9. Gender and Off-Grid Solar

Foundations of Off-Grid Solar in Haiti

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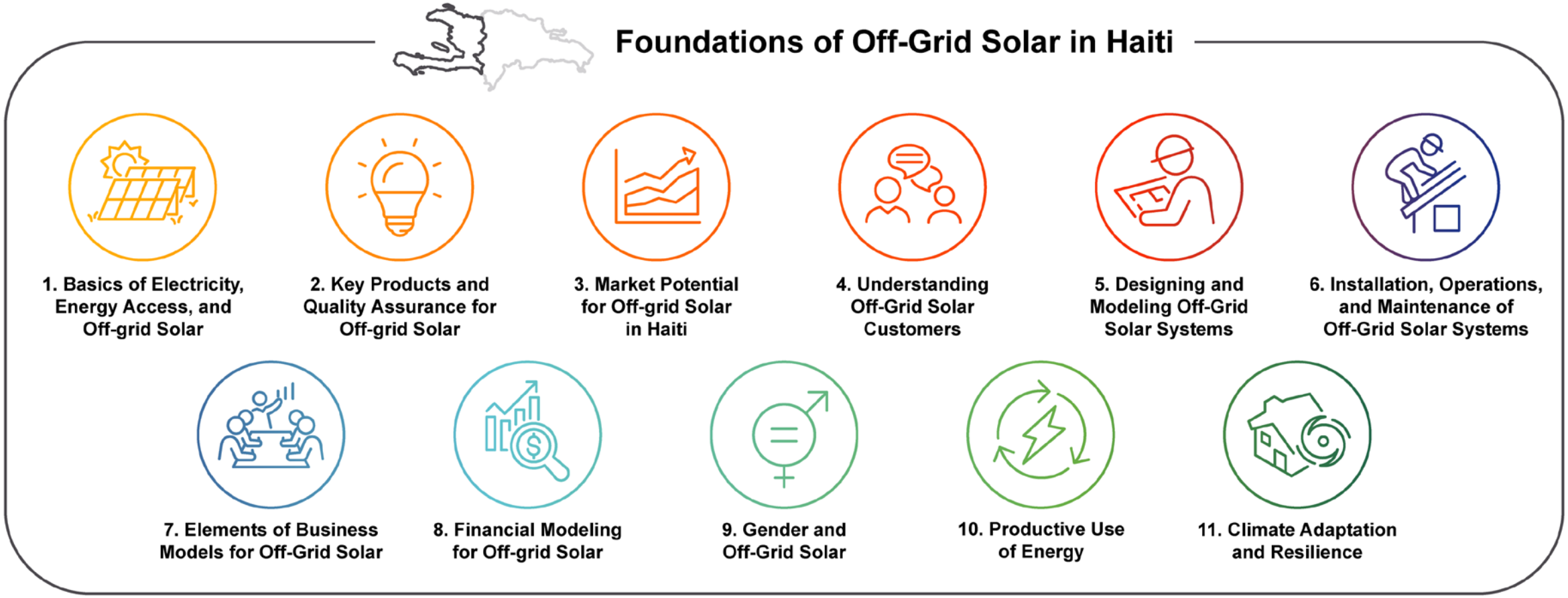
Overview



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Overview

The objectives of this module are to provide an overview and key resources/tools for understanding:

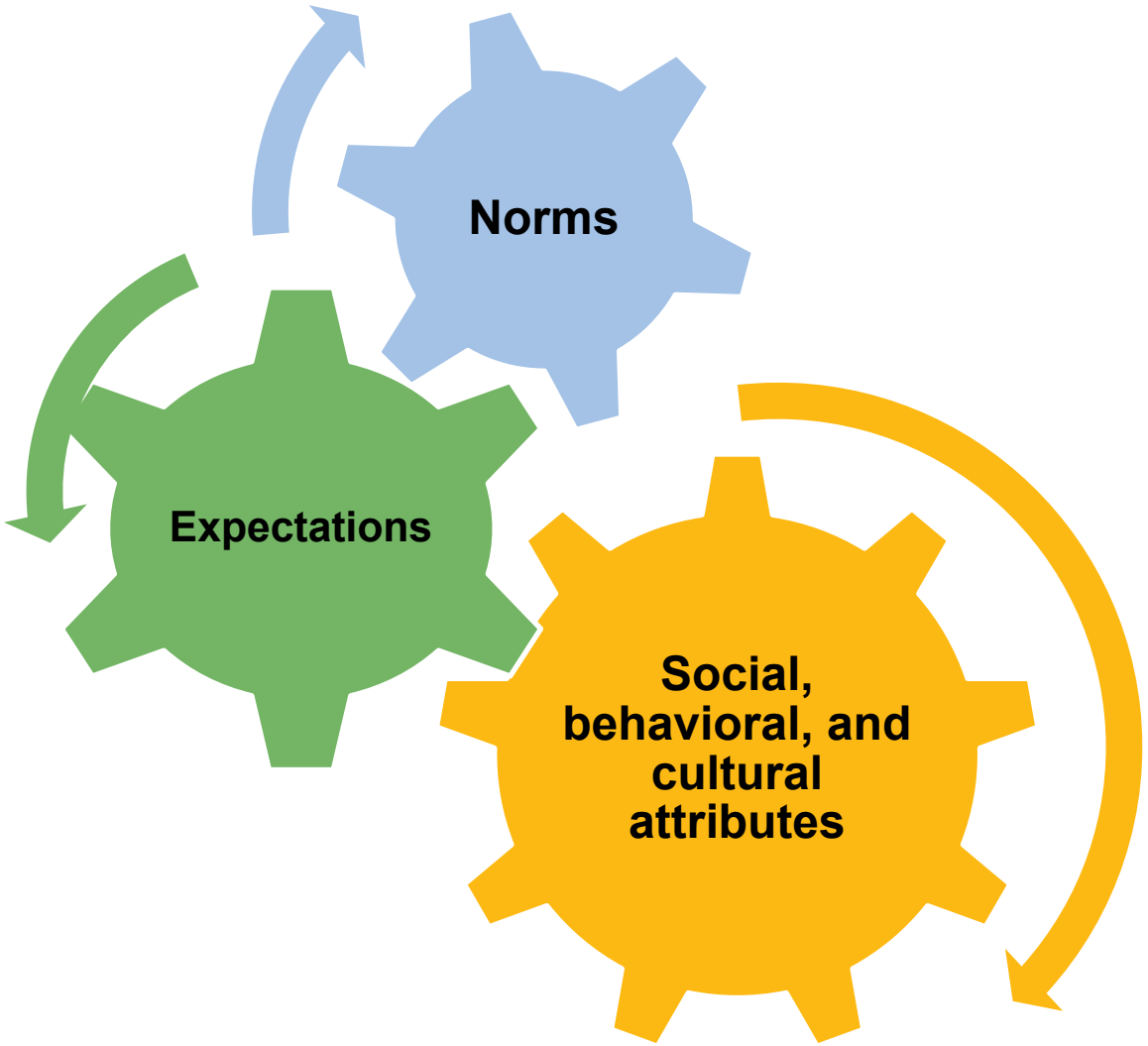
- What is gender and gender equality? What is the status of gender equality in Haiti? (Go to section)
- How are gender and energy access linked? (Go to section)
- What is the status of gender in the off-grid solar sector? (Go to section)
- What is the business case for gender integration in off-grid solar? (Go to section)
- How is gender integrated into investor due diligence and planning? (Go to section)

