Polaris Renewable Energy, Empowering Communities

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ABSTRACT

As a Company, the opportunity to make a positive impact, while investing in our projects is a fundamental driver of our commitment to Sustainability. We are committed to contribute to the neighbouring communities of the projects we operate in, prioritizing those activities and projects of sustainable development and social investment that mean substantive changes in the quality of life and well-being of the entire community. We are determined to foster the local economy by maximizing local employment and procurement opportunities.

For us, it is important to build trust-based relationships with all stakeholders while maintaining active listening and promoting open channels of consultation and participation.

This philosophy is fundamental to align our Company with the United Nations Sustainable Development Goals (SDGs), mitigate risks, build positive relationships, and generate a significant and lasting impact on the communities where we operate.

For many years, starting with our operations in the San Jacinto-Tizate Geothermal Power Plant in Nicaragua, we have focused our community development efforts in areas that we consider fundamental, such as education, community infrastructure, agriculture, health and sports. This program positively impacts the lives of five communities and approximately 5,000 people.

The social impact generated by the different actions we have carried out, whether small or large, have contributed to the fact that these communities are now more resilient; with access to water services, that positively impacts their human rights; with children and youth more prepared for life; with small producers that are now properly technified and equipped; as well as communities supported by infrastructure that assists healthy recreation and integration.

In this way, our management has demonstrated that engaging positively with local communities helps to build trust and gain support for our projects and its operations.

1. INTRODUCTION

Polaris Renewable Energy Inc. ("Polaris" or the “Company”) is a Canadian publicly traded company engaged in the acquisition, development, and operation of renewable energy projects in Latin America. We are a high-performing and financially sound contributor in the energy transition.

Polaris manages a quality portfolio, with diverse technologies, which includes solar, geothermal and run-of-river hydro. The Company’s operations are in five Latin American countries and include the San Jacinto-Tizate Geothermal Power Plant (82 MW: two condensing Fuji turbines and bottoming Ormat binary), which is located in northwestern Nicaragua, in the village of San Jacinto, municipality of Telica, 20 km from the city of Leon.



Figure 1: San Jacinto-Tizate Geothermal Power Plant.

The project is one of the largest generators of Renewable Energy in Nicaragua, contributing significantly to the overall energy requirements of the country.

We remain committed to our belief that long-term returns are bolstered by a healthy balance among all Company stakeholders including equity and debtholders, employees, customers, the society our business operates in, and the environment. Our commitment to sustainability is rooted in our business strategy and corporate values; and we are committed to achieving the highest standards through the continuous improvement of our practices.

In recent years, issues related to the environment, social matters, and governance (ESG) have taken a critical focus in the business world, and we are required in Canada to provide annual reports on our ESG efforts. But further than that, as a renewable energy company, we have identified these as principles and as an integral part of our corporate identity (Business Ethos). We are aware that as to part of our purpose, apart from being a financially sound company, is to leave a positive mark on the world for generations to come.

This paper focusses on the San Jacinto-Tizate project as it is our largest and oldest operation and our only geothermal plant, so is the most relevant in the present context, though we do apply the same methodology at all of our projects.

1.1 Materiality Analysis and Sustainability Strategy

Sustainability management has always been an important pillar of our operations. To ensure high sustainability standards, we apply fundamental principles and practices as

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developed by the International Finance Corporation (IFC), that are specifically applicable to our operations.

Moreover, in recent years, Polaris carried out a materiality analysis, which was developed based on the Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), ISO 26000:2010 Guidance on social responsibility and the AA1000 Assurance Standard, which helped define our Sustainability Strategy that was integrated into our overall Corporate Strategy.

Polaris' Sustainability Strategy, as in Figure 2, is divided into four key areas, which address social (internal and external), environmental and governance aspects that are relevant to the business as well as to internal and external stakeholders.



Figure 2: Polaris' Sustainability Strategy.

The material topics identified were prioritized according to their importance to stakeholder groups and their influence on the success of the business. This process resulted in the selection of fifteen material topics and allowed us to have a clearer and more lasting vision of where to focus, how to distribute our resources and the best way to achieve our sustainability goals.



Figure 3: Polaris' Materiality Map.

In this way, as in Figure 3, two of the fifteen identified material topics refer to Stakeholder Engagement and Community Development. Both have been classified with a high level of materiality, meaning that from a strategic perspective for the Company, they must be managed with excellence and adequate resources should be allocated for their management.

In general terms, having a well-defined strategy and clear levels of focus and work for each material issue has allowed us to adopt a planned and proactive approach to our sustainability management.

