and cozy environment.
- **OXXO:** since 1978, OXXO proximity markets have enchanted customers due to the quality of services provided, a consistent expansion strategy and professionalization in market operations. Currently, units are operating in



Mexico, Colombia, Chile, Peru and Brazil. In Brazil, we offer consumers bakery, produce, groceries, hygiene and cleaning products with the convenience of addresses close to their homes and workplaces, at a fair price.

## **E. Agro-Industrial Operating Indicators**

### **Total Recoverable Sugar (TRS)**

Total Recoverable Sugar (TRS) is a measure used in the sugar-energy industry to quantify the total amount of sucrose contained in sugarcane. TRS is an important indicator for the production of sugar and ethanol, as it represents the amount of sugar available to be converted into final products (sugar or ethanol) through the transformation coefficients of each production unit. In addition, TRS is also relevant for managing the efficiency of industrial processes, as it directly influences the yield and productivity of sugar-energy plants. The higher the TRS value, the greater the amount of sugar and ethanol that can be produced from the same volume of sugarcane.

The age of crops, the way of harvesting, the impurities and, mainly, the climate, influence the levels of TRS. Regarding the climate, the more humid and rainy it is, the lower the concentration of TRS, since the sugarcane grows and the sugar levels are diluted. TRS tends to be higher with scarce rainfall.

### **Ton of sugarcane per hectare (TSH)**

The TSH Index is a metric used in the sugar-energy industry to assess sugarcane productivity, that can vary according to plantation management, the variety of sugarcane used, weather conditions, among other variables.

Unlike TRS, TSH generally increases in a more humid rainy climate scenario, which causes the cane to grow more. In drier climates, sugarcane tends to grow less, leading to a lower TSH. The most productive TSH is that of the first cut of sugarcane, with the curve decreasing year after year.

### **Agricultural Productivity (TRS/ha)**

Total Recoverable Sugar per Hectare (TRS/ha) can be used to measure the productivity of equivalent sugar per hectare, being more assertive when referring to sugarcane production, since it already weighs the TRS and the TSH (the two main indicators), measuring actual productivity and equalizing any distortions caused by climate.

## **CONSECANA**

CONSECANA is the acronym for “Council of Sugar Cane, Sugar and Alcohol Producers of the State of São Paulo.” This entity was formed to establish and regulate commercial relations between sugarcane producers and sugar and ethanol plants in the State of São Paulo.

The CONSECANA index is used as a reference for the remuneration of sugarcane in the State. This index is calculated based on the quality of the sugarcane and the market prices of final products (sugar and ethanol).

Calculation of the CONSECANA index involves several steps and factors, such as:

1. Price of products traded on the market (Sugar and Ethanol, of all types and in all markets);
2. Production Mix between Sugar and Ethanol in the State of SP;
3. Concentration of monthly sales to allow weighing prices between months;
4. Share of agricultural costs in the production chain to share product revenue with producers.

These factors are weighted and combined in a specific formula determined by CONSECANA itself, to calculate the final index that will be used as a reference for the payment of sugarcane to producers. The index calculation is revised periodically to adjust to changes in market and industry conditions. Sugarcane prices defined in most supply, lease and partnership contracts are partially fixed and partially variable, according to criteria defined by CONSECANA. It is important to point out that efficiency indicators and TRS are not considered in the base calculation of the CONSECANA index.

It is worth mentioning that in our Earnings Release, we show the ex-CONSECANA cash cost, i.e., our metric excludes the variation between the CONSECANA of the previous and current crop year, not excluding the impact of CONSECANA on our costs.

### **RIT/STAB Industrial Productivity Indicator**

This indicates the efficiency with which the industry transforms the raw material (sugarcane sucrose) into products (or, adversely, how much of the raw material is lost in the industrial process). That is, it indicates the equivalent sugar yield relative to the potential of the TRS that's been ground.

### **Equivalent Sugar**

This metric allows for the value of different products to be compared equivalently. It is used to standardize and compare the produced value of different sugar and ethanol products in a standard Sugar Content measure. By definition, for 1l of ethanol, 0.63 kg of ATR is needed in addition to that needed to produce 1 kg of sugar. In other words, 1.63000 kg of sugar = 1.0000 liters of alcohol. Sugar has a ratio of 1 to 1 to equivalent sugar.

Equivalent Sugar production levels are important for pricing and production planning, as this allows for the amount of raw materials needed to produce a given amount of Sugar or Ethanol to be assessed.

## **F. Macroeconomic Variables**

We are exposed to market risks arising from the conduct of our commercial activities, mainly from changes in commodity prices, exchange rates, interest rates and inflation.

### **Interest Rates and Inflation**

We monitor fluctuations in variable interest rates linked to certain debts, and when necessary, derivative instruments are used in order to manage risks. It is also necessary to consider recurring and expansion investments (mainly E2G). Inflation affects our financial performance by increasing certain operating expenses. These operating expenses include labor costs, leases and selling and general administrative expenses.

### **Prices**

#### **Sugar**

Sugar is a global commodity, traded on the New York Stock Exchange under the NY11 futures contract ticker code. The NY11 price is used as a reference for raw sugar prices in the international market, being a decisive factor for defining the mix of production and operations on the trading desk.

#### **Brent**

The barrel of Brent oil is a global benchmark for the price of crude oil, traded mainly in the European and Asian markets (while WTI is the standard oil in the US). Brent is the main benchmark for the oil industry and serves as a measure for OPEC+ (Organization of Petroleum Exporting Countries) decisions. The Brent oil price is influenced by a number of factors:

- Increases in international demand or shortages in supply;
- OPEC decisions to raise or cut daily production;
- Tensions and geopolitical conflicts in producing or consuming regions;
- Weather events;
- Logistics, transport and storage crises;
- Government decisions, such as production restrictions, sanctions or incentives;
- Inventory and storage levels;
- Currency fluctuations, economic growth and higher levels of industrial activity and energy consumption.

Since these factors directly or indirectly impact Diesel and Gasoline prices, our results are affected by fluctuations in Brent prices through the prices of inputs for resale and production in our Mobility segment, and the costs of our

logistics and agro-industrial operations. To minimize impacts, purchases of derivative products are hedged using derivative instruments.