What is gender and gender equality? What is the status of gender equality in Haiti?

What is Gender?

The social, behavioral, and cultural attributes, expectations, and norms associated with being male or female.

These factors determine the way in which women and men relate to each other and to the resulting difference in power between them.



Source: USAID-NREL Partnership Action Plan for Gender Integration

Gender Equality and Gender Mainstreaming

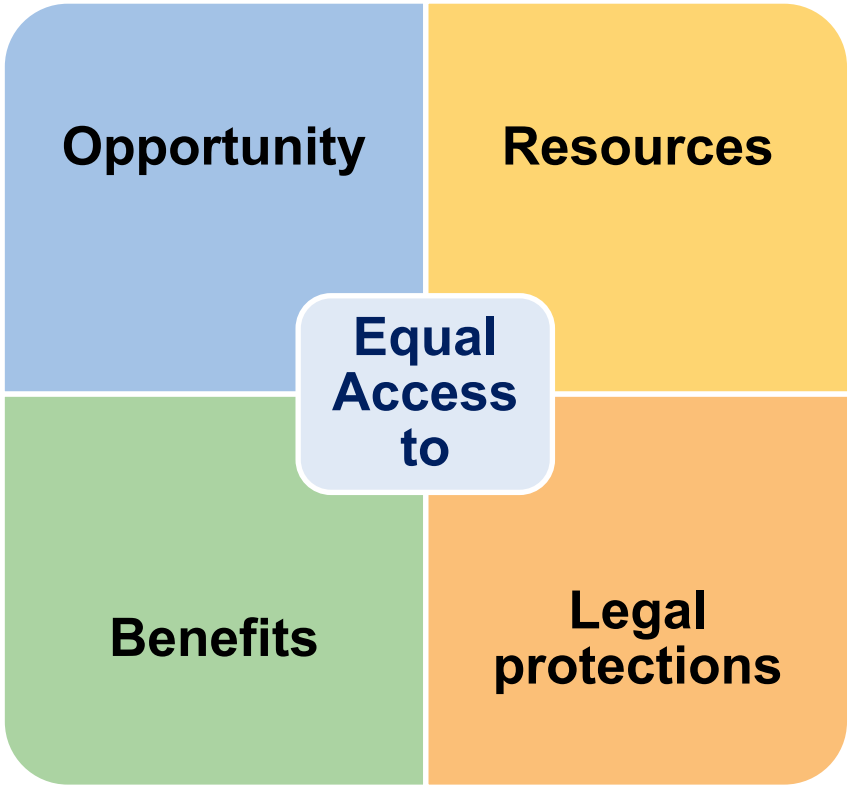
Gender Equality is the ability for women, men, girls, and boys to have equal access to opportunity, resources, benefits, and legal protections.

Gender equality is the overarching and long-term developmental goal

Gender mainstreaming is a process that

- Systematically integrates gender perspective into legislation, public policies, programs, and projects.
- Enables making women's and men's concerns and experiences a part of the design, implementation, monitoring, and evaluation of policies and programs in all political, economic, and societal spheres with the goal of achieving gender equality.

Gender Equality



Source: USAID-NREL Partnership Action Plan for Gender Integration

Gender Inequality in Haiti

OVERVIEW OF KEY GENDER GAPS

Although declining, Haiti's adolescent fertility rate **remains higher** than the average for lower-middle income countries.