Each in turn leads to quantifiable KPIs, who are essential to manage our Sustainability program as they have provided us measurable goals and support the making of informed decisions and continuous improvement.

2. COMMITMENT TO OUR PARTNERS

We are focused on achieving positive Stakeholder Engagement and Community Development. In this way, we are confident that by operating our business, we are creating a positive impact with our Partners.

Overall, having a positive social footprint helps ensure that our renewable energy projects are sustainable, beneficial, and accepted by the surrounding communities.



Figure 4: Computers and robotics kits donation to local school.

2.1 Importance of positive Stakeholder Engagement

The participation of interested parties in the project cycle is an integral part of an adequate environmental and social management system since it contributes to the sustainability of the project itself.

From the conceptualization of the project and/or substantial changes to it, our Company undergoes a process of social analysis as well as consultation with stakeholders. This ensures that from the beginning, opinions and perspectives of stakeholders are considered to ensure an appropriate design for each project.

Polaris has a Stakeholder Engagement Plan (SEP) implemented for each of its projects, including the San Jacinto-Tizate project, and it is aligned with the following standards:

- International Finance Corporation (IFC) Performance Standards (2012).

- Equator Principles (EP4, 2020).
- Applicable World Bank Standards (Guides).

IFC's Performance Standard 1 (PS1), Social and Environmental Management and Assessment System, establishes that the participation of social actors is a permanent process that can include, to different degrees, the following elements:

- Analysis of the social stakeholders and planning for their participation.
- Disclosure and dissemination of information.
- Consultation and participation.
- Grievance mechanism.
- Regular provision of information to the Affected Communities.

In this sense, quality stakeholder identification is crucial for successful engagement, risk management, resource optimization, informed decision-making, trust-building, compliance, and overall project success.

Following these standards, our company has completed its stakeholder identification process, which is categorized into different groups as in Figure 5.



Figure 5: Identification of Stakeholder categories that are relevant at project level.

Additionally, the Equator Principles also establish that projects must develop or maintain a system that includes a grievance mechanism, which is an indispensable tool for communities and companies to deal with difficulties proactively.

Our Company confirms that it has established grievance mechanisms in all of its projects, which includes the San Jacinto-Tizate project, and these have assigned clear procedures, roles and responsibilities associated with said procedure.

Polaris periodically reviews the Stakeholder engagement and grievance mechanism procedure and ensures ongoing training for community members on its availability and usage.

Having these well-implemented plans has helped our Company to minimize its exposure to risks with communities and to identify opportunities for continuous improvement.

2.2 Community Development

For our Company, community development has been an important pillar of our contribution. Given that our projects are located mostly in low-income communities, leaving a positive mark on these communities has been part of our purpose as a Company.

While the biggest contribution a company normally makes is the positive impact of the business itself - through employment, contracts, its supply chain, and payment of taxes - voluntary community investment programs offer an important additional avenue for enhancing socioeconomic benefits and to improve the relationships between the Communities and the Company.

In the case of the San Jacinto-Tizate project, we have had a positive impact that has been managed for many years. We started by identifying the main needs, practicing active listening, and maintaining a close relationship, where building a connection based on good communication and trust has yielded long-term results.

We are very proud of the positive impact we are creating in our communities. To achieve this, we established our community development program in alignment with the following principles:

- Engage an effective community consultation. This applies for the formulation of our geothermal project, but also for the implementation of social investment projects.
- Manage expectations. We are aware that communities can have many needs. However, for us it is essential to manage clear, realistic expectations of how we can intervene, together with them and other actors.
- Build trust. It is an essential part of the work we do in the communities. Good faith and transparency in our processes have been essential to creating and maintaining that trust.
- Plan for sustainability. We aim to design projects that can have an impact that continues long after our involvement.

Polaris has determined lines of action for its community development efforts. This has been made through Social Assessments, Environmental and Social Impact Assessments (ESIA's) and/or direct interactions with community leaders.

These lines of action are Education, Community Infrastructure, Agriculture, Health and Sports.

In recent years, our company has developed projects along these lines of action that have significantly contributed to improving the quality of life for the communities surrounding the project, as well as strengthening the company's position for the operation of its geothermal project.



Figure 6: Senior students visiting the plant for the 2023 vocational fair.

2.2.1 Education

We believe in the importance of quality education, because it enables upward socioeconomic mobility and is a key to escaping poverty.