### **Exchange Rates**

Our revenue from exports, imports, debt flows and other assets and liabilities in foreign currency are subject to fluctuations in the exchange rates used (Sugar and Ethanol). We use hedging operations as a strategy to mitigate exchange fluctuations.

### **Hedge**

The Company is exposed to the following main market risks: (i) the volatility of prices for sugar, electric energy, ethanol and derivatives; and (ii) exchange rate volatility. The financial instruments for hedging purposes are contracted based on the analysis of the exposure to the risk, in relation to which our Management seeks to cover and capture consistent returns. Our hedging operations tend to cover a maximum period of three years (36 months).

The evolution in the percentage of “locked in” production and the Sugar hedge prices are disclosed to the market every quarter, in accordance with the internal Hedges policy covering the subsequent 36 months. In the case of Ethanol, the Company does not normally work with future price locks due to the lack of perfect instruments or liquidity.

To reduce the Company's exposure to exchange rate changes between the price definition date and the payment date by the client, we use exchange derivatives (exchange locks, via non-deliverable forwards, agreed with banking institutions in an over-the-counter environment), which are linked to product sales in dollars, always concurrently.

## **G. Financial Modeling**

### **Agro-Industrial Operation Modeling**

#### **Dynamic of Sugarcane**

Brazil is the largest producer of sugarcane in the world. In addition to the continental proportion, with great availability of land, and the climatic condition favorable to the cultivation of sugarcane (tropical climate), the country still has a favorable export logistics. As a grass, sugarcane needs to be replanted every six years (on average), which helps in soil conservation – unlike corn, which is replaced annually. In addition, sugarcane by-products have even greater added value, enabling the reuse, recovery and recycling of materials and energy.

#### **Definition of Crop Year**

Raizen follows the sugarcane production crop year, so the fiscal begins on April 1 of each year and ends on March 31 of the following year. In this regard, the quarters have the following format:

- 1Q – quarter beginning on April 1 and ending on June 30;
- 2Q – quarter beginning on July 1 and ending on September 30;
- 3Q – quarter beginning on October 1 and ending on December 31;
- 4Q – quarter beginning on January 1 and ending on March 31.

Generally, the sugarcane harvest begins in April and ends between November and December, when the off-season begins. During the off-season, the maintenance is carried out on the industrial plant, including the agricultural machinery used in the sugarcane harvest and cultural practices.

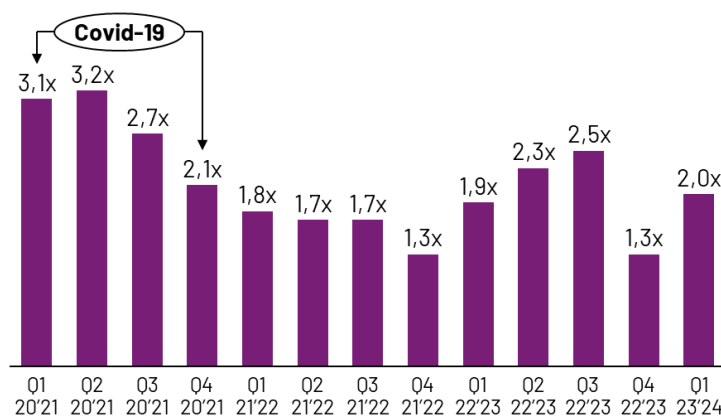
#### **Impacts of seasonality on results**

Raizen is subject to seasonal trends based on the cycle of growing sugarcane and the sale of its by-products. Throughout the Crop Year, the Company is faced with the effects of seasonality on inventories, revenues, costs and working capital.

The first and second quarters of the harvest, mainly, are the periods in which there is a greater cash disbursement due to the expenditures with treatment, harvest and production, in addition to the beginning of the formation of stocks for future commercialization. In this way, working capital, leverage and results can be affected at the

beginning of the season, reflecting the marketing strategy and seasonality. This dynamic, however, may change as a result of favorable price scenarios for Sugar and Ethanol.

### Leverage (Net Debt/Adjusted EBITDA LTM)



### Crushing, TSH and TRS

Raizen's total crushing capacity (installed capacity) is 105 million tons, considering the 35 Bioenergy Plants, 30 of which are in operation in the 2023-24 harvest.

There is still potential to improve the productivity and use rate of our parks (effective crushing versus crushing capacity). We estimate productivity gains through investments in our sugarcane fields and agriculture, including crop management and better operational practices in all our Bioenergy Plants to improve efficiency in agricultural processes.

Considering that in the 2023-24 harvest there are (i) five hibernated plants; (ii) proportion of approximately 50% between own volume and sugarcane of suppliers; (iii) normalized climate scenario; and (iv) Harvest Area of approximately 560 thousand hectares, we estimate crushing growth driven by gradual improvement in the TSH levels.

Our estimates indicate TSH of approximately 83 ton/ha at the end of Crop Year 2025/26, in line with the historical productivity level of sugarcane suppliers that operate in the same regions as Raizen, and sugarcane availability of approximately 94 million tons. In our presentation on Raizen Day 2023, we provide further information on these numbers. [Click here](#) to access the presentation.

TRS levels vary mainly depending on the weather. The Company recommends using the average industry level disclosed by UNICA<sup>7</sup>.

### Mix of Production

Each plant defines the mix (% of Ethanol produced versus % of Sugar produced) most suited to its set-up and installed capacity, according to the guidelines established by Raizen's sales strategy. The mix, however, is dynamic, and also depends on the quality of the TRS.

At Raizen, the mix of production between Sugar and Ethanol is limited to 55% x 45%, with the historical average level being 52% for Sugar and 48% for Ethanol, which may vary between quarters over the Crop Year. This mix also varies according to the number of stoppages during the harvest, usually due to rain. A drier climate makes it possible to maximize sugar production if needed.

<sup>7</sup> <https://unicadata.com.br/listagem.php?idMn=63>

### Agro industrial Volume (Sugar and Ethanol)

For purposes of estimated volume of Ethanol and Sugar:

1. Equivalent Sugar Production (Crushed Sugarcane x TRS x RIT STAB / 0,92 [Sugar Conversion Factor]);
2. Sugar Volume (Equivalent Sugar x Sugar Mix x 1,0);
3. Ethanol Volume (Equivalent Sugar x Ethanol Mix x 1,6 [Sugar to Ethanol Conversion Factor])

### Revenue<sup>8</sup>

The revenues referring to the Renewable Sources segment mainly come from the sale of Ethanol and Energy produced by Raizen and third parties, in addition to Other Revenues from renewable by-products such as molasses, steam, syrup, bagasse, vinasse, among others that are immaterial to the result of the business.