30% of women have access to a financial account compared to **35% of men.**

Gender data **remain scarce** in key areas, hampering policies to narrow gaps between women and men, boys and girls.

Women are **16 percentage points more likely** than men to have vulnerable jobs.

1 in 7 women have experienced physical and/ or sexual intimate partner violence in the last 12 months.

Vulnerable jobs – forms of employment typically featuring high precariousness, inadequate earnings, and lack of decent working conditions

Source: World Bank Gender Scorecard - Haiti

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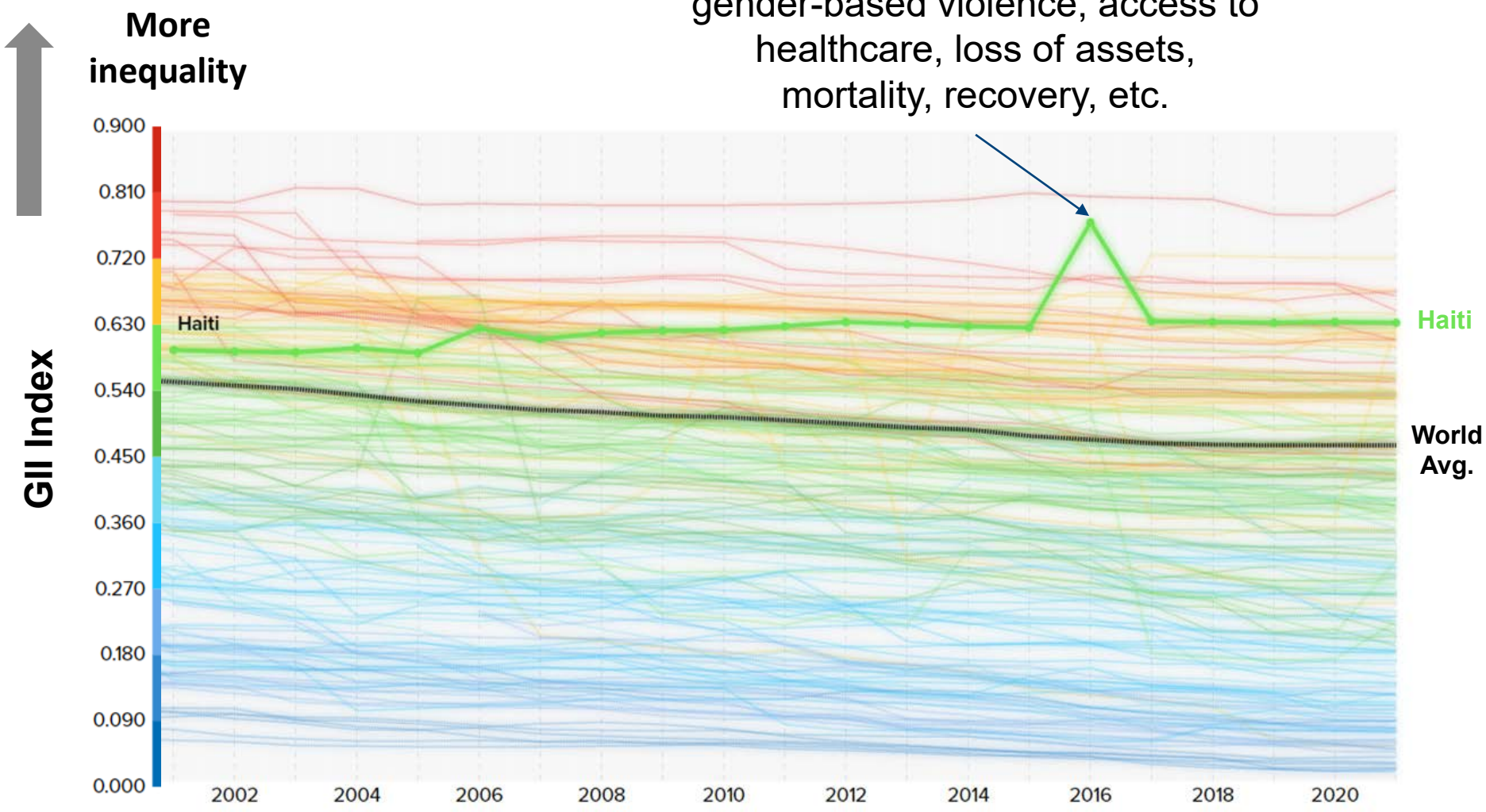
Gender Inequality in Haiti

Hurricane Matthew in 2016 caused significant and unequal impacts on women, particularly for gender-based violence, access to healthcare, loss of assets, mortality, recovery, etc.

Haiti ranks 163rd in the World for Gender Equality

(measured across health, empowerment, and employment/labor dimensions through the UNDP Gender Inequality Index)



Source: UNDP Gender Inequality Index

How are gender and energy access linked?

Electricity Access for Empowerment and Collective Action

Energy access can be a critical enabler of socio-economic development, community engagement, climate resilience and enjoyment of rights

Individual Empowerment

Reduced drudgery and time spent on daily activities unlocking time for education, business, family, and even relaxation

Reduced indoor air pollution, GHGs and deforestation

Enterprise development and income savings from baseline energy expenditures

Increased access to information, reliable telecommunications, and digital connectivity

Improved study hours and conditions as well as access to learning material and technologies

Water pumping, cold storage, and agricultural processing to support water and food security

Improved healthcare and health outcomes including maternal care, vaccines, etc.