Our education program has a short, medium and long-term positive impact; because through it, we endeavor to contribute to the preparation of a skilled workforce in the future. Through this program, we make a direct contribution to SDG 4, which is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

With this clear vision, Polaris initiated its education program more than a decade ago. Over the years, Polaris formed partnerships with the Ministry of Education and various NGOs, such as World Vision, American Nicaraguan Foundation (ANF) and the Oneness-Hearts-Tears and Smiles.

An important contribution has been engaging with our partners to manage donations for local schools through their own efforts. Which, through their foundation, sent educational donations to the local schools. Polaris handled all logistics and associated costs. This approach expanded the reach of what the company could have achieved on its own.

Our approach has primarily involved integrating educational technologies into local classrooms. Initially, we built the first school computer We installed it in the Sara Maria Parrales School at the San Jacinto village, since that school is not only the largest and closest to our project but has become a teacher training and resource centre for the district thanks to all the contributions our company has made over the years.

Similarly, Polaris implemented the program 'Learning Today, Shining Tomorrow'; which has been developed in phases since 2016. Over the last few years, it has significantly impacted the schools that surround our facility.

This program not only received investment from our company through our social investment budget, but we also managed to secure personal donations from members of our Board of Directors and private investors. This allowed us to expand the scope of the project and, consequently, increase the positive impact created.

This initiative seeks to compliment the formal education established in the local schools. This program continues to benefit 51 teachers, 1000 students and their parents and it is separated into two projects.

The first project, 'I want to read to Learn' which is aimed at Elementary and High-School students, encourages improved reading comprehension, enhanced communication skills and critical thinking across all the local schools through the use of digital backpacks (computers and tablets).

Then, the "Learning Roots" project, which is set for pre-school students (3 to 6 years old), involves the creation of playful spaces and making use of the learning areas according to each dimension (cognitive, physical, emotional and social). This project provided training to teachers and parents who have reinforced their knowledge to improve educational techniques in the development of life skills for children.

In line with the project, the early childhood classrooms have been equipped with age-appropriate educational materials, such as furniture kits (chairs, tables, acrylic whiteboards, drawers and metal filing cabinets), kits of instructive & play materials (paper, colored sheets, markers, crayons, lego, puzzles, plasticine, puppets, abacuses, sensory balls, soccer balls, jump ropes, puzzle mats), Preschool Kits (storybooks, coloring books, crayons, pictures of the human body, and alphabet pictures).



Figure 7: I want to read to learn.

The delivery of materials and furniture further promoted the learning experience, with a better atmosphere, improving daily attendance in preschool classrooms, making education attractive, fun, and participatory.

A couple of years later, Polaris decided to extend its contribution by integrating robotics into the school curriculum from elementary to high-school education. The Sara Maria Parrales School was the first school that had educational robotics in the entire western sector of the country. Teachers were certified in robotics and play an active role in this new methodology.



Figure 8: 2023 National Olympics competition.

With robotics, we have contributed to the expansion of knowledge and have built 21st century skills that will create active, collaborative and lifelong learners.

The students who participated in the Program were then able to apply their new skills at regional Olympics, in which they ranked first place and then allowed them to compete at the national Olympics, being able to achieve third place at the national level. This is a significant achievement for any school, especially for a resource-limited rural school. Such results for these young people open a tremendous window of opportunity for them.

Today, all these technological tools are managed under the umbrella of the innovation center at the school, established by Polaris.

Furthermore, to encourage nearby communities to also pursue acceptable environmental practices, we promote our company's environmental responsibility into practice and lead by example. In this manner, we have supported and educated young people about the importance of the environment by conducting annual reforestation campaigns, donating fruit trees to students and their families, and implementing an annual environmental education program. Over the past 3 years, Polaris has donated 6600 fruit trees. To date, this has been highly beneficial, as the crops are sold in local markets, helping to generate additional income for the families.

The main highlight in this area has been the annual environmental fair with the community, where children learn through hands-on activities about new and improved practices that benefit the environment. Preschool students and those in 1st to 3rd grade created recycling planters and environmental drawings, while the rest of the elementary and high school students displayed models on environmental topics. The themes included sustainable transportation, restoration of degraded forests, measures for protecting endangered and threatened species, sustainable tourism proposals for the San Jacinto hot springs, green filters or biofilters, geothermal energy, solar energy, and wind energy.

Consistently, by recognizing the importance of soft skills development for a comprehensive education, the company has implemented leadership talks and vocational fairs, where employees volunteer a day to explain various careers and how they can be applied in the workforce. This is an excellent way to support and prepare them for life.