### Ethanol

#### Volume Overview:

We define our volume to be produced based on the assumptions of demand and global supply and projected profitability among the different types of sugar and ethanol, defining the company's mix of production. Ethanol Volume (Equivalent Sugar x Mix Ethanol x 1.6 [Sugar to Ethanol Conversion Factor]).















In addition to the sale of our own products, we increase our market share in the ethanol value chain with sales operations, seeking opportunities for product origination in the market.

The sales may include volumes produced in the same or previous crop year, known as “carrying stock”.

#### Pricing:

Ethanol Hydrous and Anhydrous prices are based on ESALQ prices<sup>9</sup>, Anhydrous with approximately from 12% to 14% premium above ESALQ, when sold in the local market. Additionally, we export Anhydrous Ethanol to California certified with the Low Carbon Fuel Standard, with an additional premium due to certification. The Industrial Ethanol is marketed at differentiated prices, due to the added value differentials.

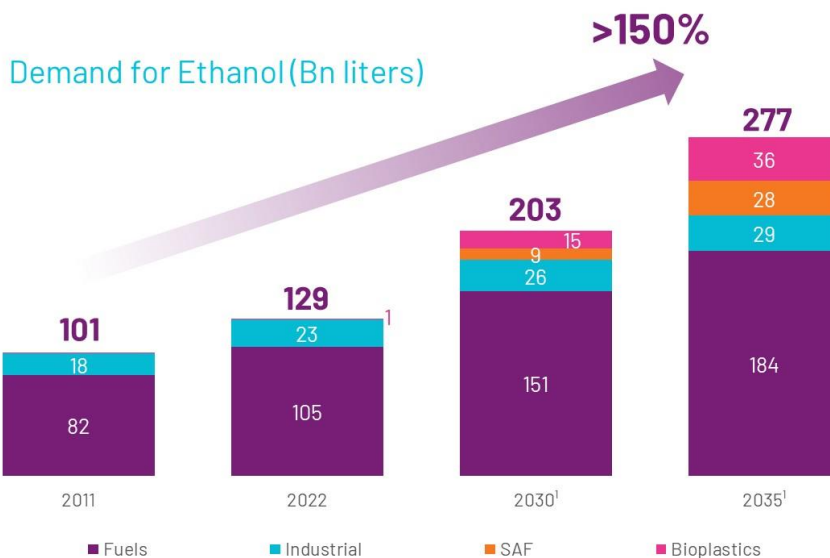
## Value Generation and Risk Mitigation

	DESTINATIONS	APPLICATIONS
 <b>Industrial</b> <b>40%</b>	 <b>50%</b> Brazil	 Beverages  Bioplastics
	 <b>50%</b> Asia, Central America, EU	 Cosmetics and Pharmaceuticals  Sanitization
 <b>Anhydrous</b> <b>40%</b>	 <b>50%</b> Brazil	 Octane booster for fuels
	 <b>50%</b> USA, EU, Asia Export	 Low carbon fuel solution
 <b>Hydrous</b> <b>20%</b>	 <b>100%</b> Hydrous Ethanol - Brazil	 Ethanol Fuel

<sup>8</sup> For more details, see the Explanatory Note "Net Operating Revenue" in the Financial Statements of Raizen S.A.

<sup>9</sup> Prices analyzed by the methodology defined by CEPEA/ESALQ (Center for Advanced Studies in Applied Economics), and disclosed at <https://www.cepea.esalq.usp.br/br/indicador/etanol-mensal-sp.aspx>.

We envision new markets for Ethanol, such as SAF, Biobunker and Bioplastic. We increase the production of Ethanol grades with high added value and for new consumer markets. In our Raízen Day 2023 presentation, we have a specific slide on the main destinations of our ethanol. Click here to access the presentation.



<sup>1</sup> Source: IHS Markit, Corsia, IMO/UN, EPA/USA, EC/EU, METI/Japan, Raízen Trading Intel

The **diversification** of Raízen's Ethanol portfolio for different applications and markets, as well as the **certification**, results in a premium over the comparison base of ethanol hydrous in the Brazilian market.

The premium may vary according to the timing of the Ethanol price curve and special product mix. In the 2022/23 harvest it was approximately 30%.

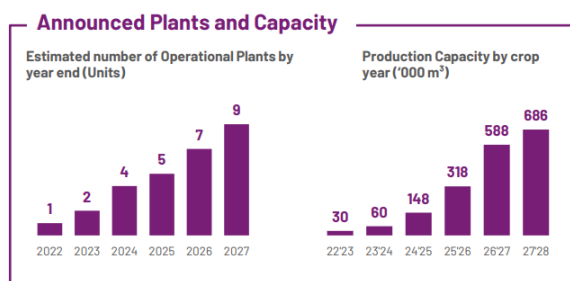
### Revenue (Price x Volume):

In order to obtain the net revenue projection, we must multiply the volumes projected for production by the prices of Ethanol Hydrous plus an average premium of 22% to 28%.

### E2G

#### Volume Overview:

Currently, Raízen operates the largest E2G plant in the world, the available E2G volumes follow the plan to build new plants resulting in an increase in our production capacity, as shown below (August/2023 baseline):

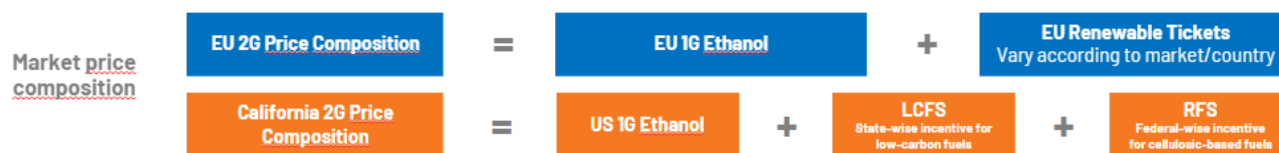


Each plant will have a capacity of 82 thousand cbm. In the first year of operation, production should reach 60% of the capacity, while, in the second year, the production will reach 100% of the capacity, depending on the month of entry into operation and availability of bagasse.

