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## **ABOUT THE REPORT**

BYD Brasil presents its 2022 Sustainability Report. The document reinforces the company's commitment to combating climate change by providing a zero-emission energy ecosystem - encompassing solar energy generation and storage, along with electric mobility - establishing itself as a global leader in the energy and transportation sectors.

The purpose of this document is to strengthen the company's relationship with its stakeholders and to present the main initiatives, sustainability strategies, and achievements in 2022, supported by the principles of transparency and ethics that characterize BYD's global operations, thereby reinforcing its mission and core values.

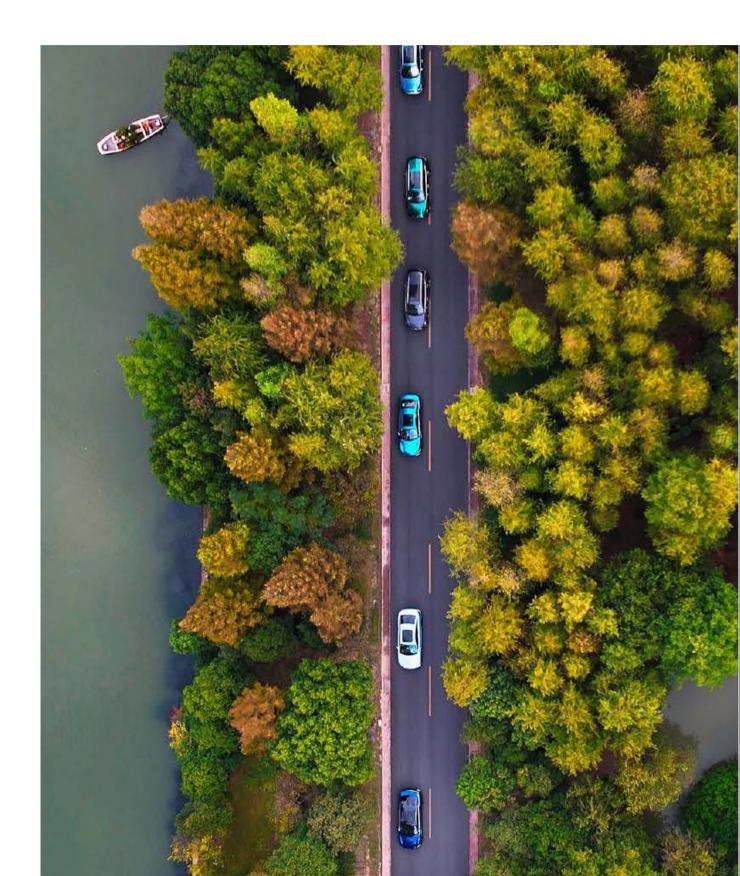
#### Scope of the report

This report covers all business units of BYD in Brazil, during the period from January 1st to December 31st, 2022.



#### PEOPLE





## **MESSAGE FROM THE PRESIDENT**

Dear reader,

BYD emerged from the dream of Wang Chuanfu, our founder and current CEO. A dedicated chemist, since the inception of BYD's early operations in China in 1995, he advocated for issues related to clean energy generation and storage as instruments for reducing pollution, improving guality of life, and creating sustainable jobs.

Today, we are the top-selling automotive company in China, with our entire lineup fully electrified in the world's largest automotive market. In 2023, we also took the lead in the global electrified market. We represent the fourth-largest brand in automotive market value and have a presence on six continents, with nearly 570,000 employees.

We are also global leaders in electric bus sales, with over 70,000 units delivered. Together, BYD's electric buses have traveled 5.5 billion kilometers worldwide, preventing the emission of 3.8 million tons of CO<sub>2</sub>.

In 2022, for the second consecutive year, the American magazine TIME named BYD as one of the 100 most influential companies in the world.

In Brazil, we are experiencing the most significant moment in BYD's history. The local automotive operation started in 2021 when we began selling passenger cars. Today, we have already launched 7 models: BYD TAN EV, BYD HAN EV, BYD Song DM-i, BYD Yuan, BYD D1, BYD Dolphin, and BYD Seal.

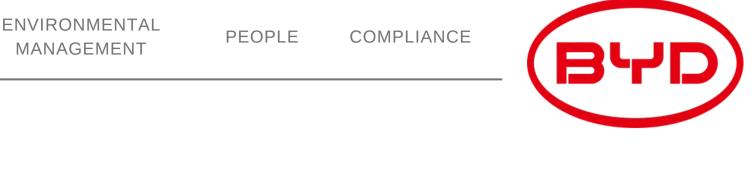
We have conquered the Brazilian market in an unprecedented manner, making BYD the sales leader in the electrified segment. We already have a consolidated and operational network of dealerships, operating in all major Brazilian cities. Soon, some models will be manufactured in Brazil at the industrial complex in Camaçari (BA), boosting job creation and technological development in Bahia and Brazil.

We have BYD buses in more than 10 cities in Brazil. In 2022, we delivered one of the largest fleets of electric buses in the country to the Government of Bahia. BYD Energy inaugurated a new production line for photovoltaic modules and, during the Intersolar South America 2022, introduced a new business model, the Solar Kit. The model features advanced technology and represents a significant advancement compared to brands available in the domestic market.

BYD reaffirms its long-term commitment to Brazil, betting on and investing in the country's potential through the expansion of one of its primary businesses outside of China. We provide high-quality products and services, aiming to meet the needs of our customers and contribute to a more sustainable world and a higher quality of life for everyone.

The challenges are numerous, and we still have a long journey ahead, but our dream of building a more sustainable future is motivating and fills us with confidence in this purpose.

Thank you very much for your attention, and happy reading!



We live in an era where technology has constantly changed the way we do business. And we, as a technology company, closely follow this evolution.

Tyler Li President of BYD Brazil



## PRESENTATION

Who we are

With the aim of solving social issues and driven by technological innovation, BYD provides a suite of sustainable solutions for cities to build a new zero-emission energy ecosystem, facilitating the development of the low-carbon industry.

BYD is a company present on six continents, spanning over 70 countries, and listed on the stock exchanges of Hong Kong and Shenzhen. The year 2022 concluded with 570,000 employees across over 30 factories worldwide, with over 90,000 being research engineers responsible for developing 26,000 authorized patents.

"

Over the years, BYD has steadfastly pursued a path of sustainable development and makes every effort to address climate change.

PEOPLE

COMPLIANCE



Wang Chuanfu Global President of BYD

# MISSION Technological innovations for a better life



## **COMPANY CORE VALUES**







### EXCELLENCE

Inspires our dreams through vitality

## PRAGMATISM

Turns our dreams into reality

Drives our dreams

#### ENVIRONMENTAL MANAGEMENT

PEOPLE

COMPLIANCE





### PASSION

### INNOVATION

Overcomes barriers in pursuit of our dreams

**GLOBAL PERFORMANCE 2022** 

World Top 500 Companies

Annual revenue	Number of Employees*
R\$ <b>309.89 bilhões</b>	570.060

- Sales of new energy vehicles: 1.787.838 units, 217,63% year-on-year growth.
- Annual mileage of BYD electric vehicles: 19,4 billion kilometers, representing a save of 940.000 tonnes of fuel and oil.
- Annual carbon emission reduced by car owners: 2,38 million tonnes, representing a planting of 103 million trees.

\*Fonte: BYD CSR REPORT 2022

PEOPLE

COMPLIANCE

## **Charity Expense R\$ 175.41 milhões**

## **OVERVIEW OF BYD BRAZIL**

The acronym BYD — Build Your Dreams — translates the company's mission of building a better planet by providing zero-carbon emission solutions and solar energy. In just a few years, it became the world's largest electric vehicle manufacturer, having already produced over 6 million models. In the energy sector, it has reached the milestone of producing 2.3 million photovoltaic modules in Brazil.

Based in Shenzhen, the Chinese Silicon Valley, the company arrived in Brazil in 2015, inaugurating its first assembly plant for 100% electric buses in Campinas. Later on, it opened its second factory for the production of photovoltaic modules. In 2022, it launched its new integrated business model focused on manufacturing complete solar energy kits.

To power the electric bus fleet, it began operations in 2020 at the Manaus Industrial Pole, dedicated to producing iron-phosphate lithium batteries. Additionally, the company is responsible for the monorail project on Line 17 Gold in the city of São Paulo.

From 2019 to 2023, BYD was responsible for the concession of the Subúrbio Ferroviário de Salvador Light Rail Transit (VLT). It was a Public-Private Partnership concession agreement between BYD and the Government of the State of Bahia, where BYD was in charge of the construction, implementation, and operation of the project.





"

We've been in Brazil for almost ten years now, but we want consumers to understand that we are the world's largest cleantech company. We're planning to invest significantly in the country to expand and bring all our electrification technology to Brazil.

COMPLIANCE

Stella Li Global Vice President of BYD

Rio de Janeiro



## **RESPONSIBILITY TOWARDS CLIMATE CHANGE**

Over the years, BYD has steadfastly followed a path of sustainable development and makes every effort to address climate change. The company launched the 'Cooling the Earth 1°C' initiative as early as 2016, at the C40 Mayors Summit in Mexico. Wang Chuanfu, Global President of BYD, urged everyone at the conference to pay more attention to global climate change and to reduce global warming.

In 2020, after China announced its goal to peak carbon emissions by 2030 and achieve carbon neutrality by 2060, BYD swiftly mobilized and launched a planning study on carbon neutrality in February 2021, aiming to explore carbon footprints within the electric vehicle industry.

On August 10, 2021, BYD established the Carbon Emission Control Committee, officially commencing the management and control journey across the company to achieve carbon neutrality goals. On August 19, 2021, BYD launched the first 'Zero Carbon Park' project in the Pingshan Industrial Park, constructing the first zero-carbon park by a Chinese automotive brand.

At COP26, the 26th United Nations Climate Change Conference, This action encourages the implementation of new technologies held in November 2021 in Glasgow, Scotland, BYD signed three and innovative solutions, highlighting the state's leadership in the significant global agreements to accelerate the transition to nonclimate agenda. polluting vehicles.

Additionally, the company has been actively participating in In 2022, BYD became the world's first manufacturer to cease the conferences and international agreements to engage with the production of fuel-powered vehicles and construct the first zerocommunity in discussing the pathway to reduce climate change. carbon headquarters of an automotive brand in China.