Figure 9: 2023 Environmental Fair with local communities.

In this way, the company has made a comprehensive contribution to the education of children and young people in the area, with a central focus on increasing the tools and skills of parents and teachers to empower them to improve the quality of local education. Additionally, forming partnerships with specialized educational entities has helped strengthen the company's program.

These contributions, by addressing specific challenges, fostering a positive learning environment and contributing to the overall development of students, are key to enhancing the quality of education in these rural public schools. At the same time, in the medium and long term, it helps to build a more skilled local workforce.

2.2.2 Community Infrastructure

Infrastructure is an important part of the foundation for community development. It provides the physical structures and services that are necessary for a community to function and thrive.

In this regard, our company's contribution to community infrastructure has been fundamental for its development. With this line of action, we are contributing to SDG 11, which is to make cities and human settlements inclusive, safe, resilient, and sustainable.

This began with the implementation of the water and sanitation project that benefited the five communities surrounding the geothermal project. The water project emerged from identifying the community's primary need - access to potable water, which they had access to only for 2 hours every 2 days during the socioeconomic survey conducted at the start of the geothermal project studies.



Figure 10: Water project inauguration.

From there, it progressed to the formulation and fund management phase with financial entities, such as Interamerican Development Bank (IDB) and the Development Bank of Austria (OeEB); which were also part of the San Jacinto-Tizate project financing at the time. Similarly, the organization Catholic Relief Services participated in the project. Together, an investment of 1.2 million US dollars was made to address this significant need.

Similarly, the project involved the participation of government entities and strong community engagement and involvement. As a result of this project, over 900 families were connected to a potable water system that delivered water directly to their homes; 5 schools gained access to water and sanitation services, as well as the health clinic. The key component for ensuring its sustainability was the training and empowerment of the leaders of the potable water and rural sanitation committees.

This training covered technical and accounting aspects with a gender-focused approach. The project was inaugurated more than 8 years ago and continues to operate and remain self-sustaining.

To this day, the company, through partnerships with a local volunteer organization, continues to strengthen the capacities of leaders and the community in managing their water system; with the goal of promoting comprehensive, sustainable, and efficient management of water resources and infrastructure systems, as well as encouraging hygiene practices, sanitation, and integrated solid waste management in the communities.

Similarly, Polaris has contributed to community infrastructure by renovating local schools, installing recycling booths, building sewers and bridges to improve access to the more remote local communities in the rainy season, and constructing and equipping sports fields and parks to promote healthy recreation among community members.

All of this has helped the community become more resilient and have what is necessary for its development.



Figure 11: Sewers project inauguration.

2.2.3 Agriculture

The main economic activity in the countries we currently operate in is primarily agricultural. Given this premise, our Company has made agriculture one of the main areas of our social investment program for several years.

We have also placed special emphasis on this area given the contribution we can make to SDG2, which is zero hunger, by implementing resilient agricultural practices and incrementing the agricultural productivity and incomes of small-scale producers.

As a result of this program, we have witnessed local farmers' growth and development through technical training and donations of agricultural inputs.



Figure 12: Watermelon project.

To date, it has supported the strengthening of the capacity of a group of 50 farmers in various crops such as beans, corn, and watermelon.

The project consists of technical assistance, training, donation of inputs, monitoring of the harvest process and commercializing of the produce. Likewise, over the years, they have been supplied with the machinery necessary to increase productivity, allowing the group to generate higher revenue from their production.

The sustainability of this program is ensured through the implementation of a revolving fund, where each beneficiary commits to contributing a percentage of their earnings to a common fund for the group. This fund is managed by their

leadership structure and is used to self-finance additional planting processes.

Additionally, Polaris implemented a biodigester program. Biodigesters are a type of waste management technology used to convert organic waste into biogas and fertilizer. Overall, the use of biodigesters helps reduce greenhouse gas emissions, decrease waste, improve soil fertility, and provide a renewable energy source, all of which are crucial for environmental conservation.

Communities can use the biogas for their own consumption, leading to family savings by reducing the need to purchase gas on the open market, thus offering social and economic benefits.



Figure 13: Biodigester project.

Due to our intervention, the biogas produced led to a 69% reduction in the use of firewood for cooking in the benefited families. Previously, beneficiaries used 22,656 pounds of firewood annually, and this has now decreased to only 6,912 pounds annually.

In the same way, a new project has recently been launched to promote sustainable beekeeping practices. Bees are essential both to pollinate the food we need to survive and pollinate many of the trees and flowers that provide habitats for wildlife. By promoting beekeeping, Polaris is also contributing to SDG 2 by ensuring sustainable food production systems and implementing agricultural practices that help maintain ecosystems.