Plants under construction have 80% of future production in long-term demand agreements.

### Pricing:

The composition of the E2G price are referred to in the two main consumer markets of the product: the European Union and the USA. In both markets there are defined targets and fines, which reward fuels with low carbon emission rates, specifically those in which the raw material does not compete with the food matrix, and use some type of waste or cellulose base, among other specifications.



We have already entered into agreements for volumes of plants under construction; for information on the average price of these agreements (EUR 1,000/cbm), see our [earnings presentation](#).

### Revenue (Price x Volume):

We estimate that each E2G plant will generate an EBITDA margin of approximately 50% at maturity.

Considering the maximum production potential, approximately 20% of the capacity of each plant is not contracted, therefore available for sale at market prices.

In order to obtain the net revenue projection, we must multiply the own volume produced, according to the projection of production capacity, by the prices of the client markets, disclosed by us in our [earnings presentations](#).

### **Power**

Aligned with the macro trends in electrification and decentralized generation, since 2021 we have focused on the strategic evolution of the power business. Raízen Power has an integrated ecosystem as a differential due to the synergy between our businesses, the verticalization of our structure to offer 100% renewable energy to our clients through the One Stop Shop, which has a diversified portfolio of solutions, the coverage in the national territory, the proximity to our clients, and the different 100% renewable sources.

### Volume Overview:

**Co-generation:** Energy cogeneration is obtained from the burning of sugarcane bagasse. Therefore, the energy volume projections in MWh depend on biomass availability, in line with crushing projections.

**Distributed Generation (“GD”):** In expansion, the DG volumes grow exponentially based on the creation of generation capacity, mainly solar, through private investments in capacity increase and/or contracting capacity from third parties to meet our client demand.

**Trading:** The trading segment operates with opportunities available in the market, the projected volume foresees an increase in the client base and in traded volumes.

### Pricing:

**Co-generation:** The cogeneration prices are determined in the market by the PLD; however, Raízen has effective agreements until approximately the end of the 25-26 crop at fixed prices.

**Distributed Generation:** The market tariffs of distributors can be consulted at Aneel, and in this model we offer the clients a value of 10% to 20% lower depending on the region.

**Power Trading:** Analysis the opportunities in the “Balcão Brasileiro de Comercialização de Energia” (BBCE) market, where we have access to simultaneous offers for the purchase and sale of futures contracts with different maturities.

### **Revenue (Price x Volume):**

**Co-generation and Distributed Generation:** Revenue comes from own volumes traded at market prices and agreements.

**Power Trading:** The revenue projection also takes into account the creation of a database and expertise in trading and market analysis.

## **Sugar**

### **Volume Overview:**

The Company expects to increase the sugar origination, considering its leadership position and consequent market analysis, increasing our market in the sugar value chain, market intelligence and profitability.

We define our volume to be produced based on global demand and supply assumptions and projected profitability among the different types of sugar and ethanol, defining the company's production mix. Sugar Volume (Equivalent Sugar x Sugar Mix x 1.0).

Direct sales to the destination reaching 100% of the own sugar book and 60% of the total book (in June 2023). Our long-term goal is to advance in direct sales, reaching the entirety of the book delivered to the destination.

We emphasize that the formation of carry-over stocks in the off-season must be considered, that is, the sale of volumes produced in the previous crop-year and stored mainly due to the price volatility.

### **Pricing:**

Raizen has a proven track record of pricing above the market average. With investments in technology and infrastructure, in addition to gains in scale, we will be able to further increase this gap, supported by greater storage capacity.

As a commodity, the sugar price is referenced by trading on the New York Stock Exchange (NY#11).

The Brazilian VHP sugar is one of the most desirable raw sugar exports in the world. The VHP stands for Very High Polarization. The VHP sugar has a high sucrose content and its light brown sugar crystals are easier to refine into white sugar than other raw sugars. Therefore, the Brazilian Sugar has a polarization premium over the value of (NY#11) of approximately 4%.

To ensure predictability and profitability of our results, we carry out financial operations to define the prices (hedge operations) for up to 36 months. We moved forward with the sugar strategy, seeking efficiency in protecting the next harvests.

Raizen has been successfully implementing its strategy to expand its market in the sugar distribution chain, increasing from 30% of own sugar agreements being delivered direct to destination in 2020/21 to more than 100% in 2022/23, obtaining higher sales price.

**Definition of Raizen's Average Price:** In addition to the polarization premium, direct sales to the destination, third-party sugar sales operations, and sales of sugar produced from non-genetically modified sugarcane ("Non-GMO") contribute to a premium that can vary from 5% to 7% on average, applied to the sugar reference price (NY#11).

### **Revenue (Price x Volume):**

In order to obtain the net revenue projection, we must multiply the volumes projected for production by the Raizen's Average Sugar Price (already fixed or to be fixed), based on quotations from (NY#11).



## Agro industrial Costs<sup>10</sup>

*Disclaimer: the costs of the Renewables and Sugar segments refer to the Agro industrial Operation, since the raw material (sugarcane) and the initial production process are the same.*

To guide the modeling, we describe our production cash cost items of the agro industrial operations and the main indicators that guide and make a proxy for the vectors of the projections of these items. This cost is analyzed in R\$, R\$/ton of equivalent sugar or sugar and R\$/cbm of ethanol.

To support the projections, the Company's own planting area (leased) is divided as follows:

Leased Area	
Harvest Area (ha) - Driver CCT	571,000
Cultivation Area (ha)	97,000
Seedlings and Passage Area (ha)	95,000
<b>Total Leased Area (ha)</b>	<b>763,000</b>

## Cash Cost

- **Own sugarcane** accounts for approximately 50% of the sugarcane crushed by Raizen and has the following cost items, excluding depreciation and amortization:
  - Lease – Raizen does not have its own plantation land. In this way, own sugarcane is planted on leased land, becoming an important cost factor, which has as an item the total leased land and the CONSECANA that guides the agreements, as referred to above;
  - CCT - Cost of Cutting, Loading and Transport that has as a factor the amount of harvested area and impacts of changes in diesel prices;
  - Overhead – Cost of labor dedicated to field work.
- **Cane from suppliers** (or FOCA cane) represents approximately 50% of the cane crushed by Raizen and is compensated at the value of CONSECANA plus a premium.
- **Industrial Cost** represents the cost of processing sugarcane to transform the cost into products such as Sugar and Ethanol of first generation. This component is proportionally divided by two main items: (a) depreciation of production assets; (b) production cost [approximately 50% labor; approximately 40% maintenance and industrial inputs; and approximately 10% energy].