Increased social security and reduced violence against women from solutions like street lighting

Technical training programs to connect women to employment and entrepreneurship in the energy access sector

Participatory governance and decision making for ensuring inclusive solutions at community level, and advocating for policies + local funding

Improved organization + collective action

Source: SHINE Campaign

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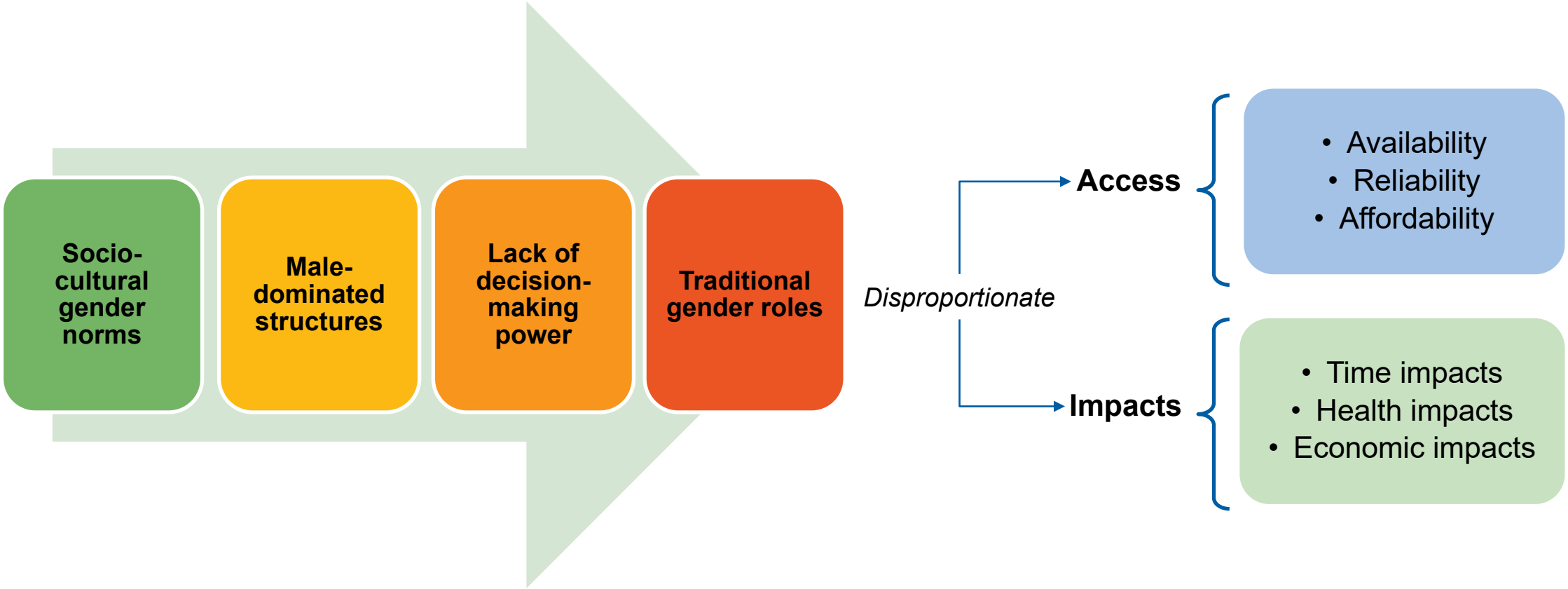
Energy Poverty and Gender

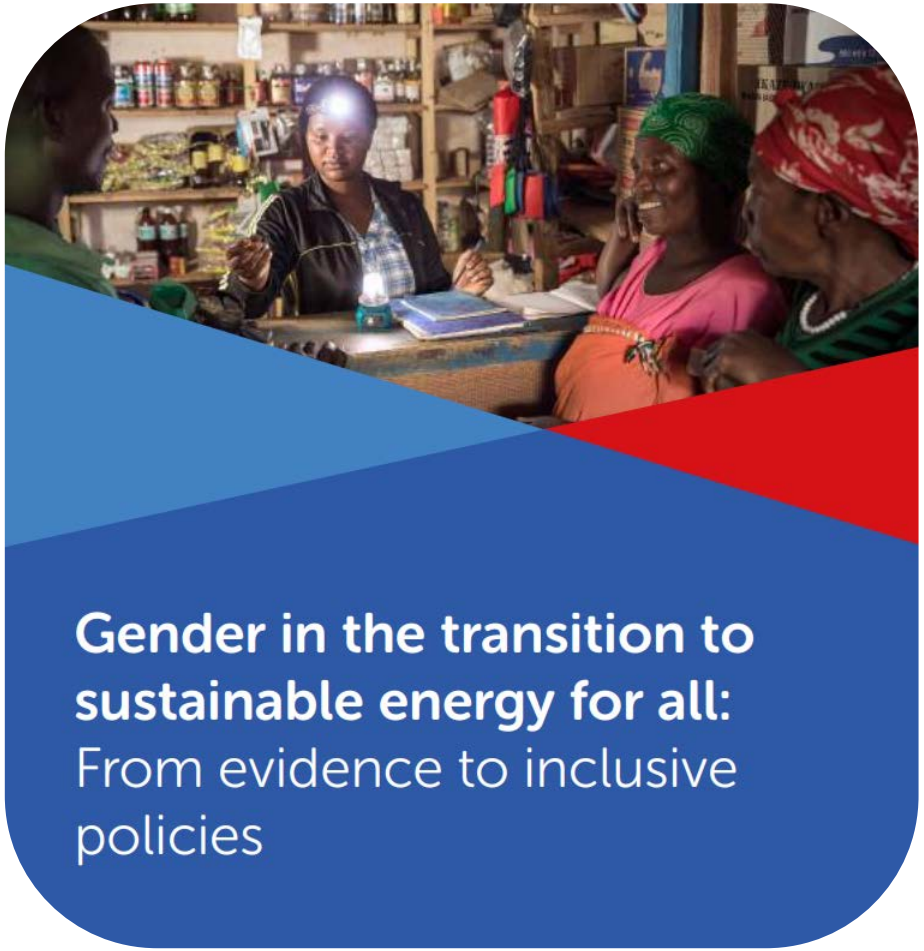
Traditional gender roles result in different patterns of energy use between men and women and highlight that **women stand to have outsize benefits** from electrification if programs and solutions are specifically designed to support their needs and priorities.



