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Experience report

Conscious energy: Experience report about conscious energy consumption

Energia consciente: relato de experiência sobre consumo consciente de energia

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Abstract

Objective: presenting the results of a project focused on conscious energy consumption, carried out in a company located in the North of Minas Gerais, which had as reference the UN Sustainable Development Goals. **Methods:** this is a case study that presents tools used by management students for the organization of a social entrepreneurship project related to electricity consumption. Management tools were used for both planning and execution of actions. The team also developed material for dissemination and awareness such as warnings, folders and pamphlets. **Results:** the project was executed during the first half of 2021. Through awareness actions, there was a reduction of 31.6% in the company's electricity bill. **Conclusion:** it was possible to demonstrate that, even with the decrease in energy consumption, the site guaranteed gain in productivity and the production of the same amount of merchandise. The people involved absorbed the information and realized that they were of great value and will take learning outside the company, for example, to their homes.

Keywords: Energy consumption. Sustainable Development Goals. Management tools.

Resumo

Objetivo: apresentar os resultados de um projeto voltado para o consumo consciente de energia, realizado em uma empresa localizada no Norte de Minas, que teve como referência os Objetivos de Desenvolvimento Sustentável da ONU. **Métodos:** trata-se de relato de experiência que apresenta ferramentas utilizadas por acadêmicos de Administração para o gerenciamento de um projeto de empreendedorismo social, relacionado ao consumo de energia elétrica. Foram utilizadas ferramentas gerenciais tanto para o planejamento como para a execução de ações. A equipe desenvolveu, ainda, materiais para divulgação e sensibilização, como avisos, folders e panfletos. **Resultados:** a execução do projeto deu-se no decorrer do 1º semestre de 2021. Através das ações de conscientização, verificou-se a redução de 31,6% na conta de energia elétrica da empresa. **Conclusão:** foi possível demonstrar que, mesmo com a diminuição do consumo de energia, o local garantiu ganho na produtividade e a produção da mesma quantidade de mercadoria. As pessoas envolvidas absorveram as informações e perceberam que foi de grande valia e irão levar o aprendizado para fora da empresa, por exemplo, para suas casas.

Palavras-chave: Consumo de energia. Objetivos de Desenvolvimento Sustentável. Ferramentas de gestão

INTRODUCTION

According to the National Energy Balance (BEM, 2019), in 2020 Brazil would already occupy the ranking of the ten largest energy consumers in the world, being also one of the world leaders in the production of energy from renewable sources. It is important to highlight that the increase in electricity demand in the world was one of the main reasons why global CO2 emissions from the energy sector reached a record in 2018.

In this sense, the importance of a more renewable energy matrix is highlighted. However, despite this growing trend, the year 2020 is characterized as an atypical year, due to the Coronavirus pandemic.

The International Energy Agency - IEA states that the global demand for electricity will grow at a rate of 2.1% per year until 2024. In Brazil, the final consumption of electricity showed a 1.3% progression between 2018 and 2019 (ENERGÊS, 2019).

The sectors that most contributed to this increase were the residential, commercial, energy and public sectors. The residential sector expanded its consumption by 4.8 TWh (+3.5 %). The commercial sector grew 4.1 TWh (4.5%), the energy sector 1.3 TWh (+4.1 %) and the public sector 0.9 TWh (+2.1%).

Concerned with these realities, in 2015, the United Nations (UN) launched the 2030 Agenda, which is a plan for all interested parties to work on combating social and environmental issues. Countries, particularly developing ones, need to expand infrastructure and modernize technology to provide modern and sustainable energy services. There is also a need to strengthen international cooperation to facilitate access to research and clean energy technologies, including renewable energy, energy efficiency and advanced and cleaner fossil fuel technologies.

A study carried out by the National Water Agency points out that hydroelectric power plants use four times more water than the entire national human supply, including consumption in homes, commercial and public establishments, and in rural and urban areas (ECOA, 2019). This information served as a reference for defining the project's area of study and action.

Water represents one of the most important natural resources for life on the planet. Motivated by this information, the team chose the work strategy, defined as an awareness campaign on electricity consumption.