**Important:** The realized Cash Cost additionally includes valuation based on the average cost of inventories.

## Cost of Goods Sold (CPV)

For purposes of composition of the CPV<sup>11</sup>, in addition to Cash Costs, the following items are considered:

- Measurement of Biological Assets at fair value;
- Depreciation (mainly agricultural machinery and equipment and productive assets);
- Amortization, mainly lease\*, planting and treatment;
- Direct accounting additions to COGS, such as provisions for contingencies, income (loss) from unrealized profit on inventories and tax impacts, among others.

\*For measurement purposes, the best proxy is based on the lease costs, as already detailed in the cash costs. For accounting purposes, the amortization of the lease agreements is included in the Cost of Goods Sold, which, in the EBITDA composition, are excluded by the Depreciation and Amortization.

<sup>10</sup>For further information, see Explanatory Note "Costs and Expenses by Nature" in Raizen S.A.'s Financial Statements and the table "Cost of Agroindustrial Production (CPA)" in the Financial Release.

<sup>11</sup> The composition of the cost of goods sold (COGS) can be consulted in the Financial Statements.

## Biological Asset<sup>12</sup>

Raizen's biological assets correspond to "standing" canes, grown in sugarcane plantations that will be used as a source of raw material for the production of sugar, ethanol and bioenergy.

The fair value measurement method is cash flow discounted to present value. The valuation model considers the present value of the expected cash flows to be generated, including projections of up to two years, considering the estimates of the effective date of cane cutting.

## Selling, General and Administrative Expenses<sup>13</sup>

For the purposes of maintenance of the reduction of its expenses, the Company has applied the matrix management of the expenses that includes the grouping of expenses by nature incurred by each department, which brings better visibility of deviations. The main items are described below:

### Selling Expenses

Selling expenses are expenses related to the Commercial department, delivery of goods, depreciation of assets related to the Commercial department and PCLD (Allowance for Loan Losses).

The main item to be considered for selling expenses is freight expenses, which are based on the sales volumes.

Currently, we have 100% of our own sales of Sugar delivered to the destination and in the coming years we should reach 100% of the sales originated, which explains the growing increase in selling expenses in this segment.

### General and Administrative Expenses

Corporate structure expenses, which include compensation for corporate functions and depreciation of the assets of such departments and expenses related to the activities carried out by the shared services center. The main item to be considered for general and administrative expenses is labor expenses, which are mainly based on inflation and/or collective bargaining agreements applied annually.

## Depreciation and Amortization

### Property, Plant and Equipment<sup>14</sup>:

For the agro-industrial area, the line item is covered by depreciation mainly of machinery, equipment, production facilities, frequently replaced parts and components, sugarcane planting, work in progress and buildings.

The main factors that guide depreciation and amortization of property, plant and equipment are acquisitions of new assets, machines and components, improvements made to production plants, renewal of sugarcane fields, construction of production plants and acquisition of new properties and other physical assets.

### Intangible Assets<sup>15</sup>:

For the agro-industrial area, intangible assets are mainly covered mainly by amortization of software licenses and goodwill. The main factors that guide the amortization of intangible assets are acquisitions of software, trademarks and patents, and business combinations that may generate goodwill.

### Rights of Use<sup>16</sup>:

The agro-industrial segment is covered mainly by amortization of land, machinery and equipment and vehicle leases. The main factors that guide the amortization of use right are new lease agreements for land, machinery, equipment, vehicles, among others.

<sup>12</sup> For accounting details consult the NE "Biological Asset" in the Financial Statements.

<sup>13</sup> For more details, please refer to the Explanatory Note "Costs and expenses by nature" of the Financial Statements.

<sup>14</sup> For more details, see the Explanatory Note "Fixed Assets" in the Financial Statements.

<sup>15</sup> See the Explanatory Note "Intangible" in the Financial Statements.

<sup>16</sup> See the Explanatory Note "Right of use" in the Financial Statements.

## **EBITDA**

EBITDA (Earnings before Interest, Taxes, Depreciation and Amortization) is net income before financial income (loss), income tax and social contribution, depreciation, amortization. Raizen understands that EBITDA reflects the Company's operating performance and provides for information on the Company's ability to comply with obligations and obtain funds for capital expenditures and working capital.

The Company discloses EBITDA, as the performance metric is frequently used by capital market analysts, investors, creditors and other interested parties in evaluating companies in the sector; however, EBITDA is not the metric used in accounting practices and does not represent cash flow for the periods presented, and should not be considered as an alternative to cash flow as a liquidity indicator.

## **Adjusted EBITDA:**

We consider that some recurring and non-recurring accounting effects may distort the generation of the company's operating income (loss). Therefore, we made some adjustments to provide clarity and a fair basis for comparison, as follows:

- (i) Fair value of biological asset:** we eliminated the variation in the fair value of the biological asset that is included in the COGS, as the COGS does not reflect the company's results, but the remeasurement of the generation of results with the biological assets in up to two years at market value.
- (ii) IFRS16:** from the application of the IFRS16 standard and the new way of accounting for the lease agreements, the amortization of these agreement began to compose the total "Depreciation and Amortization", which is a component of the calculation for EBITDA, generating higher EBITDA. Despite of the comparison periods with the same effect due to the relevance, peers and Raizen continue to highlight and eliminate these effects.
- (iii) Other specific effects:** usually unusual effects of the operation of the segments that occurred in the current quarter are eliminated and detailed in a specific section in the Company's Earnings Release.

## **Investments<sup>17</sup>**

The investments refer to additions to Biological Assets, Fixed Assets and Intangible Assets and may be recurring in the normal course of operations and expansion aimed at construction and/or productive and operational expansion of the business.

- (i) Recurring:** represent the maintenance of biological assets and machinery and production assets during off-season and in sustaining and agro-industrial operations.
- (ii) Expansion:** represent initiatives and projects aimed at building new production plants in our various segments, improving operational efficiency, reducing costs, increasing capacity and increasing our operations. Therefore, we highlight in our reports the investments in our main project, E2G, with an expected increase in investment until 2027.