In 2021, BYD joined the São Paulo Environmental Accord, aimed at encouraging São Paulo-based companies, associations, and municipalities to make voluntary commitments to reduce greenhouse gas emissions, in order to contain global warming below 1.5°C. The adherence aims to drive the reduction of GHGs (greenhouse gases) over the next 10 years. The Accord also entails recognizing signatories as members of the climate change leaders community, along with governmental technical support.







**BYD** Products

Environmental

Management

## **COMMITMENT TO SUSTAINABLE DEVELOPMENT**

At the United Nations General Assembly in 2015, the Sustainable Development Goals (SDGs) were adopted with the purpose of establishing a sustainable society worldwide through social development, environmental protection, and inclusive economic growth. The timeline for these UN SDGs spans from 2016 to 2030.

BYD is a participant in the Global Compact Network Brazil, a United Nations initiative aiming to mobilize the business community to adopt and promote Ten Principles universally accepted in the areas of human rights, labor, environment, and anti-corruption in their business practices. With the creation of the Sustainable Development Goals (SDGs), the Global Compact also took on the mission of engaging the private sector in this agenda.

As a responsible corporate citizen, BYD aims to consider the SDGs in how it conducts its business. By joining the Global Compact, the company commits to annually report its progress regarding the Ten Principles. This initiative thus encourages continuous evolution of internal sustainability practices.

#### Actions aligned with the United Nations Sustainable Development Goals



People

Compliance



5 IGUALDADE DE GÊNERO đ

**ENVIRONMENTAL** MANAGEMENT

PEOPLE

COMPLIANCE















10 REDUÇÃO DAS DESIGUALDADES

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## SUMMARY OF AWARDS OF SUSTAINABLE DEVELOPMENT OF BYD IN 2022

Prêmio	
Special Prize of Award for Science and Technology Progress of Guangdong	Guangdong Provinc
First Prize of Guangdong Machinery Industry Science and Technology Award	Guangdong Mecha
Silver Award for SDP Sustainable Improvement	Deutsche Telekom
Silver Award for EcoVadis CSR Rating	EcoVadis
2021 Automative Networking Business "Best Supplier Award"	Continental Group
First Prize of 43rd Quality Management Team of Hunan Quality Association	Hunan Quality Asso
2022 World Top 500 Companiesof Fortune	FORTUNE CHINA
National Quality and Integrity Benchmark Enterprise	China Association f
Returning to No. 1 position in after-sales service customer satisfaction for MPV models for BYD SONG MAX by 2022 CAACS research	China Automative N
No. 1 National Brand by 2022 CAACS research	China Automative N
2022 Gold Prize of International Convention on Quality Control Circles (ICQCC)	The 47th Internation
OPPO 2022 Excellent Supplier Award	OPPO
2022 China Automotive Golden Wrench Award — Customer Experience Award	China Auto Market
Golden Wrench Service Top 100 Quality Shop 2022	China Automotive N
Top 100 ESG A-share Companies	Securities Times
Outstanding cases of social responsibility of private enterprises in China 2022	All-China Federatio
Best Listed Company of the 4th New Fortune Selection	New Fortune
Best ESG Practice Award of the 4th New Fortune Selection	New Fortune
Golden Bull Most Valuable Investment Award	China Securities Jo

COMPLIANCE



#### Organizadora

incial People's Government

hanical Engineering Society, Guangdong Machinery Industry Association

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n for Quality Inspection

e Maintenance and Repair Trade Association

e Maintenance and Repair Trade Association

tional Congress of the Quality Assurance Community – 2022 Jakarta

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e Maintenance and Repair Trade Association

tion of Industry and Commerce

Journal

2003

## **KEY EVENTS OF BYD IN BRAZIL AND WORLDWIDE**

growth without pollution, through clean energy.
* * * * *

1995

The award-winning chemist Wang Chuanfu, a researcher

for the Chinese government, founded BYD with 20

employees. His primary goal was to enable China's

#### 2016

100% electric BYD buses are delivered in London, Sydney, Long Beach, Stanford, Amsterdam, Campinas, among other cities around the world. 100% electric BYD taxis begin operating in Campinas and São Paulo, along and distribute them to various countries with Brazil's first car-sharing program in Fortaleza.



#### BYD becomes the first Chinese supplier of lithium-ion batteries for Motorola and Nokia, becoming the country's largest manufacturer of components for IT.

2002

#### BYD enters the automotive industry and completes the Xi'An factory. It launches the F3, the first model under its own brand, which becomes a bestseller.vv



2020

NAt the onset of the COVID-19 pandemic, the company decided to start producing disposable masks, a product that became scarce in the early months of the pandemic,





2021

In November 2022, a ceremony was held at BYD's global In November 2021, it took the first step towards the headquarters to celebrate the milestone of three million commercialization of its passenger vehicles in Brazil, electrified vehicles produced. presenting the BYD Tan EV model.



COMPLIANCE



#### 2014

BYD arrives in Brazil, bringing significant advancements in electric mobility to the country. Since then, BYD has continued to accumulate achievements in South America.

2022

## **BYD PRODUCTS**

BYD has fulfilled its mission over the years by developing products focused on technological innovation. Through its technology, it has accelerated the development of clean energy-driven transportation systems with the aim of cooling the Earth by 1°C.

BYD offers photovoltaic modules, energy storage systems, as well as electric vehicles and handling equipment to establish a complete chain, from energy capture and storage to application.







#### **ENVIRONMENTAL** MANAGEMENT

#### PEOPLE



# SOLAR ENERGY



Cal Alata Cala

## **SOLAR ENERGY**

The dream of BYD aligns with what humanity needs: to shift human dependence from non-renewable energies to clean energy sources.

BYD's green dream is to continue acting and expanding the popularization of using energy in a free and independent manner. The company's focus in this chain includes energy generation, energy storage, and urban mobility. All these activities are fully operational and cater to diverse audiences.

BYD's photovoltaic energy technologies are applied in solutions for small, medium, and large-scale segments, including residential, commercial, industrial, rural, investors, energy utilities, among others.

Photo

Energ

Invest



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## **PHOTOVOLTAIC MODULES — EFFICIENCY AND QUALITY**

BYD Energy in Brazil is the largest national manufacturer of photovoltaic modules. With a factory in Campinas, the company achieved, in 2022, the milestone of supplying over 2 million modules solely in Brazil. The BYD photovoltaic modules installed in the country reduce the emission of approximately 156,089 tons of CO<sub>2</sub> per year, equivalent to planting 632,388 trees.

In April 2022, BYD Energy in Brazil inaugurated a new photovoltaic module production line in the country, located in Campinas (SP). The new facilities underwent complete equipment and process renovation, adopting the highest technology available in Brazil and abroad, such as Multi-busbar, half-cell, 1/3 cut cell, micro-gap, and negative-gap. Thus, the company began marketing a new complete line of high-power modules, mono and bifacial, ranging from 450W to 670W.

In October 2022, BYD introduced at Intersolar South America the integrated BYD solution, comprising photovoltaic modules, hybrid or off-grid inverters, lithium batteries, and electric vehicle chargers.

BYD photovoltaic modules provide energy independence and savings. They can be applied in urban and rural areas, industries, commerce, residences, condominiums, and power plants. They are easy to install, require low maintenance, and have a long lifespan, with a 10-year product warranty and 25-year performance warranty. Additionally, the company has a specialized technical team to support project development and equipment commissioning.



In 2022, BYD reached the milestone of producing 2 million photovoltaic modules in Brazil.

#### ENVIRONMENTAL MANAGEMENT

#### PEOPLE







BYD Photovoltaic Module Factory in Campinas (SP)

## **ENERGY STORAGE SYSTEMS**

BYD has been revolutionizing the battery market day by day, actively engaging in modernizing technologies, and thanks to substantial investment in Research & Development in the field, it's revolutionizing the entire market. The enhancement of the entire supply chain, from chemical composition to final design, has made BYD a global leader in manufacturing and marketing energy storage systems.

These storage systems provide autonomy and independence in energy usage. Currently, BYD employs Lithium Iron Phosphate (LIFEPO4) technology, making its batteries the safest in the world. Consequently, the company offers various battery models tailored to the diverse market needs for both On-grid and Off-grid systems, applicable in urban and rural areas, industries, general commerce, residences, condominiums, and power plants. BYD's storage systems require low maintenance and boast a prolonged lifespan, serving as a source of 100% clean and renewable energy.

#### **B-Box Line**

The BYD B-BOX battery line, globally awarded on several occasions, is designed with Lithium Iron Phosphate technology, making it the safest in the world. They are ideal for residential, commercial, and industrial applications, delivering a high level of efficiency and safety.

#### **ESS** Container

BYD has developed the ESS Container, the most comprehensive and secure solution for solar energy storage, monitoring, and management available on the market. Its wide input voltage range, output smoothing and impact on the grid, the power conversion system, which is both reactive and adjustable, the fire suppression and protection system, along with numerous other features, qualify BYD's ESS Container as a completely secure solution ideal for storing, monitoring, and managing large-scale power plants. It can be applied to meet diverse needs in highcapacity energy generation systems.

#### ENVIRONMENTAL MANAGEMENT

#### PEOPLE





**B-Box Line** 



ESS Container: comprehensive solution for energy storage

## **INVESTMENT IN RESEARCH & DEVELOPMENT**

The ongoing transformation within the photovoltaic market demands that companies stay well-informed about new technologies to enhance their products. The technologies presented by BYD are initially studied by the R&D team through prototypes to test their economic viability and the benefits they can bring to the product and the Brazilian photovoltaic market.

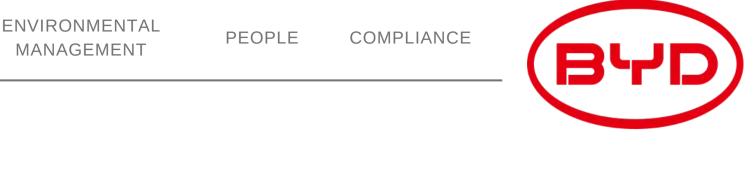
Research at BYD receives government support and incentives through PADIS (Program for Support of Technological Development in the Semiconductor and Display Industry), which involves studies in semiconductors, focusing on cell behavior analysis in various technologies and applications. Besides internal research by the R&D team, there are partner institutions conducting research and training professionals for the job market. The goal is to leverage the expertise of universities and research institutes for technology development and human resource formation.

BYD's R&D boasts a highly gualified team dedicated to improving the utilization of new photovoltaic technologies and has already invested over R\$50 million in research.