Source: JPIA Gendered effects of electrification; WHO Household Air Pollution ; ARE Women Entrepreneurs as Key Drivers in the Decentralised Renewables Sector; ENERGIA Gender in the transition to sustainable energy for all:

Gender Approach to Energy

- **Recognizes** and **analyzes differential impacts** on women and men and consciously seek consultations from women and men
- Considers the **potential of women** and men to participate in energy supply
- Considers the need to **tackle institutional barriers** that limit women's participation in energy planning and production, a variety of end uses



Source: ENERGIA Gender in Inclusive Energy Policies

Summary of Energy Access and Empowerment Research

- **Gendered approach** is essential to achieving universal access to energy
- **Women in energy supply chains** benefit them, their families, and businesses
- Modern energy services for **women's productive uses** promote their **empowerment**
- **End-use appliances** that deliver modern energy services to reduce drudgery and save time can **transform gender roles and relations**
- Improved **affordability, reliability, capacity and convenience** of modern energy services can help achieve **gender-equitable outcomes**
- **Engaging with political processes** can help women access modern energy services and change gender norms

See annex for additional resources

Source: ENERGIA Gender in the Transition to Sustainable Energy for All

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What is the status of gender in the off-grid solar sector?

“Typical” Off-Grid Solar Customer

The off-grid solar sector is still mainly serving a uniform customer base that tends to be male, more affluent, and better educated than the average person in a country; **84 percent of companies do not even report gender-disaggregated data**