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<sup>17</sup> For more details, see the Cash Flow Statements and Explanatory Notes, "Fixed Assets" and "Intangibles" in the Financial Statements of Raizen S.A.

## Mobility Results

### Revenues<sup>18</sup>

Revenues related to the Mobility sector are mainly derived from the distribution and sale of fuels to our franchised resellers, B2B, clients in the aviation sector, and the sale of lubricants.

### Cost

Costs are mainly composed of (a) acquisition of products for distribution to resellers, such as Diesel, Gasoline, Ethanol, Aviation Kerosene, among others, whose prices are defined in the market; (b) primary freight (transport of fuel for collection of products and transfer between distribution bases and terminals); (c) storage; (d) acquisition of CBIO's carbon credits; (e) acquisition costs of products with extended terms through agreements with suppliers and financial agents; (f) tax charges; and (g) labor.

In operations in Argentina, the costs are mainly composed of oil refining processing for the production of derivatives, mainly to serve our service station network both in Argentina and Paraguay.

### Mobility Brazil

#### Volume:

For our portfolio of fuels and lubricants, we estimate growth in volumes sold by the segment linked to projections of the Brazilian GDP, which, due to economic developments, mainly impacts the otto-cycle and diesel.

#### Margin:

The company's focus on the Mobility sector is on profitability and service to the Shell network, as well as contracted clients. The Company's margin may change more significantly based on the volatility of the product costs and market competitiveness. Despite these effects that may impact certain periods, the focus on maximizing margins is supported by Shell's Integrated Offer, through a value proposition for our clients, for the purposes of maintaining long-term relationships with our clients.

### Mobility Latam

#### Volume:

For our fuel portfolio in Argentina and Paraguay, we estimate growth in volumes sold by the segment of 1% per year, subject to variations based on the macroeconomic environments and competitiveness in which we operate.

#### Margin:

The company focuses on profitability in the Mobility sector. Accordingly, we have focused on factors to maximize our margin.

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<sup>18</sup> For more details, see the Explanatory Note "Net Operating Revenue" in the Financial Statements of Raizen S.A.

## ***Selling, General and Administrative Expenses***<sup>19</sup>

With a focus on expense reduction management, the company has implemented matrix expense management, which involves grouping expenses by nature from the perspective of each department, providing better visibility of deviations.

The main components are described below:

### **Selling Expenses:**

Selling expenses are expenses related to the Commercial department, freight to deliver the product to some clients, marketing expenses, actions with Shell Box, depreciation of assets related to the Commercial department and PCLD (Provision for Loan Losses).

The main component to be considered for selling expenses is freight expenses, which are driven by sales volume and marketing expenses. For operations in Brazil, we consider approximately 1% of the segment's total net operating revenue. For Latam operations, we consider approximately 3%.

### **General and Administrative Expenses:**

Corporate structure expenses that include the functions of HR, Finance, Legal, IT, Supplies, depreciation of the assets of such departments and expenses related to the activities carried out by the shared services center.

The main component to be considered for general and administrative expenses is labor expenses; therefore, the main indication is inflation and/or collective bargaining agreements.

## ***Depreciation and Amortization***

### **Property, plant and equipment**<sup>20</sup>:

The marketing and services segment is covered by depreciation mainly of machinery, equipment and facilities, land and buildings.

The main factors that guide the depreciation and amortization of property, plant and equipment are the acquisition of new goods, machines and components, improvements to the facilities and the acquisition of new properties and other physical assets.

### **Intangible assets**<sup>21</sup>:

The marketing and services segment is covered mainly by amortization of brands (use of the Shell brand in Brazil, Argentina and Paraguay), contractual relationships with clients, software licenses and goodwill.

The main factors that guide the amortization of intangible assets are acquisitions of software, brands and patents, business combinations that may generate goodwill and new agreements with clients.

### **Right of Use**<sup>22</sup>:

The marketing and services segment is covered by amortization mainly of vehicles and properties.

The main factors that guide the use right amortization are new lease agreements for real estate, vehicles, among others.

<sup>19</sup> For further information, see Explanatory Note "Costs and expenses by nature" in Raizen S.A.'s Financial Statements.

<sup>20</sup> For further information, see Explanatory Note "Property, Plant and Equipment" in Raizen S.A.'s Financial Statements.

<sup>21</sup> For further information, see Explanatory Note "Intangible Assets" in Raizen S.A.'s Financial Statements.

<sup>22</sup> For further information, see Explanatory Note "Use Right" in Raizen S.A.'s Financial Statements.

## EBITDA

EBITDA\* (Earnings before Interest, Taxes, Depreciation and Amortization) is the net income before financial income (loss), income tax and social contribution, depreciation, amortization. Raizen understands that EBITDA reflects the Company's operating performance and provides information on the company's ability to pay the obligations and obtain funds for capital expenditures and working capital.

The Company discloses EBITDA, as the performance metric is frequently used by the capital market analysts, investors, creditors, and other interested parties in evaluating companies in the sector; however, the EBITDA is not the metric used in accounting practices and does not represent cash flow for the periods presented and should not be considered as an alternative to cash flow as a liquidity indicator.

### Adjusted EBITDA:

We consider that some recurring and non-recurring accounting effects may distort the generation of the company's operating result, so we make some adjustments to provide clarity and a fair basis for comparison, as follows:

- (i) **Asset from agreement with clients:** amortization of advanced bonuses to our clients (resellers) which are bound to deadlines and performance to be fulfilled, specifically to the consumption of volumes defined in the supply agreement. As contractual conditions are met, bonuses are amortized and recognized as a reduction in income under net operating revenue.
- (ii) **Other specific effects:** unusual effects of the operation of the segments that occurred in the current quarter are usually eliminated and detailed in a specific section in the company's release.

### Note

**IFRS16:** from the application of the IFRS16 standard and the new way of accounting for lease agreements, the amortization of these agreements began to compose the total "Depreciation and Amortization", which is a component of the calculation for EBITDA, generating higher EBITDA. Due to the relevance of the IFRS16 amortization for the marketing and services segment, we do not adjust in the segment, only for consolidated purposes.