The research lines include studying the reliability of photovoltaic Moreover, BYD has a photovoltaic plant in Campinas (SP) modules, interconnections of photovoltaic cells and their exclusively dedicated to Research and Development (R&D) in technologies, the manufacturing process of photovoltaic the country. With an investment of R\$ 7 million in equipment, the modules, photovoltaic cells, and circular economy. In 2022, plant was built within the concept of Industry 4.0, making it the BYD's R&D published and presented papers at national and most modern in Brazil, in partnership with the TMW Energy international conferences, such as the '8th World Conference on group and Instituto Eldorado. The solar plant features a complete weather station and is dedicated to studying various Photovoltaic Energy Conversion,' the largest congress in the segment worldwide, held in Milan, Italy, and the IX Brazilian types of photovoltaic modules in tropical soil and integrating with Congress on Solar Energy held in Florianópolis, Santa Catarina. energy storage systems and inverters.



**BYD Energy's Photovoltaic R&D Plant** 



#### **New Products**

In 2022, BYD began producing the Harpia photovoltaic module, which incorporates N-Type TOPCon technology. The innovation, entirely developed by the company's R&D department in Brazil, stands out for its higher energy efficiency and reduced degradation rates. This module was specifically designed to optimize performance according to the characteristics of the Brazilian climate.

All research and development of new products by BYD Brazil are conducted on Brazilian soil, bringing the knowledge and necessary technologies to the country to further its pioneering efforts in renewable energies.



## **PASSENGER VEHICLE**

Electric vehicles are already a reality in the automotive market and are increasingly gaining space in a sector that was previously dominated by combustion models. Gradually, Brazil is also becoming part of this transformative scenario.

BYD has introduced the most advanced and top-selling electric cars from the brand worldwide to the Brazilian market. The car interiors boast excellent finishing, premium high-quality materials, and a minimalist, technological architecture. The vehicles feature BYD's innovative Blade battery, which has redefined safety standards for the entire industry.

As the world's leading manufacturer of electric vehicles, BYD plays a leading role in the global-scale transition to electrification in transportation, elevating Brazil by offering high-quality, efficient, and innovative electric vehicles.

Leadi
Blade
Electri
Effecti

DM-i \$

BYD



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ic Vehicles Released by BYD Brazil in 2022	24
ive Quality and Rigorous Control	25
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## LEADING THE GLOBAL ELECTRIC VEHICLE MARKET

As a leading global manufacturer of electrified vehicles, BYD has played a pivotal role in the transition to electrification in the global transportation industry, becoming one of the first companies to cease production of combustion engine vehicles and focus exclusively on battery electric and hybrid models.

BYD's pioneering work in battery technology and electric vehicle manufacturing has been driving the revolution in the global automotive industry since the company entered this segment in 2003, led by innovative technologies and a global business strategy. In 2004, BYD unveiled its 100% electric concept car, the BYD ET, at the Beijing Auto Show, marking the debut of a clean energy model. In 2008, the world's first mass-produced plug-in hybrid vehicle, the BYD F3DM, was officially revealed.

By 2021, Shenzhen, China, the global headquarters of BYD, had become the city with the highest adoption rate of electric vehicles, exceeding 30% of the fleet, with a shift from combustion engine vehicles to electric vehicles for ride-sharing applications.

In 2022, BYD became the world's first manufacturer to cease the production of combustion engine vehicles and constructed the first carbon-neutral headquarters for an automotive brand in China, setting a demonstration for the global transportation sector and low-carbon transformation manufacturers.

In November 2022, BYD celebrated a significant milestone by becoming the first automaker to produce three million electrified vehicles. This marks not only a major achievement in BYD's history but is also crucial in witnessing the acceleration of global sustainable mobility. In the future, BYD will continue to collaborate with partners across various sectors to achieve high-quality development. Moreover, it will persist in facilitating progress in the global electrified vehicle industry, accelerating the transition towards a more sustainable world.

ENVIRONMENTAL MANAGEMENT

PEOPLE







## **BLADE BATTERY**

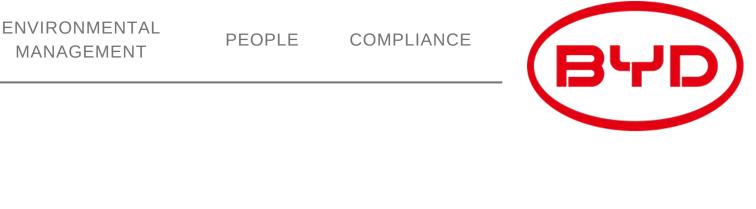


Bateria Blade da BYD

A BYD prioritizes consumer safety. An example of this commitment is the development of the innovative Blade ba This highly technological product has redefined safety stan within the electrified vehicle industry.

The BYD Blade battery was engineered to enhance the saf the component by organizing individual cells into an array then inserting them into a battery pack, creating a highly eff space compared to other lithium iron phosphate (LFP) batter

Comprising lithium iron phosphate cells, the BYD Blade battery surpassed all expectations in the industry's "Everest" test - the nail penetration test. The results demonstrated that spontaneous combustion or explosion in this battery is highly improbable, if not virtually impossible.



i uns	In the test, a fully loaded 40-ton truck drove over the blade
attery.	Battery pack, which emerged without leakage, deformation, or
ndards	smoke, remaining perfectly intact and ready to be used in an
	electric vehicle. The test results under such extremely severe
	conditions are sufficient proof of the superior performance of the
fety of	Blade Battery in terms of safety and durability.
y and	
ficient	Since April 2021, BYD has been employing this type of battery in
eries.	its electric vehicle models. As a result, the vehicles have become
	safer, contributing to the acceleration of global electrification
oatterv	efforts.

## **BYD'S ELECTRIC CARS LAUNCHED IN BRAZIL IN 2022**

A BYD has become synonymous with technological innovation and engineering excellence, developing revolutionary products with proven reliability.

The creation of a Zero Emissions Energy Ecosystem comprising affordable solar energy generation, reliable energy storage, and cutting-edge electrified transportation — has made it an industry leader in the energy and transportation sectors, assuming unprecedented leadership in the Brazilian market for electric and hybrid vehicles.

#### **BYD TAN EV**

At the end of 2021, BYD launched in Brazil the first passenger car to be marketed by the brand in the country: the BYD TAN EV, the first seven-seater SUV 100% electric to be commercialized in Brazil. With this, BYD combined two consumer desires: the quest for products that do not harm the environment and the fastest-growing category of cars in the country, the SUV segment.

#### **BYD HAN EV**

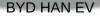
In April 2022, the HAN EV was launched in the Brazilian market. Launched in November 2022, the Yuan Plus EV is the first model Thus, this premium electric sedan became the second built on the brand's e-Platform 3.0. It represents the next passenger vehicle to be marketed by BYD in the national generation of electric cars, embodying concepts that will become territory. A vehicle that combines luxury, sophistication, and bold key attractions and differentiators for consumers: intelligence, design with top-level safety and numerous intelligent features. efficiency, safety, and design.

#### SONG PLUS DM-i

Also introduced to the Brazilian market in November 2022, the SONG PLUS DM-i marks the beginning of a new phase for BYD in the country, with the sale of intelligent plug-in hybrid models. It was the first BYD vehicle to arrive in Brazil with the exclusive DM-i super plug-in hybrid technology. It brings new concepts, innovations, and benefits, including low fuel consumption, quick acceleration, smooth drivability, as well as low CO<sub>2</sub> emissions.











PEOPLE

COMPLIANCE



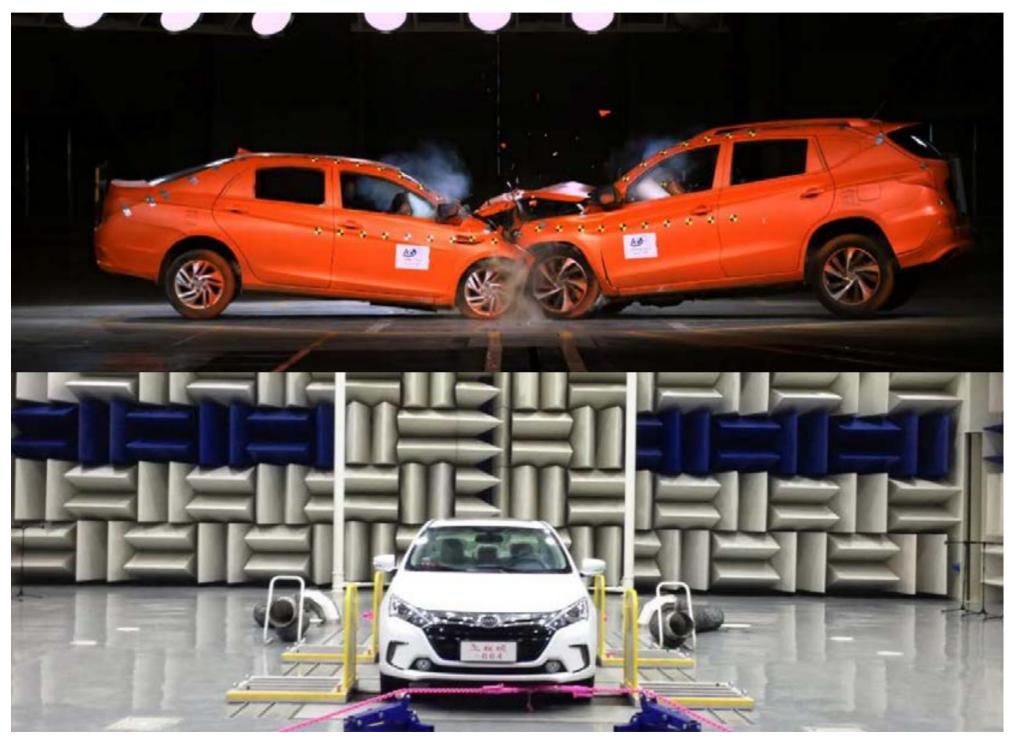
#### **BYD YUAN PLUS EV**



## **QUALIDADE EFETIVA E CONTROLE RIGOROSO**

A BYD controls the entire production chain of its vehicles, from manufacturing to delivery. There's a rigorous inspection process conducted with state-of-the-art equipment and intelligent monitoring systems, such as headlight examining machines, rotating platforms, braking tests, skidding and exhaust tests, wheel alignment, fault diagnosis systems, panoramic cameras, and road performance meters.

The production and delivery cycle is completed only if the final product complies with quality engineering standards and meets consumer needs.



