# RESUMEN DEL PROYECTO EN DISEÑO * (*)

## Ilumexico: innovative solar PV energy services for the poor and vulnerable

| FECHA DE ELEGIBILIDAD DEL PITCH | PAIS(ES) |
|---|---|
| 09/17/2021 | México |

| SOCIO(S) |
|---|
| ERES ENERGIA RENOVABLE SAPI DE CV |

| CLASIFICACIÓN PRELIMINAR DEL IMPACTO MEDIO AMBIENTAL Y SOCIAL |
|---|
| B (**) |

| PRESUPUESTO TOTAL | BID Lab | CONTRAPARTE LOCAL Y COFINANCIACIÓN |
|---|---|---|
| US 8,500,000 | US 1,500,000 | US 7,000,000 |

### DESCRIPCIÓN

**The problem** According to the National Institute of Statistics and Geography (INEGI), approximately 1.8% (2.6 million people) of Mexico's vast population (130 million[1]) is still underserved in terms of access to energy, causing families to rely on substitutes such as diesel, candles or wood which have negative environmental and health consequences. In recent years innovative off-grid household solutions have emerged from the solar energy sector which, depending on the systems installed, can allow families to power lightbulbs, charge cellphones, run small and large appliances, or even operate water pumps. COVID-19 evidenced more serious basic deficiencies behind the main challenges of Latin America: inadequate urban infrastructure and lack of access to critical services, as well as sustainable employment opportunities and progress in the formal economy[2]. At the same time, it has shown that technology is a powerful instrument to mitigate these gaps. More and more innovative startups are meeting the growing demand for digital services and the adoption of new technologies within these sectors.

Companies such as Ilumexico offer alternatives for sustainable clean energy that have become effective solutions for isolated communities in rural Mexico, or other countries throughout the Latin American and Caribbean region. Ilumexico currently has more than 24,000 clients (households) which benefit more than 110,000 poor and vulnerable people. However, this market in Mexico still has room to grow[3] – there are still approximately 2M people without access to electricity in rural areas. It is still possible to find families spending US$10+/month on hazardous and polluting lighting sources or up to US$100 in ice for refrigeration, so these solutions have become more competitive and innovative and now are in a stage of scaling and growth.

[1] Mexico is the 10th most populous and the largest Spanish-speaking country in the world, with socioeconomic inequalities directly correlated to energy access levels (SE4ALL, 2020: Energy Safety Nets: Mexico Case Study, Sustainable Energy for All).

[2] The informal economy represents 28% of employment (SE4ALL, 2020).

[3] The Mexican electricity utility CFE (Comision Federal de Electricidad) estimates that around 440,000 households lack access to electricity (SE4ALL, 2020)

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**The IDB categorizes all projects into one of four E/S impact categories. Category A projects are those with the most significant and mostly permanent E/S impacts, category B those that cause mostly local and short-term impacts, and category C those with minimal or no negative impacts. A fourth category, B13, is a catch-all category not related to severity of impacts; it covers non-investment lending and flexible lending instruments for which ex-ante impact classification may not be feasible, such as Financial Intermediary operations or Policy Based Loans.

**The solution** Ilumexico aims to improve the lives of the off the grid homes, placed in communities beyond the reach of an interconnected electric power distribution grid, by bringing affordable solar power to their homes for light, connectivity, and productivity, which contributes to socio-economic development and breaking the vicious circle of poverty. Furthermore, Ilumexico business model is innovative and disruptive, using technology to capture data and offer better services, tailor-made pay-as-you-go system for the most vulnerable communities.

Ilumexico's model is based on delivering affordable technology to poor and low-income households, implementing efficient last-mile distribution methods through a hub-and-spoke solar PV distribution model: Families get a system installed with low up-front cost; Ilumexico then empowers local entrepreneurs to sell Recargas Ilumexico, so these entrepreneurs earn a commission (Recargas is integrated with 5000+ payment points). A fee is collected via Recargas Ilumexico according to cash availability (day, week, month); Customers receive a Recarga Ilumexico code specific for their system and payment amount and, finally they input this code into their Ilumexico's pay-as-you-go Meter and start using the electricity (see figure below):


With this operation, IDB Lab will support the expansion of Ilumexico's operations so the company can operate in additional underserved and poor areas of rural Mexico. Until now the company has installed solar systems in over 24,000 rural households in Mexico (representing 17 different indigenous groups) with an installed capacity of over 4.1 MW. Currently, it has 94 full-time employees.

**The beneficiaries** Approximately 16,000 additional households to reach a total of 40,000 families that will be able to have Ilumexico solutions within the next five years, benefits an average of 200,000 poor and vulnerable people.

**Impact thesis and monitoring: Ilumexico is a certified B corporation, an Ashoka fellow and Endeavor company. In addition, Ilumexico is rated by GIIRS (Global Impact Investing Rating System)**

The expansion to be partly financed by this operation would result in the following environmental and social key performance standards: additional 100,000 poor and vulnerable beneficiaries[1], 20,000 new tons of displaced CO2, 1,000 more indigenous and/or communities served, 55%+ of women beneficiaries. In terms of gender impact, approximately 45% of Ilumexico customers are poor and vulnerable women. And in Ilumexico itself 43% of employees are women (vs 3% baseline in employment for women in the rural electricity sector).

[1] The average family has a size of between 4 and 5 members and lives with an average family income of 155 USD/month. These families are mainly indigenous and vulnerable groups who have a lack of basic household infrastructure and services. Common characteristics in the households include dirt floors, non-potable water.

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**The partner** Ilumexico is a social enterprise that provides energy access through solar home systems to rural communities in Mexico. It was founded in 2010 by 5 young engineers and its mission is to fight poverty through solar energy by creating technologies for rural solar use. The founders turned their idea into a business plan and won first place at the Santander Prize for Social Innovation, which gave them financial capital and the motivation to work full time on their newly created social enterprise. After a pilot project of 42 households in 2010, Ilumexico grew significantly after earning government contracts to reach more households. Ilumexico has deployed a strategy of rural branches, or ILUcentros, which oversee sales, maintenance and equipment upgrades to client bases in the base of the pyramid markets.

**The IDB Lab's contribution** IDB Lab would carry out a revenues-based loan of US$1.5M in the company, with headquarters in Mexico.

The non-financial additionality of IDB Lab is associated with: (i) assisting the company with its expansion strategy, approaching them to potential future investors and/or clients, (iii) supporting Ilumexico to deepen the impact monitoring and reporting (above all in poor and vulnerable populations, and the environment).

This investment is strategic for IDB lab because i) its model reaches the poorest and remote rural and indigenous populations of Mexico; thus, it contributes to social-economic and diversity targets of the Bank. ii) it contributes to the scaling of an affordable and renewable energy business model that can be replicated in other parts of LAC; iii) it contributes to IDB Lab's climate finance target (climate mitigation).