### Investments<sup>23</sup>

#### Mobility Brazil

- (i) **Recurring:** represent the maintenance at distribution terminals and B2B terminals.
- (ii) **Expansion:** represent the initiatives and projects aimed at expanding our network with Shell-branded service stations, such as replacement of fuel pumps, environmental adaptation, image revitalization, investments in large clients (B2B), such as the acquisition and installation of equipment, installation of fueling stations at these large consumer clients and expansion, modernization and improvement at airports, such as the acquisition of fueling vehicles, expansion of hydrant networks and fueling points, as well as expansion of terminals.

#### Mobility Latam

- (i) **Recurring:** represent the maintenance at the distribution terminals, B2B terminals and refinery.
- (ii) **Expansion:** represent initiatives and projects aimed at improving and adapting the refinery until the 23-24 crop year, after which the amounts decrease by approximately 60%.

<sup>23</sup> For further information, see Statements of Cash Flow and Explanatory Notes "Biological Assets", "Property, Plant and Equipment" and "Intangible Assets" in Raizen S.A.'s Financial Statements.

## **Consolidated Financial Income (Loss)**

### **Financial Income (Loss)<sup>24</sup>**

The financial income (loss) recorded in the management report in accordance with the nature of the financial transactions, including the financial income and expenses that reflect the financial income (loss) disclosed in the Financial Statements.

### **Gross debt charges<sup>25</sup>e<sup>26</sup>:**

Gross debt charges are related to variations in the outstanding balance and the interest rates associated with the Company's loans and borrowings.

### **Income from short-term investments:**

Income from short-term investments are composed of income earned on financial investments, usually in CDI (Interbank Deposit Certificates), which are realized against cash balances.

### **Other charges and exchange rate changes:**

Gains (losses) on non-debt derivative agreements used to mitigate the company's risks from exchange rate changes and interest rate exposures and foreign exchange and non-debt interest rate variations.

### **Bank expenses, fees and others:**

Cost of raising debentures, loans, bank fees and other financial income and expenses.

### **Interest on leases (IFRS 16):**

Refers to interest on lease liability agreements (lease liabilities). The amounts are adjusted annually by inflation indexes (such as IGP-M and IPCA) or may incur interest calculated based on the TJLP or CDI. Some of the agreements are subject to renewal or purchase options that were considered in determining the classification as finance lease.

## **Taxes**

The Company is subject to different taxes and contributions, such as municipal, state and federal taxes, regulatory fees and income tax, among others, which represent the expenses incurred by the Company. The Company is also subject to other taxes on its activities that generally do not represent an expense.

### **Taxes on revenues:**

**ICMS** – Tax on Circulation of Goods and Services (“ICMS”);  
**PIS and COFINS** – Social Integration Program (“PIS”) and Tax on Revenues (“COFINS”);  
**CIDE** – Economic Domain Intervention Contribution (“CIDE”);  
**ITC** – Fuel Transfer Tax (“ITC”);  
**IVA** – Added Value Tax (“IVA”);  
**IIB** – Gross Income Tax (“IIB”).

### **Income tax and social contribution<sup>27</sup>:**

**Current income tax and social contribution:** Income tax and social contribution on earnings are calculated as a percentage of net income before taxes and are currently charged at the rates of 25.0% and 9.0%, respectively. Brazilian law in force allows tax losses to be accounted for in subsequent years to be offset against future taxes.

Although the income tax loss carryforwards has no expiration date, the annual compensation is limited to 30.0% of adjusted taxable income for the year.

In addition, Raizen enjoys tax benefits and uses methods of distributing profits to its shareholders that reduce its effective rate, historically remaining between approximately 20% and 30%. The main reductions are:

<sup>24</sup> For further information, see Explanatory Note “Financial Income (Loss)” in Raizen S.A.’s Financial Statements.

<sup>25</sup> For further information on the Company’s Gross Debt, see section [Debt](#).

<sup>26</sup> For more details, see the Explanatory Note “Loans and Financing” in the Financial Statements of Raizen S.A.

<sup>27</sup> For more details, consult the Explanatory Note “Income tax and Social Contribution” in the Financial Statements of Raizen S.A.

- (i) Interest on Capital (JCP)
- (ii) Tax debt – Selic
- (iii) Change in Raízen Argentina's rate
- (iv) Non-recognized deferred taxes
- (v) Exchange rate changes on foreign assets and liabilities
- (vi) Deferred IRPJ and CSLL

#### **Tax benefits<sup>28</sup>:**

We are entitled to tax benefits that we recognize in our shareholders' equity, including:

- (i) Federal economic subsidy in diesel sales operations, from the direct subsidiary Blueway.
- (ii) Incentive program of the State of Goiás called "Produzir" to finance a part of the payment of ICMS.
- (iii) Tax benefit in the State of Mato Grosso do Sul, in sugar production operations.
- (iv) Benefit granted by the States bound by ICMS Agreement 116/2022 and EC 123/2022 attributing granted credit (or deemed credit), used in taxpayers' bookkeeping to offset ICMS debts in the ordinary calculation, arising from the hydrous ethanol production and marketing operations.

#### **Recoverable taxes<sup>29</sup>:**

The main tax asset balances recorded by the Company are as follows:

#### **ICMS:**

ICMS arises, mainly, from interstate operations for the distribution of oil derivatives, in which the tax burden of the state of destination is lower than that withheld by the supplier, pursuant to Agreement 110/07. In order to use the ICMS credit balances, the Company internally reviews certain activities, specifically the logistical review of operations with changes in supply centers. Additionally, there are requests for specific systems with certain state tax authorities, requests for authorization to transfer balances between branches in the same state and analysis of the sale of credits to third parties.

The recoverable ICMS balance is recorded in the Financial Statements and reflects the amount that the Company expects to realize, less the provision for loss of credits for which Management does not expect to realize.

#### **PIS and COFINS:**

ICMS on the PIS and COFINS calculation basis

On March 15, 2017, the Federal Supreme Court ("STF") concluded the judgment of the Extraordinary Appeal ("RE") 574706 and, under the general repercussion system, established the legal provision that the ICMS tax is not part of the calculation of PIS and COFINS taxes, since this amount does not constitute the Company's revenues/billing, that is, taxpayers have the right to exclude the value related to ICMS highlighted in the invoice from the PIS and COFINS calculation basis.

Supplementary Laws 192/2022 and 194/2022 ("Supplementary Law 192/22" and "Supplementary Law 194/22", respectively).