PEOPLE

COMPLIANCE



**BYD Crash Test** 

## **TECNOLOGIA DM-I SUPER-HÍBRIDA**

When compared to traditional combustion vehicles, models equipped with DM-i hybrid technology stand out as innovative products with reduced dependence on fossil fuels, quick acceleration, smooth and silent driving, as well as low  $CO_2$  emissions.

The BYD 1.5L plug-in hybrid engine is highly efficient and specifically designed for DM-i hybrid technology. It boasts a thermal efficiency of 43%, making it the combustion engine with the highest thermal efficiency in production today. Its fuel efficiency combined with the intelligence of the DM-i hybrid system provides a distinctly smooth, quiet driving experience, prioritizing lower and ultra-efficient fuel consumption.

A significant advantage is that the DM-i technology offers the possibility of 100% electric driving mode, with zero CO<sub>2</sub> emissions. This fact could significantly contribute to and even accelerate the replacement of traditional fuel cars with electrified vehicles.





#### PEOPLE

COMPLIANCE



Hybrid DM-i Technology

## **BYD DEALERSHIPS IN BRAZIL**

In 2022, the first BYD dealerships were inaugurated in the main capitals of Brazil. By the end of 2022, there were already 22 operating dealerships across the country.

The BYD automotive network stores represent complete dealerships, providing full service to the market. They also feature special leisure and social spaces and offer an integrated solution for buyers of the brand's electrified vehicles.

#### **ESG IN DEALERSHIPS**

Valid for three years and conducted by the company ICV Brasil, the certification requires each BYD dealership to undergo a series of In December 2022, BYD became the world's first automaker to obtain processes, including the submission of reports and documents for a ESG certification- an acronym for 'Environmental, Social, and comprehensive diagnosis. Training, implementation of mandatory Governance'-focused on the brand's dealerships in Brazil. requirements, and internal audits are also fundamental steps.

The ESG concept is a set of guidelines and recommendations to The certification reinforces BYD's commitment to complying with consolidate good environmental, social, and governance practices environmental, social, and governance guidelines, providing evidence within organizations, bringing positive impacts to society as a whole. of transparency and brand appreciation. This highly relevant topic in the corporate world is already integrated into the brand's daily operations and is now part of the routine for Several indicators are required for certification, such as environmental dealerships as well.



BYD Dahruj em Campinas (SP)



**BYD Carmais em Natal (RN)** 

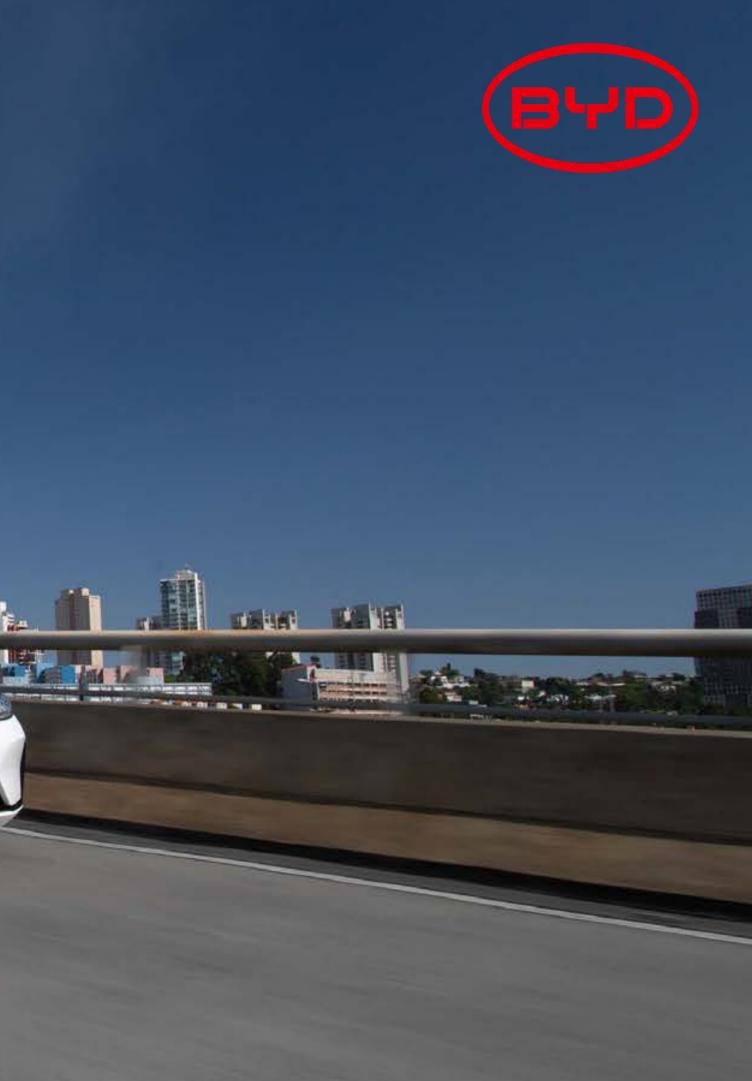


goals and targets, waste management, and water conservation, among others.

From a social perspective, factors evaluated include the existence of volunteer programs, employee mental health initiatives, and the ratio between base salary and remuneration received by women.



# **CORPORATE VEHICLES**



DIEV

## **CORPORATE VEHICLES**

More and more companies around the world are seeking sustainable practices for decarbonizing the planet, coupled with alternatives to reduce emissions of polluting gases. Linked to the environmental aspect, adopting 100% electric corporate fleets reduces maintenance and refueling costs. BYD corporate vehicles provide increased safety and comfort for drivers and passengers.



PEOPLE

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## BYD D1 EV - Solution for Corporate Fleets

## **BYD D1 EV - SOLUTION FOR CORPORATE FLEETS**

In 2022, BYD Brazil took another step to expand its line of electric vehicles and introduced a modern, versatile, high-tech, and costeffective model to the Brazilian market. This is the BYD D1 EV, a vehicle belonging to the MPV (Multi-Purpose Vehicle) category, featuring innovative solutions set to become a new benchmark for mobility and transportation, especially in the corporate sector, transportation apps, vehicle rental companies, and public agencies. The BYD D1 EV avoids emitting 6.6 tons of  $CO_2$  per year.

The BYD D1 EV was developed in partnership with DiDi Chuxing, a Chinese mobility company that provides transportation services such as taxis, car-sharing, chauffeur-driven or self-drive rentals, and cargo transportation.

The BYD model boasts several distinctive features. The vehicle is equipped with a 136 hp electric motor powered by BYD's renowned Blade Battery, offering a range (PBEV) of up to 258 km. With a monovolume style, the BYD D1 EV accommodates five occupants and measures 4,390 mm in length, 1,650 mm in height, and 1,850 mm in width, with a wheelbase of 2,800 mm. And that's just one of the attention-grabbing details. Another major highlight of the model relates to its doors.

While on the left side and at the front, the model features conventional doors, the right rear door is of the sliding type, operated by a motor. This facilitates passengers' entry and exit from the rear compartment. The combination of a wider opening angle, flat floor, and lower height from the ground (12.5 cm) also contributes to accessibility for people with reduced mobility.

Adaptive cruise control, automatic headlights, Dual Zone air conditioning, keyless entry, and push-button start are some of the comfort features available in the BYD D1 EV. Inside, there's support for entertainment screens, adequate luggage space, and ample legroom and storage. The reading lights are positioned not to dazzle.

When it comes to safety, the model boasts cutting-edge technology such as automatic emergency braking (AEB), lane departure warning (LDW), pedestrian collision warning (PCW), as well as lane change alert through steering wheel vibration. There's also the Driver Monitoring System (DMS), a steering wheel with safety alerts and responsive functions, a monitoring system for voice, video, and object recognition technology, in addition to automatic emergency braking.

#### ENVIRONMENTAL MANAGEMENT

#### PEOPLE

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**BYD D1 EV** 





## **GREEN LOGISTICS**

Green logistics is a set of actions aimed at reducing the environmental impacts caused by logistics sector activities. BYD invests in the logistics sector with the development of technology for vans, trucks, forklifts, pallet trucks, and tow tractors that are 100% electric.

To enter this market, BYD has established three objectives: using long-lasting batteries, seeking energy efficiency, and protecting the environment. Thus, the process of using BYD battery-powered logistics equipment began, changing the habits and application scenarios of traditional machinery and vehicles.

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## **GREEN LOGISTICS**

#### Furgão 100% elétrico BYD eT3

Consumer acceptance of sustainable vehicles is increasingly growing in the Brazilian market, particularly in the electric light commercial segment.

The BYD eT3 electric van is an extremely guiet vehicle, offering a widely sustainable solution by avoiding emissions of 16,534 kg of CO<sub>2</sub> per year of operation, which is equivalent to planting 1,377 trees.

It has a range of up to 170 km and the potential for guick charging from 20% to 80% of the battery in just 30 minutes, providing an additional 180 km of travel. The model has a capacity for 808 kg of cargo and space in the compartment for 3.3 cubic meters, with a total weight of 1,700 kg.

#### **100% Electric Trucks**

The eT18 21.250 100% electric truck is multifunctional and has a BYD sells two models in Brazil. The eT7 12.220 100% electric truck is multifunctional and has a range of up to 230 kilometers. One of the range of up to 165 kilometers (C-WTVC). In addition to its capacity to carry up to 13,300 kg, the model has a total gross weight of standout features of the eT7 12.220 is its zero emissions due to being 100% electric. The vehicle has the capacity to serve in various approximately 21 tons. The vehicle is equipped with a lithium iron applications, especially among companies committed to reducing phosphate battery and thus emits no polluting gases. It can be used carbon emissions. The model has a total gross weight of 12 tons and across various applications, particularly by companies committed to is equipped with a lithium iron phosphate battery, ensuring autonomy, reducing carbon emissions. complete safety, and adaptability to fleet needs.

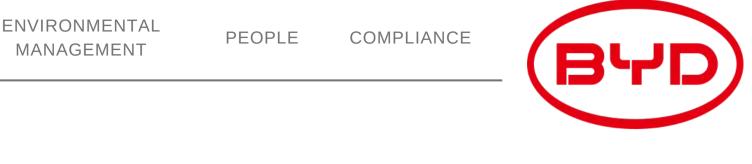
Each eT18 21.250 electric truck prevents an average emission of Each eT7 12.220 electric truck prevents an average emission of 81 133 tons of CO<sub>2</sub> per year, equivalent to planting 949 trees per tons of  $CO_2$  per year, equivalent to planting 577 trees per vehicle. vehicle.