A man in his early forties

Connected to the grid

In sub-Saharan Africa

Living in a rural or peri-urban area

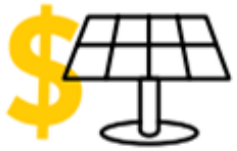
With 4-5 members in his household

Employed, with at least a secondary education

Above the poverty line of USD $3.20 per day

Does not have a disability

Included in the formal financial sector

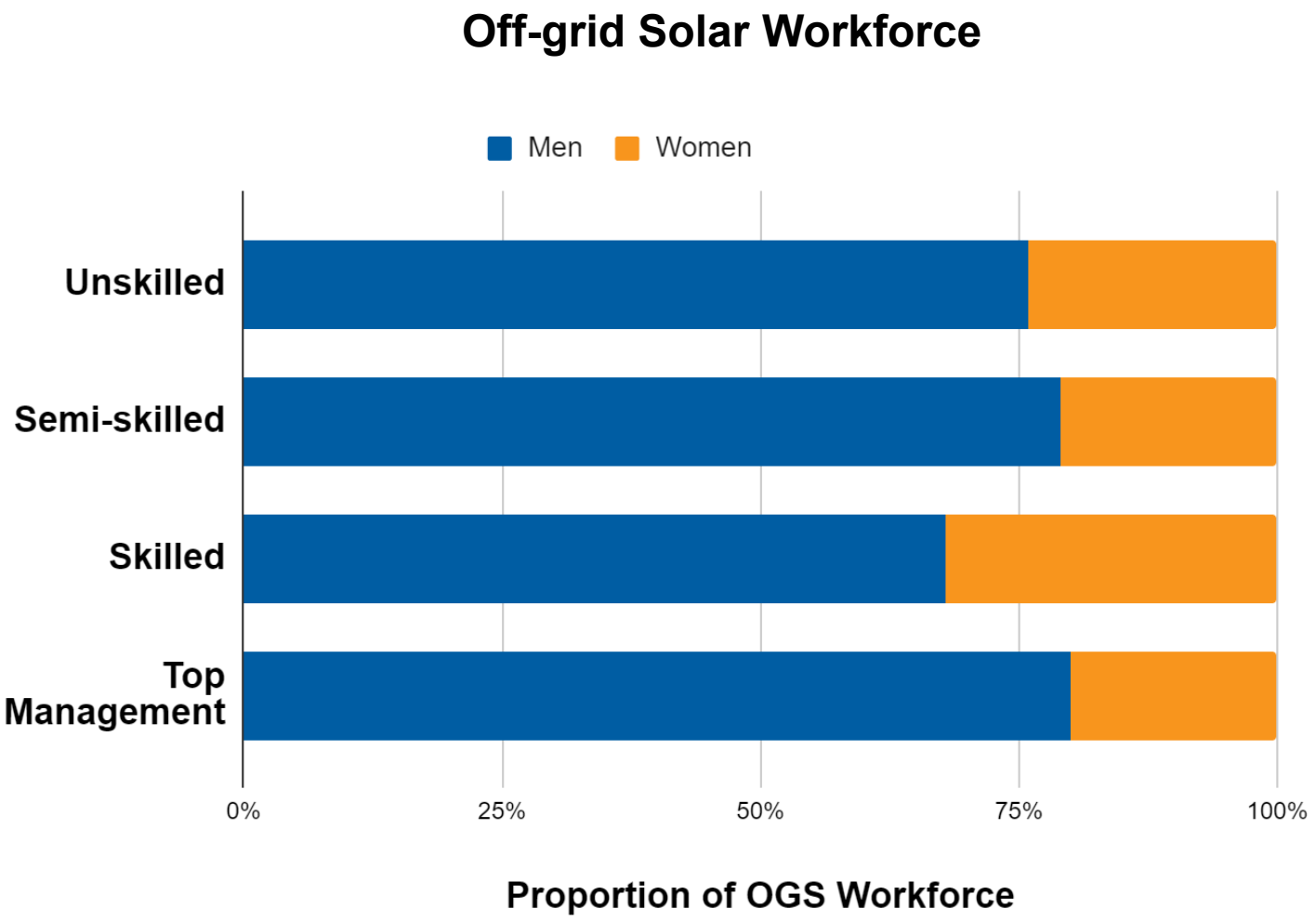


Able to leverage financing to purchase their appliance

Source: [Efficiency for Access Assessing Inclusivity in Off-grid Solar Sector]

Off-Grid Solar Workforce (Global)

Women make up **just 23% of the workforce** in solar lighting and appliance companies, indicating the field is heavily male-dominated. This trend mirrors the broader energy sector where women make up just 22% of the total workforce.



Source: Efficiency for Access Assessing Inclusivity in Off-grid Solar Sector

Off-Grid Solar Workforce (Haiti)

The USAID Off-Grid Solar Assessment interviewed off-grid solar market suppliers across Haiti including questions on their workforce composition.

27% female employment

(Ranges from 8%-50% across SHS providers in Haiti)

89% of company respondents

indicated that women mostly worked in support and administrative roles

Only 22% of company respondents

had women working in field work or engineering positions

Source: USAID Haiti Off-grid Solar Market Assessment (internal study not available online, available from USAID on request)

Differences Between Men and Women Customers?

Significant variation in appliance needs, priorities, and development impact between men and women

However, **only 5% of distributors** carry the niche or nascent appliances traditionally perceived to benefit women.

Products that showed the largest deviation between in consumer perspectives for men and women include:

SEWING MACHINES:
Rank **first** for women and **19th** for men, despite anecdotal evidence of both men and women being employed as tailors throughout most of Africa's informal markets

ELECTRIC COOKERS:
Rank **fourth** for women and **15th** for men. Use of electric cookers may change gendered norms around cooking. Pilot results from Tanzania indicate that men participate more regularly in cooking when using an electric cooker.[28]

SOLAR WATER PUMPS:
Rank **third** for women and **first** for men. Despite high development impact potential for men and women, men own the overwhelming majority of SWPs. In survey of 400 SWP users in East Africa, only 16% of were women.

HAND POWER TOOLS:
Rank **20th** for women and **fourth** for men. Anecdotal evidence suggest when capacity building in coupled with energy access, the demand for such tools is not as gendered as anticipated.

Source: Efficiency for Access 2020 Off-Grid Appliance Market Survey

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Productive Use Appliance by Gender

Top 5 Development Impact Rankings of Business/Productive Use Appliances by Gender

WOMEN

1. Sewing Machines
2. Light Commercial/SME Refrigeration/Freezer Units
3. Solar Water Pumps
4. Electric Cookers
5. LED Room Lighting

MEN

1. Solar Water Pumps
2. Agricultural Cold Storage/Cold Chain Technologies
3. Mills/Grinders
4. Hand Power Tools
5. Light Commercial/SME Refrigeration/Freezer Units

Source: [Efficiency for Access 2020 Off-Grid Appliance Market Survey]

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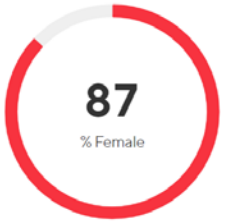
Case Studies: Energy programs empowering women

Example 1: Solar Sister

Model: Solar Sister recruits, trains, and supports women entrepreneurs to build businesses and bring clean energy to their communities

Impact

- 2022
- 2021
- 2020
- 2019
- 2018
- 2017
- 2016
- 2015



Entrepreneurs	8,500
People Reached	3,516,348
Products Sold	732,847
Countries Reached	3

Source: Solar SIster

Example 2: Brighten Haiti

“Men anpil, chay pa lou.” – Haitian proverb meaning “but many, load not heavy.”

Model: Brighten Haiti couples solar energy with education to bring a strong path for economic development in Haiti. By providing solar to rural schools, clinics, and orphanages as well as training programs to sell and install solar (e.g. Solar Apprentice Program), the organization is creating a sustainable model for education now and a future path to jobs.

Source: Brighten Haiti

What is the business case for gender integration in off-grid solar?

Business Performance Impacts for Gender-Inclusive SME*s

A 2022 report from the Shell Foundation and Value for Women shows how a business-based approach to gender inclusion does more than just benefit women as entrepreneurs, employees and consumers. Gender inclusion is a performance strategy aligned with more profitable and sustainable business models.

74% of SMEs

that track impacts of gender-inclusive (GI) policies reported positive impacts on employee satisfaction, productivity, and retention.