Due to the injunction and the lack of conversion into law of Provisional Measure 1118/22, the wording given by Supplementary Law 192/22 remained in force, which guaranteed to all legal entities in the fuel chain, including Raízen's subsidiaries, the maintenance of PIS and COFINS credits linked to those operations in the period from March 11, 2022 (from the date of publication of Supplementary Law 192/22) to August 15, 2022 (ninety days after the date of publication of Supplementary Measure 1118/22 that restricted the taxpayers' credit right), when it became effective, as decided by the STF.

<sup>28</sup> For further information, see Explanatory Note "Shareholders' Equity" in Raizen S.A.'s Financial Statements.

<sup>29</sup> For further information, see Explanatory Note "Taxes Recoverable" in Raizen S.A.'s Financial Statements.



In relation to Supplementary Law 194/22, which restricted the right to PIS and COFINS credit right on the acquisition of diesel, aviation fuel and liquefied petroleum gas (“GLP”), according to the wording given by Provisional Measure 1118/22, published in the 90s, the tax burden increased. In this way, supported by the opinions of external and internal legal experts, the constitutional principle of precedence should be complied.

Therefore, the Company and its subsidiaries recognized PIS and COFINS credits under applicable law in force and disclosed the balances and activities in the Financial Statements.

Additionally, the Company and its subsidiaries used such credits to offset the balances of corporate income tax (“IRPJ”) and social contribution on net income (“CSLL”) payable.

The recoverable balance of PIS and COFINS is recorded in the Financial Statements, reflecting the amount that the Company and its subsidiaries expect to realize, less the provision for loss of credits for which Management does not expect to realize, when applicable. Considering Management's estimates, the expected period for realizing PIS and COFINS credits is up to 10 years.

### **IVA:**

Refers to a federal tax applicable in Argentina and Paraguay on commercial transactions with clients and suppliers, whose taxable event, calculation and payment takes place monthly.

### ***Working Capital***

Working capital is the cash flow that a company needs to maintain its activities and pay the operating expenses of the business while such company does not paid for the product or service sold. The working capital is the net value between accounts receivable, inventories and trade payables.

Due to the seasonality of operations, the purpose of Raízen's working capital changes, mainly affected by inventory levels, which are normalized at the end of the crop year. The contracting of drawn risk also affects the working capital.

### ***Leverage:***

The Net Debt/Adjusted EBITDA LTM ratio is used to analyze the company's debt level. Its result demonstrates the number of years it would take for a company to pay off its net debt considering its current operating result remains constant. Net Debt is the sum of net loans and borrowings minus Cash and Cash Equivalents, Financial Instruments of debt - MtM). For Raízen, leverage is subject to the seasonality of the Renewable and Sugar segment, considering that the formation of inventories requires more financial capital from the company. In this ratio, Adjusted EBITDA is used as a proxy for the company's cash generation.

### ***Earnings Per Share (EPS):***

#### ***Basic:***

Basic earnings per share is calculated by dividing the net profit of the period attributable to the shareholders of the Company by the weighted average quantity of all classes of shares in circulation during the period, excluding treasury shares.

#### ***Diluted:***

Diluted earnings per share is calculated by adjusting the weighted average of shares in circulation, assuming the conversion of all shares that would cause dilution.

### ***ROACE***

Raízen understands that ROACE reflects the average profitability of the return on the company's assets, which provides information on the ability to measure the efficiency of the contributed capital used by the Company.

In this calculation, ROACE is defined as the income for the period before financial income (loss) and taxes (EBIT) adjusted for the effects of the fair value of biological assets, IFRS16, and other specific effects, by the ratio of the average contributed capital for the period. Contributed capital consists of shareholders' equity, excluding assets and liabilities such as cash and cash equivalents, loans and financing and related-party balances not linked to the company's operating activities.

### Useful links

Details of our business, activities and products: <https://www.raizen.com.br/nossos-negocios>

Blog Raízen is a content platform that brings relevant information, studies and data on ESG, renewable energy and innovation: <https://www.raizen.com.br/blog>

Raízen's main news in one place: <https://www.raizen.com.br/sala-de-imprensa>

Our initiatives in governance, certifications and certified purchases: <https://www.raizen.com.br/agenda-esg/governanca>.

Unica – União da Indústria de Cana de Açúcar, the sugarcane and bioenergy department, provides news, bulletins and studies on the sector at [www.unica.com.br](http://www.unica.com.br), for fortnightly newsletters see <https://unicadata.com.br/listagem.php?idMn=63>

For research and data related to Agribusiness, CEPEA – Center for Advanced Studies in Applied Economics – ESALQ/USP has a wide portfolio at <http://cepea.esalq.usp.br>, for price consultation of Hydrated Ethanol <https://cepea.esalq.usp.br/br/indicador/etanol.aspx>

For monthly data on fuels and lubricants, the Brazilian Institute of Petroleum and Gas – IBP provides monthly bulletins at <https://www.ibp.org.br/observatorio-do-setor/>

To consult our sector data, see the National Agency of Petroleum, Natural Gas and Biofuels' website <https://www.gov.br/anp/pt-br>

To consult our Earnings Release and Financial Statements, see <https://ri.raizen.com.br/informacoes-financeiras/central-de-resultados/>

For more information about SAF, please visit <https://www.shell.com/business-customers/aviation/the-future-of-energy/sustainable-aviation-fuel.html#iframe=L2wvODc3OTYyLzlwMjMtMDUtMjVlNHdiNjh2>

The main Explanatory Notes available in the Financial Statements are as follows:

Guide Topics	Description of the Explanatory Notes	Table Description
Investments		Cash flow statements
Working capital		
Biological Asset	Biological Asset	
Recoverable taxes	Recoverable taxes	
Asset of contract with customers	Assets From contracts with customers	
Imobilizado	Immobilized	
Intangible	Intangible	
Right of Use and IFRS16	Leases	
Gross Debt Charges	Loans and Financing	
Income Tax and social contribution	Income Tax and social contribution	
Revenue	Net Revenue and Segment Information	Earnings Results
Cost of Good Sold	Segment information and Costs and expenses by nature	
Selling, General and Administrative Expenses		
Financial result	Financial result	
Hedge	Financial Instruments	

### Version Control

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