33 SUSTAINABILITY REPORT 2022





Caminhão eT7 12.220



Caminhão eT18 21.250

## HANDLING EQUIPMENT

#### **Battery-powered BYD forklifts**

BYD has over 2,000 iron-phosphate lithium battery-powered forklifts in operation in Brazil. Each 100% electric handling equipment sold by BYD brings significant environmental benefits, averting an average emission of 51 tons of  $CO_2$  annually, equivalent to planting about 364 trees. In 2016, BYD forklifts won the IFOY (International Intralogistics and Forklift Truck of the Year) award for the best electric forklift in the world. IFOY is the leading award in the logistics sector in Europe.

Renowned for their lithium iron-phosphate battery, BYD's 100% electric forklifts ensure autonomy for three shifts without battery replacement, with partial charges (without memory effect), enabling a full recharge in up to two hours compared to the traditional eight hours for lead-acid batteries.

BYD's line of logistics equipment serves various sectors including aerospace, automotive, paper and pulp, metallurgical, food and beverage, pharmaceutical and cosmetic, chemical, as well as refrigerated and frozen foods, with a battery warranty of 5 years or 10,000 hours.

#### **Key Differentiators**

- Robustness and durability under severe use provide greater availability:
- Fast battery charging. Opportunity charging in a few minutes between shifts without memory effect;
- Average output of 3 kWh per hour, whereas similar LPG (liquefied petroleum gas) models yield 2.2 kg per hour of work...





PEOPLE

COMPLIANCE



#### **Green Tug - Electric Tow Tractor** One of BYD's highlights is the Green Tug tow tractor. With a capacity to transport up to 25,000 kg, this 100% electric tow tractor has autonomy for three shifts, a full recharge capability in 2.5 hours, and does not require a battery room. BYD has the Green Tug Tow Tractors in operation at Guarulhos Airport (GRU), where they have accumulated over 100,000 hours of Ground Handling operations. Several industries in Brazil also use this equipment for repetitive internal transportation, some even operating autonomously. These customers aim to reduce operational costs and carbon emissions. Besides economy and autonomy, one of the equipment's highlights is comfort, ensuring ergonomic seating and the One Pedal Driving system, where the driver uses only the accelerator pedal (Kers), with minimal use of the service brake.

## **COMMITMENT TO SUSTAINABILITY IN LOGISTICS**



A BYD is a member of the Green Logistics Program Brazil (PLVB), a strategic initiative reflecting the commitment to corporate social and environmental responsibility. The program aims to capture, integrate, consolidate, and apply knowledge to reduce the intensity of greenhouse gas emissions (GHG), particularly carbon dioxide (CO<sub>2</sub>), atmospheric pollutants, and enhance logistics and freight transportation efficiency in Brazil. This is achieved through the progressive development of a national sustainability program in logistics.

A BYD is also a part of the Brazilian Association of Wholesalers and Distributors (ABAD), a nationwide entity representing wholesale and distribution companies selling products across various sectors. The association aims to promote the development of the supply chain in the Indirect Channel throughout the country, encouraging exchange between industry, independent retail, service providers, and companies within the segment.







### SUSTAINABLE URBAN MOBILITY

A BYD is a leading figure in developing urban mobility projects focused on enhancing the quality of life for populations in major cities. These efforts align with their mission to reduce dependency on fossil fuels, particularly in the context of urban living, which significantly impacts the daily life and local culture. Their initiatives concentrate on the movement of both people and goods within urban spaces.

Their aim is to contribute to the creation of emission-free public transportation systems by designing intelligent, sustainable, comfortable, and noiseless solutions. This pursuit seeks to advance urban development while significantly reducing the environmental footprint.

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### A DECADE OF PRODUCING ELECTRIC BUSES

A BYD's mission is to change the world by reducing our dependence on fossil fuels through the development and advancement of battery and electric vehicle technology. The company creates intelligent and sustainable solutions to promote a zero-emission public transportation system.

In the Brazilian market, BYD offers 100% electric bus chassis that are assembled with bodies by local partners. These buses are safe, quiet, and can reduce operational costs by up to 70%.

Each BYD 100% electric bus avoids an average emission of 118.7 tons of CO<sub>2</sub> per year into the atmosphere, equivalent to planting 847 trees per vehicle (considering an average of 72,000 km traveled per year).



BYD 100% Electric Bus in São José dos Campos (SP)



BYD 100% Electric Bus - D11B

Since 2021, São José dos Campos (SP) has incorporated 12 BYD electric buses into its public transportation fleet, operating along the Linha Verde corridor. These are the first 100% electric buses, 22 meters in length, manufactured in Brazil, with a capacity to transport 170 passengers per trip.

In early 2022, BYD won the bid to produce 20 electric vehicles for Salvador (BA)'s public transportation fleet. By August of the same year, the buses were delivered and are currently in operation in the city. The electric buses are of the D9W model (low-floor), measuring 13 meters in length.

These implementations enable a significant step towards sustainability in the urban mobility of Brazilian cities.

#### ENVIRONMENTAL MANAGEMENT

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BYD 100% Electric Bus — D9W

In Brazil, BYD produces five chassis models:

- D9W: Low-floor for use with a body length of up to 13.2m
- D9A: High-floor for use with a body length of up to 12.8m.
- D9F: For charter operations and short to medium-distance road routes.
- D11A: Articulated with high-floor for urban application (especially for BRT projects) with a body length of up to 23m.
- D11B: Articulated with low-floor for urban application with a body length of up to 22m.

### **BATTERY MODULES - THE EXPERIENCE OF A GLOBAL LEADER**

BYD started its third factory operation in Brazil at the Manaus Industrial Pole (PIM) in August 2020. The manufacturing plant is dedicated to producing lithium iron phosphate (LiFePO4) batteries, initially focused on 100% electric bus chassis manufactured in Campinas, with a production capacity of up to 1,000 batteries per year. With an investment of R\$ 15 million, the factory, situated on a 5,000-square-meter area, allows for future expansion of new production lines.

Among the advantages of BYD's batteries is increased safety. BYD conducts numerous product tests, including simulations to ensure incidents such as smoke and fire do not occur. Additionally, these batteries are cost-effective and non-polluting.

The factory manufactures battery modules for use in electric buses, specifically models C15-12SYL and C15-14SYL. These modules utilize lithium iron phosphate as the positive electrode material, boasting excellent safety, a long life cycle, good performance in different temperatures, and high energy density. Moreover, they are cost-effective and environmentally friendly.

### **BYD Battery Recycling**

Currently, BYD's lithium iron phosphate (LFP) battery is the only one that can be 100% properly recycled, as it does not contain cobalt in its composition. BYD uses these batteries in vehicle operation for 8 to 10 years and then for a second life of 6 to 10 years in off-grid storage systems. After that, they undergo recycling. The company operates a recycling plant in China and plans to open others globally as the volume of electric vehicles grows.

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Battery Production at the Manaus Industrial Pole (PIM)

### **SKYRAIL — SOLUTION FOR URBAN TRAFFIC CONGESTION**

Urban mobility and sustainability are fundamental themes for the socio-economic development of cities. That's why BYD develops non-polluting, comfortable, and silent public transportation solutions. Designed to help improve urban traffic, the Skyrail is a suspended monorail system that is 100% electric and, being elevated, adapts to the geographical environment of cities with lower construction time and cost. With no emission of polluting gases, its low environmental impact during operation is one of its most notable benefits, offering an improved quality of life for the population and integration among existing transportation modes. The Skyrail makes urban transportation smarter by optimizing the time and commute for passengers.

With a \$1 billion investment, the model was developed by a Research & Development team comprising over a thousand professionals. The SkyRail brings lower costs, a shorter construction period, and greater adaptability to terrain when compared to competing technologies. Additionally, it's energyefficient with zero emission of pollutants and operates silently.

The BYD Skyrail was born to develop urban mobility projects that will bring quality of life to the population of large cities, reinforcing its mission to reduce dependence on fossil fuels, contributing to the construction of a truly sustainable world. In 2020, BYD SkyRail São Paulo and São Paulo's Metro signed a contract for the supply of trains for Project Line 17 (Gold). BYD SkyRail will be responsible for providing 14 compositions (trains) of the SkyRail system, with five cars each, designed to accommodate a daily flow of up to 185,000 passengers upon the line's full completion.

The contract also includes the installation of platform doors at the eight stations of the line, equipment for the electrical power supply system, track changing devices, train maintenance systems, and a central control system. The completion of Line 17 is expected to significantly relieve pressure on road traffic between Congonhas Airport and other sections of the city.

In São Paulo, the BYD Skyrail stands out from similar solutions by aiming to connect various subway lines along its route and by passing through a strategic point in the city, Congonhas Airport. The adoption of the Skyrail in São Paulo will enhance the city's urban mobility, making it a benchmark for clean energy and sustainability. Furthermore, the use of monorails will reduce the emission of pollutants into the atmosphere by replacing combustion models with electric battery-powered, quiet, innovative, and technological vehicles. The transportation will boast a futuristic design, elevating the quality of mobility, ensuring greater safety and speed for residents in these areas and for tourists visiting the cities daily.





SkyRail, São Paulo (SP)

# **DISPOSABLE MASKS**

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With the onset of the Coronavirus pandemic, BYD recognized the need to contribute to disease prevention and became the largest global manufacturer of disposable masks, producing 50 million masks per day. The efficiency of BYD's face masks is evidenced by ISO 90001 and ISO 13485 quality management certifications.

BYD's disposable masks feature three layers of protection and have a certified filtration capacity of 99.2% against viral droplets and particles, aiding in protection against the transfer of microorganisms, bodily fluids, and particulate matter.

Assisting humanity in striving for a better world is a hallmark of BYD. The Coronavirus pandemic posed a major challenge to the world, requiring a collective effort, much like the climate issue, which demands cooperation among multilateral organizations



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**Disposable Masks** 

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### **DISPOSABLE MASKS**

In two weeks and as an emergency response, BYD created a completely distinct factory from its other production lines and began manufacturing face masks and sterilizing gel as a direct means to combat the coronavirus pandemic.

BYD's Global President, Wang Chuanfu, was one of the first corporate leaders to respond to the virus-driven demand, back in January 2020. Just a month later, BYD was already one of the world's largest mask manufacturers.

Wang Chuanfu's initiative earned him a place on Fortune magazine's list of the 25 world leaders recognized as heroes in the fight against the Covid-19 pandemic.

However, this action was only successful due to the dedication of thousands of employees involved in the project.