38% decrease

in processing time and a doubling of daily incomes for women farmers following the implementation of gender-inclusive strategies around productivity

68% of SMEs

that implemented GI strategies in R&D, Marketing, Sales, Customer Service, and Distribution & Logistics reported improvements in customer satisfaction; 60% reported improvements in brand recognition

43% of SMEs

that implemented gender-inclusive strategies in R&D, Sales, Marketing, or Customer Service reported increased sales revenue; **42% reported increased client retention**

Source: Value for Women / Shell Foundation Driving Growth and Improved Business Performance 2022

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* Small and Medium sized enterprises

ESMAP Business Case for Gender

32% female participation
in the renewable energy sector

but
45% of jobs
in administrative roles

Only
27% of workers
in GOGLA companies are women

70% of women-owned SMEs are unserved or under-served
by financial institutions[1]

This leaves a financing gap and missed business opportunity of approx.
$260–$320 billion per year

More female clients = Lower portfolio risk
in microfinance, because women are more likely to repay their loans than men[2]

After empowerment training in the clean cooking sector,[3]
female sales agents outsold men
3 to 1

Sales strategies that
target women's self-help groups
reached communities that
male sales agents were not able to access[4]

Female customers are more likely to recommend
off-grid products to peers[5]

After mainstreaming gender, PEG Africa in Ghana saw
60% growth in revenue & 26% increase in earnings[6]

Source: ESMAP Gender Equality in the Off-grid Solar Sector

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Challenges and options to integrate gender in business

Challenges in Integrating Gender

There is an appetite among SMEs and investors to adopt gender-inclusive practices. However, it can be challenging to identify and implement practical, creative, and demonstrably impactful solutions:

- Not knowing where to start with the “how” of gender inclusion;
- Finding the proliferation of tools and literature overwhelming;
- Lack of access to compelling data and practical examples that make the case for the efficacy of gender-related TA;
- Assuming there is a high cost to implementing gender-inclusive strategies; and
- Lack of standardization or widespread adoption of both gender and business performance metrics

Source: [Shell Foundation / VFW Driving Growth and Improved Business Performance 2022]

Options to Start Integrating Gender

Specific details and guiding questions across categories can be seen in [A Business-First Approach to Gender Inclusion; BII Gender Toolkit Off-grid Solar]

MENU OF OPTIONS

OUTLINING MULTIPLE POTENTIAL GENDER INCLUSIVE STRATEGIES FOR EACH BUSINESS FUNCTION.

HUMAN RESOURCES

Review HR policies to improve employee satisfaction, retention and productivity.

Review recruitment processes to improve application, recruitment and progression.

OVERALL GENDER INTENTIONALITY AND STRATEGY

Public endorsement and explicit commitment to gender equality.

Identify and address gaps in gender capacity across the business.

MARKETING

Design targeted marketing campaigns to reach women customers.

Leverage information on your business's gender impact and gender inclusive practices to bolster marketing.

SALES

Targeted sales strategy to overcome gender-specific barriers to product access and onboard more women customers.

Gender-specific messaging for customers.

RESEARCH AND DEVELOPMENT

Incorporate analysis on gender-based needs, preferences and product usage patterns into product and service designs to address women's needs.

CUSTOMER FINANCE

Conduct gendered market research to better understand women's finance needs.

Analyse payment behaviour by sex to identify unique needs of women.

CUSTOMER SERVICE

Tailor strategies to address women's needs in customer education, customer care and after-sales support.

Implement low-cost / low-touch customer feedback and use

DATA

Collect, analyse and use sex-disaggregated data on employee performance and satisfaction metrics.

Identify and address gaps in gender capacity across the business.

DISTRIBUTION AND LOGIC

Increase women-led businesses in your supply and distribution networks.

Provide operational/logistical support to women and women-led suppliers, distributors and vendors.

Source: [Shell Foundation / VFW Driving Growth and Improved Business Performance 2022]

Business Strategies for Gender Inclusion

A 2018 framework developed by the Shell Foundation and Value for Women explored 13 tools for off-grid solar businesses to dynamically integrate gender into their operations across sales, marketing, market research, customer care, and hiring/retention of sales teams. Some of the key findings included:

Sales increased 73-85% by providing demonstration kits, training women direct sales agents for key products sales, and selling in strategic locations to connect with women customers

Gender specific messaging targeting women **reached twice as many people** as messaging targeting men

Applying gender-specific messaging to customer service calls **reduced time spent** on technical calls by call center agents **by 33%**

Implementing gender-aware recruitment, training, and compensation practices resulted in **new agents selling 2x more** than agents in a control group

Source: A Business-First Approach to Gender Inclusion

The First Step: Gender Disaggregated Data

84 percent of off-grid solar companies do not even report gender-disaggregated data

Gender disaggregated data have the below characteristics and support decision-making for better addressing the differentiated needs/priorities of men and women:

1. Data are collected and presented by gender as a primary and overall classification;
2. Data reflect gender issues;
3. Data are based on concepts and definitions that adequately reflect the diversity of women and men and capture all aspects of their lives;
4. Data collection methods take into account stereotypes and social and cultural factors that may induce gender bias in the data.