In this sense, a project was developed with the objective of reinforcing the importance of conscious energy consumption in a company located in the municipality of Manga, in the North of Minas Gerais.

METHODS

This experience report will present the results obtained through actions aimed at training and raising awareness of the team of employees of a refrigeration company, by members of the project team, one of them being the owner of the company, in search of a workplace more sustainable.

Management tools were used, such as 5w2h in the planning stage and the logbook in the stage of execution of the planned actions. The company A&P FRIOS, located in the city of Manga-MG, was chosen to implement the project, due to the proximity of one of the team members. The project report was sent to present the objectives

In the next step, the dissemination of the project and its objectives within the company began. The tools used were notices, folders and pamphlets developed by the team members and held face-to-face and remote meetings with employees, to ensure the participation of team members residing in Montes Claros.

EXPERIENCE REPORT

The execution of the project took place during the 1st semester of 2021, within the Integrator Project discipline, of the Administration course, when at each class, the steps of the project were updated. To monitor the execution of the project, the logbook tool was used. For each activity executed, the status of green was assigned, those that were in progress received the yellow color and the one that had not been executed received the red color.

On March 15, 21, the first team meeting was held for the start of the project, which was called Conscious Energy. On March 27, at a second meeting, the campaign materials were defined: folder, pamphlets, notices, reminders and the logo. On the 29th, a meeting was held with part of the team due to the company's demands and awareness of these employees took place, who undertook to pass the content on to other colleagues. The pamphlets and folders were distributed, and the notices were posted in strategic places.

With this awareness campaign, there was a reduction of 31.6% in the electricity bill. Before the actions implemented by the project, the account was approximately R$720.00 and the first account after the implementation of the actions presented an approximate value of R$500.00.

FINAL CONSIDERATIONS

With the actions implemented at the company A&P FRIOS, through the Conscious Energy Integrator Project, it was possible to make employees aware of the conscientious use of energy and the importance of saving electricity.

The company achieved a reduction of around 30% in energy consumption and reduced the amount paid on the bill. It was possible to demonstrate that, even with the reduction in energy consumption, the site guaranteed a gain in productivity and the production of the same quantity of goods, consuming less energy. The people involved absorbed the information and recognized its importance and will take the learning out of the company, for example, at home.

The project allows for expansion and new versions and can be exposed and presented to other groups of people through social networks, aiming to save costs and minimize environmental impacts.

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Figure 1 - Folder. 2021.

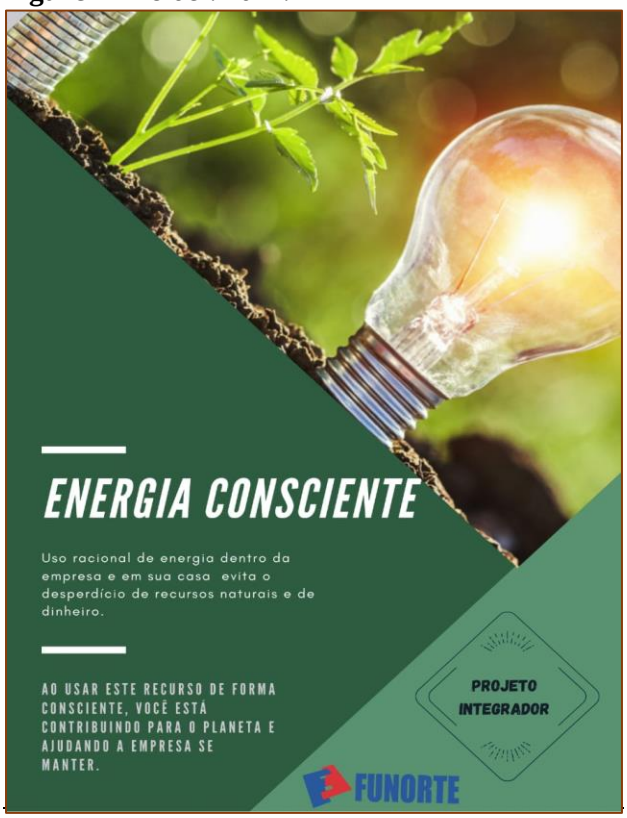

Figure 2 - Folder. 2021.