Linha de produção de máscaras descartáveis BYD

A task force led by Wang Chuanfu comprised different business divisions and over 3,000 engineers responsible for the new manufacturing plant and the challenge of expanding its production capacity to meet the exponentially growing demand.

BYD masks feature a triple layer of protection, are easy to breathe through, and have an appropriate fit to ensure protection. The product is made from ultra-soft and high-quality materials and has received quality certifications from various countries.

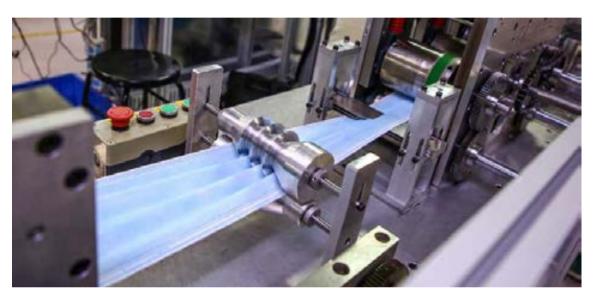
ENVIRONMENTAL MANAGEMENT

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As masks fabricadas pela BYD estão sendo comercializadas no Brasil desde maio de 2020.





Disposable masks BYD



# **CUSTOMER SATISFACTION**

### **CUSTOMER SATISFACTION**

At BYD, product quality is tied to the company's fundamental approach: creating technological innovations for a better life. This principle governs the company's operations worldwide. BYD believes that if the entire operation is guided by this principle, from design, development, supply chain management, production, sales, after-sales, to administration, the end product will offer differentiated value to the customer. Therefore, it adopts an Integrated Management System aimed at the continuous improvement of its processes.

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### **CUSTOMER SATISFACTION**

BYD Brazil's main focus is to ensure excellence in its manufacturing operations, which include the production of electric bus chassis, batteries, and photovoltaic modules. To achieve this goal, the company adopts a management system that promotes a systematic monitoring of its processes.

One of the steps in this system is the rigorous inspection of processes, ensuring compliance with established standards. Moreover, BYD invests in its employees' training and skill development.

BYD Brazil values close relationships with its customers, aiming to understand their needs and expectations in order to provide solutions that fully meet their demands.

### Valorization of National Production

BYD aims to develop an extensive network of national suppliers to strengthen its supply chain, promoting local production and ensuring benefits such as swift deliveries, guick improvements, and product optimization in collaboration with suppliers. These partners are selected through a rigorous gualification audit process.

#### National After-sales Service

Investing in quality after-sales service is essential to meet market expectations, build brand trust, and achieve customer loyalty. Furthermore, customer feedback and suggestions can bring significant improvements to the company's products and services.

BYD's after-sales service, located in Campinas (SP), is a comprehensive space equipped with a workshop, spare parts distribution center, and dedicated training area. This ensures availability and efficiency in service while technically empowering professionals to provide specialized assistance to customers.

#### **1st National After-Sales Meeting**

In September 2022, BYD Brazil held the 1st National After-Sales Meeting with the brand's dealership network.

In addition to introducing the entire BYD after-sales team to the dealerships, a team-building activity was conducted to identify priority actions. Moreover, the event featured a lecture by Gisele Paula, CEO and founder of Instituto Cliente Feliz, and cofounder of Reclame Aqui, a reference portal for reporting poorly delivered services or customer support



The executive emphasized the importance of a happy customer for the after-sales service of companies. Qualifying the dealership network is also a strategy for the group. With this in mind, BYD Brazil announced a new Training Center. The building spans 1,500 square meters and is located opposite the company's facilities in Campinas (SP).



1st National After-Sales Meeting with the Dealership Network

### **SOLAR ENERGY SECTOR DIFFERENTIATORS**

In order to prevent micro-cracks from appearing after long travels and causing issues, BYD Energy provides the most robust packaging in the Brazilian solar market, ensuring the overall quality of the products delivered from the factory to customers across the country. The packaging has double the thickness of what the market usually practices, offering a resistance of 34 kgf.cm compared to the 15 kgf.cm used by other brands. This is a significant quality differential for the end customer.

Micro-cracks not only compromise energy generation and the module's lifespan but can also evolve over time into hotspots (areas of high temperature that can significantly affect the efficiency of the photovoltaic module). Depending on their intensity, they can cause issues such as melted and burnt junction boxes, module delamination due to high temperatures, or in extreme cases, the start of a fire.

One of BYD Energy's great differentiators is that each produced module undergoes complete inspection before being handed over to the carrier to ensure the product's perfect condition upon arrival to the customer.

The packaging for photovoltaic modules produced in China maintains the same quality standards as those manufactured in Brazil. Everything is aligned with the interests of BYD Energy's Brazilian arm.

Moreover, BYD also boasts a dedicated after-sales team solely operating within the country, a significant market differential. In contrast, the majority of companies in the Brazilian solar sector outsource customer service to manufacturers located outside the country.

Through this, BYD Energy consolidates its position as a market reference, providing swift, secure, and efficient support to those acquiring their solutions.



#### PEOPLE

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Reinforced and well-sized packaging allows for the perfect arrangement of modules and ensures the quality of the delivery.

# ENVIRONMENTAL MANAGEMENT



### **ENVIRONMENTAL MANAGEMENT**

The sustainable approach of BYD permeates all stages of the production chain. The company sets goals and guidelines to minimize environmental impacts during the production process, encompassing waste management, promoting energy efficiency, responsible water usage, and reducing atmospheric emissions.

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### **ENVIRONMENTAL MANAGEMENT**

BYD is committed to building a sustainable future powered by electricity, where cities and nature can coexist harmoniously, ensuring air purity. This premise has been the fundamental guide for the company's actions since its foundation in 1995.

But beyond mere words, BYD practices environmental preservation daily in its activities. Developing pollutant-free products is part of this process, which also extends to its operations.

The company aims to minimize its environmental impact by establishing environmental goals and guidelines in the production process, covering waste management, promoting recycling, conscious water use, seeking energy efficiency, and reducing atmospheric emissions

#### **ISO 14001 Certification**

Since its arrival in Brazil, BYD has been dedicated to implementing actions focused environmental on preservation. As a result of these initiatives, in 2022, both BYD factories in Campinas underwent the process to maintain certification according to the ISO 14001:2015 standard. This standard guides and establishes the requirements for implementing a robust Environmental Management System. In 2022, BYD's battery module factory located in Manaus and the Solar Kit facility in Campinas also obtained certification according to the ISO 14001:2015 standard. Consequently, all BYD Brazil units now hold this certification.



#### ENVIRONMENTAL MANAGEMENT

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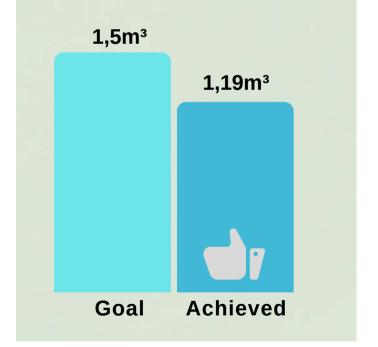




### **ENVIRONMENTAL GOALS**



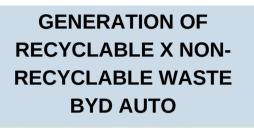
BYD Campinas/SP used water consciously, thus staying below the established goal, measured by: water consumption (m<sup>3</sup>) per employee in 2022.



### GENERATION OF RECYCLABLE X NON-RECYCLABLE WASTE BYD ENERGY

The machinery change between 2021 and 2022 impacted the generation of recyclable waste, which is why the goal for recyclable versus non-recyclable waste was not achieved during this period. 95,5%





BYD Auto exceeded its goal in reducing the generation of nonrecyclable waste in 2022.





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### ENERGY CONSUMPTION BYD ENERGY

BYD Energy used energy conscientiously, thus staying below the established goal, measured by MWh/MW produced in 2022



### ENERGY CONSUMPTION BYD AUTO

BYD Auto used energy conscientiously, thus staying below the established goal, measured by kWh/days worked in 2022



### **RESIDUE MANAGEMENT**

Through the assessment of environmental aspects and impacts, coupled with the evaluation of product life cycles, BYD is able to better manage the waste generated in its processes and administrative sectors, potentially mitigating or even eliminating adverse environmental impacts.

Moreover, the entire company complies with the National Solid Waste Policy - Law 12,305/2010 - and the SIMA Resolution No. 27/2021, which establishes the Waste Transport Manifest (MTR) of the State Online Solid Waste Management System and the Final Destination Certificate (CDF). Currently, most of the waste generated at BYD is directed towards recycling or other treatment processes. Only factory sweeping and sanitary waste are sent to landfills.

#### Recycling

BYD follows the Solid Waste Management Plan (PGRS), as required by Law 12,305/2010. This is why the company not only has a standardized methodology to manage its waste but also has a systematic approach to monitor the entire production process, aiming to generate fewer rejects and produce in a more environmentally friendly manner.

The selective collectors, standardized by CONAMA 275/2001, are **Co-processing** distributed to meet the needs of each sector within the company. Additionally, the company has monthly programs aimed at Class I waste deserves special attention when being disposed environmental awareness through various channels, both online of, which is why it undergoes co-processing, an environmentally approved technique by official agencies that reuses industrial and offline, addressing current issues and questions. solid waste as a source of energy in cement kilns. This helps Another aspect of compliance and environmental respect is the reduce CO<sub>2</sub> production and diminishes the amount of waste in Class I landfills.

adherence to state legislation regarding reverse logistics programs for plastic and cardboard packaging in all states of the Federation.

#### Biomass

Food waste generated at BYD is directed for composting to be transformed into organic fertilizer. In 2022, 48.65 tons of this In 2022, 350.09 tons of wooden pallets were diverted from type of waste were diverted from landfills. landfills and repurposed as biomass.



Selective waste collectors - BYD in Campinas (SP)

ENVIRONMENTAL MANAGEMENT

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### Composting

### Reuse

Another reutilization process developed by BYD's Solar Kit factory this year involves reusing wooden pallets received with raw materials. These pallets undergo an internal reworking process to be used again for storing and shipping finished products.

### **RATIONAL WATER USEV**

Understanding the need to preserve water resources, BYD maintains an ongoing program to treat water used in its activities. The company has an Effluent Treatment Plant (ETP) where all the effluent generated in restrooms and the cafeteria is processed. To validate the ETP's functionality, monthly pH analysis of the effluent's input and output (BOD and COD) is conducted through an accredited laboratory.