This project will create social and economic value while also providing environmental benefits, given that currently, local communities extract honey through burning practices, which has a harmful impact on the environment.

Through the ongoing pilot program, a select group of producers is being trained in beekeeping and best practices, and the first hives have already been established. This initiative generates significant value for local biodiversity and product diversification.

2.2.4 Health

Our impact contributes to SDG 3, which is to ensure healthy lives and promote well-being for all at all ages, through an improvement in essential health services. Contributing to the local Ministry of Health to assist in meeting important goals in aspects of community health, is essential for a well-coordinated, informed, and effective approach to health and epidemic prevention. Our collaboration has ensured that efforts are aligned with national health priorities, utilize existing infrastructure, and benefit from the expertise of healthcare professionals and public health officials.

We support various initiatives by the local Health Ministries to prevent and treat diseases. We have supplied local health centers with additional medical equipment that are crucial for patients' daily care and surrounding communities, such as ultrasound stations, basic medical supplies, dental stations, etc.

Likewise, through partnerships with various organizations, such as American Nicaraguan Foundation and the Oneness-Heart-Tears and Smiles, we have managed to secure additional resources for the local health clinic, contributing to the logistics of the donation.

In 2020, the health centers paid immediate attention to the Covid-19 pandemic. For this reason, our Company made donations of medical supplies to prevent the spread of the virus within the local communities.



Figure 14: Dentistry station donated for the local health post.

2.2.5. Sports

Sports promotion in rural communities has far-reaching effects on the social, economic, and cultural aspects of community life.

In this manner, for several years, through the sports fields constructed by the company, sports have been integrated into the daily lives of the communities. We have supported different leagues and teams in the area.

Polaris has donated baseball balls, bats, equipment and uniforms and is also promoting soccer and volleyball among youth.

As a company, we believe that physical activity has an immense impact on physical health and development as well as psychological health. Therefore, we advocate and support projects to strengthen communities through sport and recreation.



Figure 15: Sports supplies and uniforms donations.

Sports have also served as a means of integrating the community with the company through various leagues and games.

This contributes to SDG 3, which is Good Health and Well-being, given promoting sports and physical activity contributes to better health outcomes, which is a key focus of this goal.

3. CONCLUSIONS

From our social management, we conclude that it is essential to ensure positive stakeholder engagement and focus on community development, always in partnership with various entities and in coordination with local actors.

These partnerships have helped us expand our positive impact and involve more entities and organizations in working within local communities, generating long-term benefits for everyone. This aligns with the fulfillment of SDG 17, Partnerships for the Goals, as it underscores the need for diverse partnerships to enhance the effectiveness and reach of social development efforts in rural communities.

This approach has been essential for maintaining our social license to operate, given it involves proactive engagement, risk management, and community investment; and all of which contribute to the overall success and sustainability of a company's operations.

In this way, we guarantee that the communities perceive the geothermal project, and our Company, as a good neighbor who brings development opportunities to their community.

On one hand, we are generating a highly positive impact, and on the other hand, the community feels good and comfortable with the company. This creates a win-win situation that ensures the long-term stability of the company in the region where it operates.

However, we consider it crucial that they are active participants in this development process and gain empowerment, which, in the long term, helps them gradually break free from the cycle of poverty.

To achieve all this our sustainability program has been focused, strategically managed, analyzed and reported on in a quantified manner.

Having a materiality analysis and a clearly defined strategy ensures that resources are directed towards the most critical areas, maximizing our positive impact. It has also helped us to ensure that efforts are concentrated where they will achieve the greatest benefit,

Having an accountability structure to our Senior Management, Board of Directors, and external stakeholders such as Private Investors and Lenders drives us to conduct regular analysis of our sustainability programs and provides valuable insights into their effectiveness and areas for improvement.

A clear example is the KPIs we have defined and on which we measure our progress annually. This data-driven approach allows for informed decision-making and continuous enhancement of strategies, as well as our annual sustainability report.

ACKNOWLEDGEMENTS

We extend our gratitude to the organizations with which we have established partnerships in the past and continue to manage.

We also thank the communities for their openness to the company's social investment projects and their willingness to undergo learning processes, which have often meant breaking paradigms and changing practices.

This author (MB) is particularly grateful for the vision of Polaris's Senior Management and Board of Directors, who have strategically prioritized maintaining good relationships with communities and generating positive impact as we operate our Business.

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