The company also utilizes a rainwater harvesting system. Through a system installed in the factory building located in Campinas, rainwater is collected and directed to a 50m<sup>3</sup> reservoir. This water is reused to supply the fire protection system and taps in the external yard.

Regular water measurements are conducted across all warehouses to identify potential leaks or excessive water consumption. Audits and awareness training sessions are also conducted with the BYD cleaning team to ensure water is used efficiently in their daily activities.

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#### ENVIRONMENTAL MANAGEMENT

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Effluent Treatment Plant (ETP) at the BYD factory in Campinas (SP)

## **ENERGY EFFICIENCY AND ATMOSPHERIC EMISSIONS REDUCTION**



LED lamps installed at the BYD Energy factory in Campinas (SP)

Throughout 2022, the project to replace 230 400W sodium vapor lamps with 50W Light Emitting Diode (LED) lamps in the production warehouses at the Brazilian branch of BYD in Campinas was completed. This initiative aimed to minimize environmental impacts caused by the use of sodium vapor lamps, reducing greenhouse gas (GHG) emissions and cutting electricity costs.

The complete substitution of sodium vapor lamps with LEDs resulted in approximately a 70% reduction in energy consumption and an equivalent decrease in GHG emissions resulting from this energy use.

The mentioned project is part of the successful cases documented in the 2022 edition of the Environmental Agreement of the State (CETESB). The publication contains 91 reports related to the voluntary contributions of companies located and/or operating in the State from associations representing productive sectors. It consists of two volumes, one in English and the other in Portuguese, and besides detailing new cases, it includes experiences presented in the first edition unveiled in 2021 at COP26.

Another environmental practice by BYD in compliance with current legislation is the regular monitoring of black smoke emissions from service provider vehicles powered by diesel.

When entering the factory's entrance, vehicles undergo visual assessments to detect smoke levels, utilizing the Ringelmann Scale as reference. If a vehicle exceeds the permitted limits defined by regulations, the contracting company is notified to conduct the necessary maintenance to bring the vehicle into compliance before accessing the premises. In case of recurrence, the vehicle will not be allowed entry to BYD.

Additionally, BYD conducts measurements of smoke emissions from its stationary sources and fixed engines.

ENVIRONMENTAL MANAGEMENT



**EXAMPLE COMES FROM HOME** 

BYD concluded 2022 with 15 electric forklifts in use across its Energy, Auto, Aftermarket, and Solar Kit units. Since their deployment in 2015, these forklifts have prevented the emission of over 900 tons of  $CO_2$ , equivalent to planting 6,300 trees.

Additionally, the company operates a fleet of 100% electric cars to fulfill internal needs, resulting in reduced daily emissions of pollutants. Encouraging employees to practice carpooling further contributes to minimizing pollutant emissions.

These examples, however, extend beyond BYD's operations. The specialized company contracted for the collection, transportation, and disposal of BYD's generated waste uses 100% electric vehicles. Each electric truck used in this operation avoids emitting 133,000 kg of  $CO_2$  per year, equivalent to planting 949 trees.



#### ENVIRONMENTAL MANAGEMENT

PEOPLE



**BYD Electric Forklift** 

## 2.000.000 DE MÓDULOS PRODUZIDOS NO BRASIL PHOTOVOLTAIC MODULES PRODUCED IN BRAZIL

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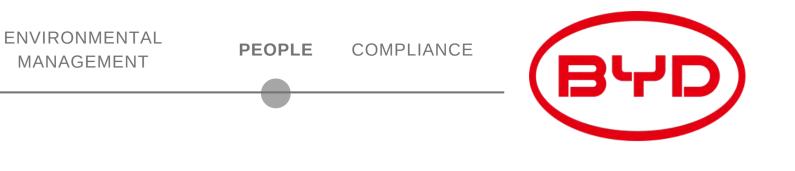


### PEOPLE

At BYD, the pursuit of dreams is encouraged through a corporate culture centered on continuous development. The company aims to maintain an innovative work environment capable of creating unique value for society and customers. Therefore, BYD understands and acknowledges that its most valuable asset is its people.

People

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### **PEOPLE: DEVELOPMENT**

BYD believes that building dreams is the driving force behind each individual facing challenges and undertaking great achievements. BYD's human resources policy is supported by this belief, which is why the company invests in attracting, caring for, retaining, and developing people, fostering a work environment with sustainable relationships.

BYD concluded the year 2022 with 591 employees, comprising 246 women and 345 men. The company has people with disabilities and expatriates among its workforce because it understands the importance of providing opportunities for everyone, thus acting inclusively and promoting diversity internally.



BYD Brazil employees in Campinas (SP)

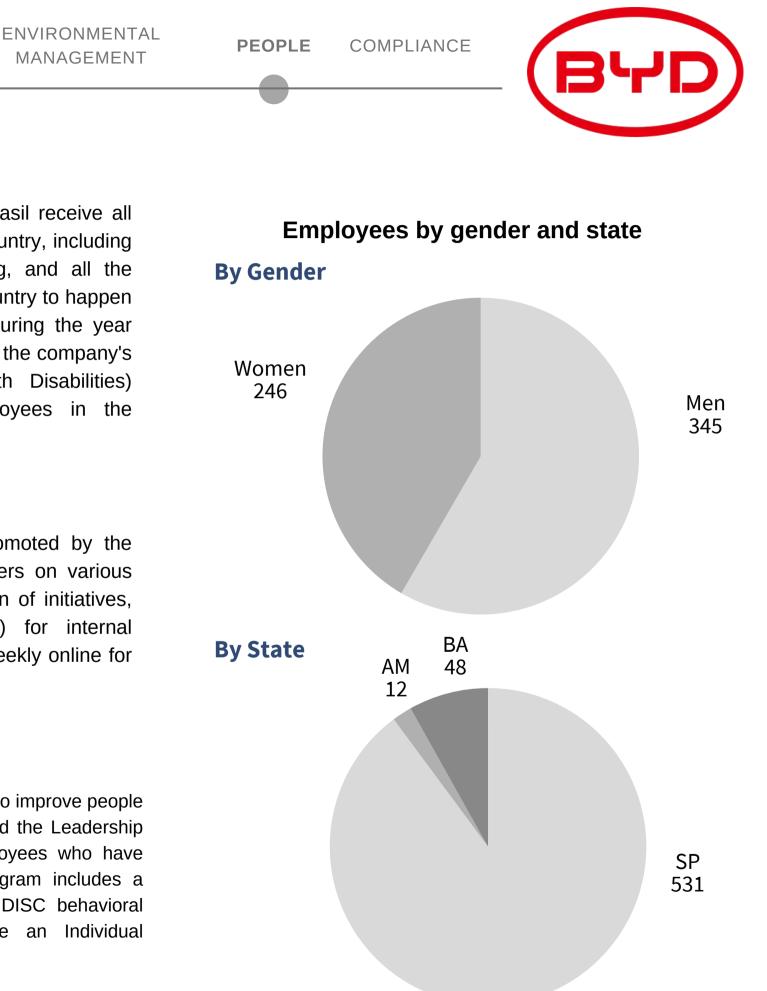
Chinese expatriates coming to work at BYD Brasil receive all the necessary support during their stay in the country, including assistance with housing, document processing, and all the necessary support for their adaptability to the country to happen in the best possible way. Throughout Brazil, during the year 2022, BYD had 18 expatriates distributed across the company's plants, in addition to 6 PwD (Persons with Disabilities) employees, fostering the inclusion of employees in the corporate and industrial environment.

#### **BYD University**

The BYD University is a training program promoted by the employees themselves or special guest speakers on various topics (celebration of special dates, presentation of initiatives, dissemination of procedures, among others) for internal dissemination. The trainings are conducted bi-weekly online for all employees who have a corporate email.

#### Leadership Development

The company also aims to develop leadership skills to improve people management. For this purpose, BYD has developed the Leadership Development Plan, a program designed for employees who have been promoted to managerial positions. The program includes a series of training sessions and incorporates the DISC behavioral profile assessment, enabling leaders to outline an Individual Development Plan.



### **PEOPLE: DEVELOPMENT**

#### Careers

The BYD prioritizes internal recruitment processes as a way to recognize its talents, providing opportunities for departmental changes, development, and promotions within the same department. Open positions are advertised on the company's website. Additionally, detailed job descriptions, requirements, and application portals are made accessible to candidates.

#### Integration Program — Onboarding

The Onboarding process is a structured integration that helps new employees socialize and gradually perform their duties efficiently. Each new employee is paired with a 'mentor' who assists them with day-to-day activities.

The program also includes evaluations after 45 and 90 days of work, during which the manager conducts feedback sessions with the new team members.

#### **Recognition Programs**

BYD aims to acknowledge outstanding employees through various initiatives such as the BYD Ambassador Program, Employee of the Month, Employees of the Year, and Difference Makers. These individuals receive awards, and their photos are showcased on the company's bulletin boards and social media. Additionally, BYD celebrates one-year and five-year work anniversaries.



Employees of the year 2022 — BYD Campinas (SP)

#### **Performance Evaluation**

There were already suggestion boxes scattered throughout the company aimed at receiving suggestions for process improvements, implementing benefits, adopting practices from The performance appraisal, conducted annually, is a process other companies, etc. However, in 2022, this practice was carried out by the manager to assess organizational competencies expanded. Now, suggestion boxes exist in all locations, and the and provide a feedback session for the employee. It's an same form is also available to employees via Google Forms. opportunity for both to discuss the actions outlined in the Individual Development Plan (IDP) to be fulfilled by the employee.

The process was enhanced in 2022 and split between operational and administrative levels, with organizational competencies derived from BYD's core values, featuring specific competencies and goals for each level. HR also developed a list of suggested actions and training for each assessed competency. These improvements were implemented to streamline the evaluation process and make it less subjective.





### Communication and relationship with the Employee

BYD maintains transparent communication to foster a loyal and harmonious relationship between the organization and its employees. Communication channels include bulletin boards, emails, magazines, and meetings. Additionally, the company celebrates occasions such as Mother's Day, Father's Day, Easter, Christmas, Chinese New Year, among others.

### **Suggestion Box**

### **PEOPLE: DEVELOPMENT**

### Yellow September, Pink October, and Blue November

EIn all units, during September, October, and November, BYD conducted awareness campaigns on suicide prevention and mental health promotion, breast cancer prevention, and prostate cancer in collaboration with the Amor e Vida Institute.



Employees during Pink October at BYD Campinas (SP)

#### **Combatting Obesity**

In October, BYD carried out a specific action to combat obesity and promote quality of life. There was an online lecture on the topic, as well as displays in the restaurant containing the nutritional information of all foods.

## BYD broadens the debate on racial inequalities during Black Consciousness Month

During November, Skyrail Bahia developed initiatives to expand the discussion around building a more egalitarian society and pathways to achieve it, bringing racial issues to the forefront of discussions. Alongside the distribution of awareness-raising newsletters, on 11/18, a lecture was held featuring Mariana Viveiros, the Coordinator of Census Outreach and Supervisor of Information Dissemination at IBGE/BA. During this event, the results of the 'Study on Social Inequalities by Color or Race in Brazil' were presented, with a focus on the Subúrbio Ferroviário, the territory where the project will be implemented. Additionally, the documentary 'Mokambu Akamobu' was screened, portraying the history of formation, struggle, and resistance of the Alto do Tororó Quilombo, thus fostering a sense of belonging among the territory and Skyrail Bahia employees.

### Treinamento de Reciclagem Brigada de Incêndio

On the 16th, 17th, 18th, and 25th of March 2022, a training session was conducted with the Fire Brigade team at the Administrative Building in Salvador (BA) to refresh their knowledge of fire fighting and first aid. During this session, techniques for approaching fires, handling fire extinguishers, cardiopulmonary resuscitation maneuvers, choking relief, victim transport, among other skills, were covered.





Lecture with the Census Outreach Coordinator from IBGE/BA



Fire Brigade Refresher Training

### **PEOPLE: RELATIONSHIP WITH LOCAL COMMUNITIES**

### Skyrail Bahia strengthens its relationship with local communities

Despite the challenges posed by the pandemic, 2022 was a year in which Skyrail Bahia, through its Communication and Social Responsibility departments, managed to consolidate its strategic role in the territory. During this actions in communication, engagement, period, mobilization, and coordination with the various stakeholder groups residing in the influence areas of the Suburban Light Rail Transit (VLT) were conducted transparently and democratically. The primary premise was always to engage in dialogue with stakeholders and develop competencies to establish a meaningful and trustworthy relationship, essential for managing the risks and impacts of the project.

In this process of strengthening institutional relations Donation of disposable masks and gowns to a between Skyrail Bahia and various stakeholders, Nursing Home in the Subúrbio Ferroviário communication and engagement actions were culturally appropriate and easily accessible to all, supported by In June, Skyrail Bahia donated 3,300 masks and over 300 preliminary social diagnosis and an understanding of the disposable gowns to the elderly residing at Casa de Repouso territory's dynamics. Bom Jesus in Praia Grande.

As part of this engagement, one of the activities carried out Casa de Repouso Bom Jesus was established 16 years ago to reinforce a sense of belonging and identity between the and has two units, one located in Praia Grande housing 29 community and the project, as well as to promote a process elderly individuals, and the other in Tubarão with 158 elderly of active and gualified listening, was the Skyrail Bahia residents. Many were brought by relatives who pay for their Relationship Channel. In 2022, it conducted 2,457 service stay, but some were abandoned and lack documentation, a interactions through fixed, itinerant, or phone/WhatsApp reality faced by several Long-Term Care Institutions for the social service centers, with satisfaction rates exceeding Elderly in Brazil. The elderly assisted by the institution do not 90%. pay for the services rendered, making donations crucial. The Nursing Home provides six meals daily.



Diálogo Social realizado em Comunidade Tradicional — Simões Filho (BA)

o←o **2.457** Interactions Satisfaction Survey \*\*\*\*\*\*\*\*\* Satisfaction with the service provided \*\*\*\*\*\*\*\*\*

Satisfaction with the information provided



99% 97%



Delivery of Masks to Casa de Repouso Bom Jesus

### **PEOPLE: RELATIONSHIP WITH LOCAL COMMUNITIES**

#### **Community Recognition: 4th Community Leader** Award - Voices that Stand Out"

For the second consecutive year, Skyrail Bahia has received the Community Leader Award - Voices that Stand Out. The award was established by the NGO Caravana Cultural dos Alagados in 2019 to honor community leaders and volunteers who develop projects and actions for the common good. The award also includes the Popular Certificate, which is presented to private companies and public entities that benefit and address some of the community's aspirations.



4th Community Leader Award Ceremony

#### Children's Day — Alto do Tororó Quilombo

For the second consecutive year, Skyrail Bahia employees came together in an act of solidarity and love, providing a happier Children's Day for 150 children from the Alto do Tororó Quilombo, located in São Tomé de Paripe. The voluntary initiative of the employees received support from the Quilombo's leaders, Maria de Fátima and Lurdes.

### Solidarity Christmas — Municipal Education Center Mário Altenfelder

Also for the second time, volunteers from Skyrail Bahia came together to provide a happier Christmas for 62 students from the Municipal Center for Early Childhood Education Mário Altenfelder, located in the Lobato neighborhood. The voluntary initiative of the employees received support from community leader Sulivan Santos.



Municipal Center for Early Childhood Education Mário Altenfelder



### Scarf Donation Campaign — Support Group for **Children with Cancer in Bahia**

Among the various initiatives carried out in October, Skyrail Bahia employees conducted a campaign to collect scarves used by patients undergoing cancer treatment.

In total, 110 scarves were collected and donated to GACC -Grupo de Apoio à Criança com Câncer da Bahia (Support Group for Children with Cancer in Bahia), a Non-Profit Civil Association founded in January 1988. Their philanthropic mission is to provide children and adolescents with all the necessary assistance and support for their treatment, with current chances of cure standing at 80%. GACC assists children and adolescents from families facing social vulnerability, with the majority coming from rural areas within the state.



GACC - Support Group for Children with Cancer in Bahia







### **COMPLIANCE**

The approach and organizational culture are used in the way we conduct our business with employees, clients, partners, service providers, suppliers, and the community. These corporate governance guidelines serve as a framework for establishing the criteria and care that must be observed in conducting any and all business involving BYD Group companies and should be adhered to by everyone who has any relationship with BYD, especially service providers and suppliers.

The Code of Conduct describes the principles that guide the relationship between BYD and its employees, addressing the rights and duties of each, in favor of good coexistence and a healthy work environment. Furthermore, the Code of Conduct is mandatory for all BYD employees and should serve as a reference for business partners. Additionally, the Compliance Manual aims to determine the parameters and mandatory rules to ensure that all company businesses comply with internal procedures, current legislation, and the company's culture.



### Compliance

65

### **COMPLIANCE**

BYD bases its actions on standards that must be observed by all acting on its behalf; therefore, it seeks to establish ethical relationships with various stakeholders. The Compliance department at BYD encourages compliance with current laws, internal regulations, and the Code of Conduct. To achieve its goal, investigations and analyses of reports made through anonymous channels or personal disclosures are conducted.

Moreover, the Code of Conduct should also serve as a reference for business partners, being a document that encompasses both employment and business contracts. Full access to this document is provided to employees and partners, who declare their acknowledgment and consent from the first day of work or the beginning of negotiations.

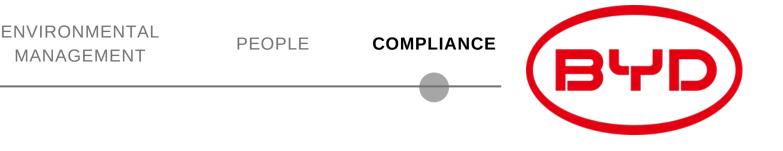
#### **Functions of BYD Compliance**

- Periodic analysis of company risks. Access should be available to both shareholders and employees.
- Involvement in labor relations aimed at reducing the risks of workplace accidents, occupational illnesses, improving working conditions, as well as investigating acts of violence, particularly regarding any form of harassment or prejudice.

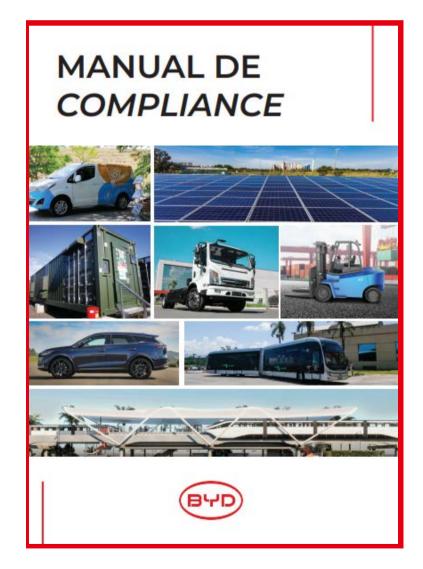
#### **Implemented Measures**

without email.

- Establishment of company rules and procedures: BYD provides the Code of Conduct to all employees.
- Communication: BYD sends regular communications via email to its employees, conducts training, and makes materials available in common access areas such as meeting rooms, social spaces, cafeterias, and others.
- Whistleblowing channels: Employees and partners have various channels available for reporting, including a specific email, online forms, physical boxes, and in-person reporting to a Compliance member. Furthermore, the receipt of reports is confidential and, if the reporter prefers, can be anonymous.
- Disciplinary measures: BYD has internal guidelines for implementing disciplinary sanctions aimed at preventive measures.
- Release of the New BYD Compliance Manual (https://www.byd.com.br/wpcontent/uploads/2022/08/Manual-compliance-BYD-imagensresolucao.pdf), providing a PDF version to all company employees with email access, and physical copies to those



• Conducted training on Combating Moral and Sexual Harassment, with a specific session for managers and another for other employees. In total, 10 sessions were conducted, some in-person and some online, with over 500 employees participating in the training.



## **PARTICIPATION IN TRADE ASSOCIATION**

Trade associations play a pivotal role in advocating for and fostering public discourse around the interests of the categories they represent and society as a whole.

BYD participates actively in ABVE (Brazilian Association of Photovoltaic Solar Energy) and ABGD (Brazilian Association of Distributed Generation). Additionally, it is an associate member of ABAD (Brazilian Association of Wholesalers and Distributors of Industrialized Products), ABINEE (Brazilian Electrical and Electronics Industry Association), and ABEIFA (Brazilian Association of Importers and Manufacturers of Automobiles).

## **CORPORATE CREDITS AND** INFORMATION

BYD group companies: BYD do Brasil Ltda, BYD Energy do Brasil Ltda, Metrogreen do Brasil Ltda, BYD Indústria de Baterias Ltda, Consórcio BYD Skyrail São Paulo and Metrogreen Skyrail Concessionária da Bahia S.A.

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Overall Coordination of the Sustainability Report: Marketing and Sustainability Department of BYD Brazil

Images: BYD Archive

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