During data collection, the following points should be considered:

- Gender-inclusive sampling approach to ensure equal representation of women and men
- Conducting intra-household interviews to hear from men and women in the same household
- Disaggregation of stakeholder groups during interviews or focus groups to ensure women are given the opportunity to express themselves freely
- Use of female and male interviewers or data collectors, provision of gender sensitivity training

The Shell-Foundation Business Strategies report includes a checklist for collecting gender disaggregated data across business segments for SMEs (see annex for details)

Source: A Business-First Approach to Gender Inclusion; UN Women Counted and Visible Toolkit

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Counted and Visible Toolkit (National Gender Disaggregation)

The Counted and Visible Toolkit provides a country level framework for generating and utilizing gender-disaggregated data through household surveys, but also provides some practical considerations for stakeholders exploring energy access specifically.

Available in Francais ; English

Additional training on the statistical approaches for calculating and assessing gender statistics using STATA can be found here.

Source: UN Women Counted and Visible Toolkit

ICRW Gender Opportunities Explorer

An off-grid energy company can integrate gender in its operations and across its board, workforce, supply-chain, consumers, and community

(See the full toolkit and checklist here).

Design and Research and Development

Ensures product design and services meet gender-specific needs. This can ultimately increase sales, adoption, and customer satisfaction

Production and Manufacturing

Women working in production and manufacturing of off-grid energy products can leverage women's traditional skills in ceramics and other fields

Marketing, sales, distribution

Gender-specific marketing, sales, and distribution helps cater to diverse consumers. Recruiting women can help access vast new market segments.

After-sales

Female customer service representatives may be particularly valuable in communities with conservative norms of social contact that restrict interactions between men and women within the home.

Source: ICRW Advisors Gender Opportunities Explorer - Off-Grid Energy

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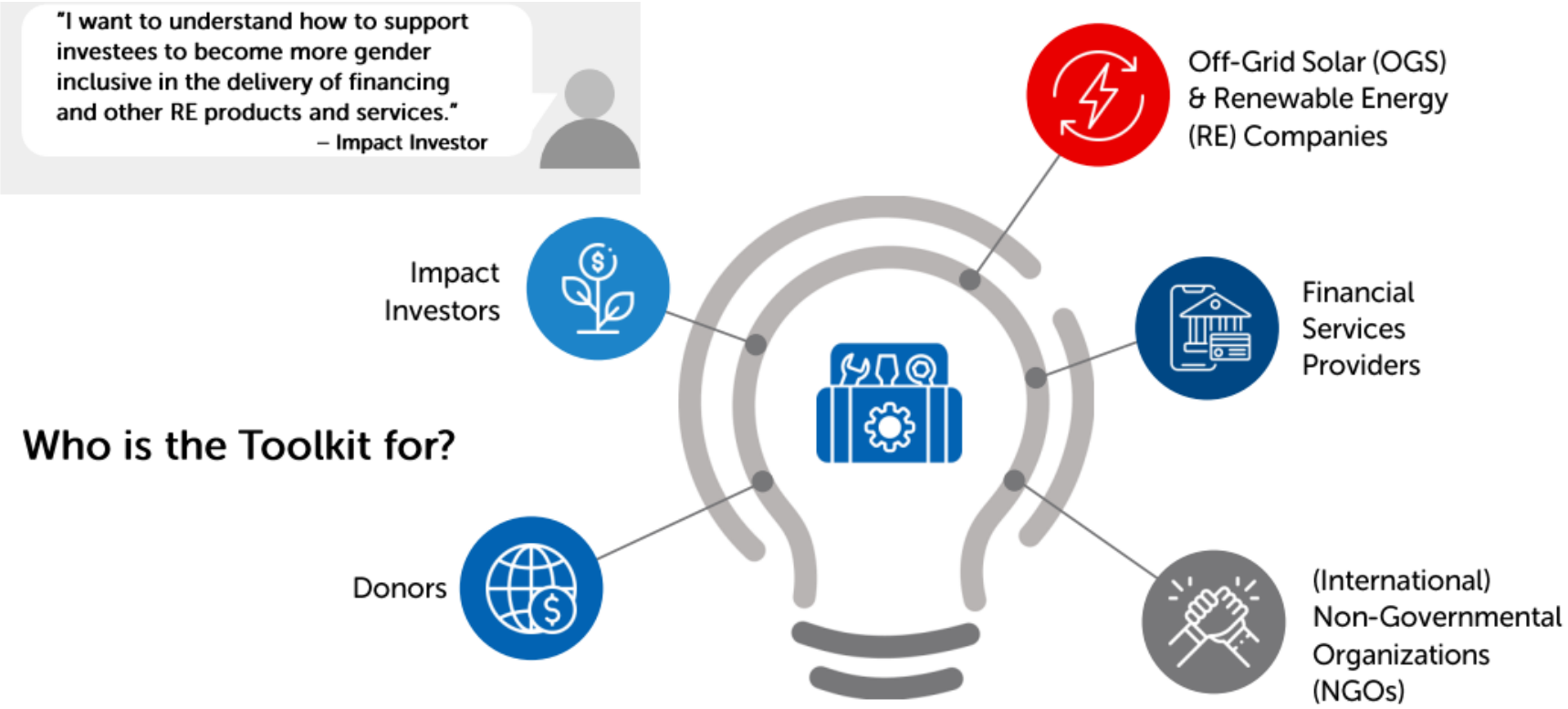
ENERGIA Building the Business Case Toolkit

ENERGIA developed an extensive digital toolkit for supporting investors, businesses, and policymakers to refine and develop the business case for women in renewable energy markets



Source: ENERGIA Digital Toolkit for Building the Business Case

Targeted Entry Points for Projects (ESMAP)

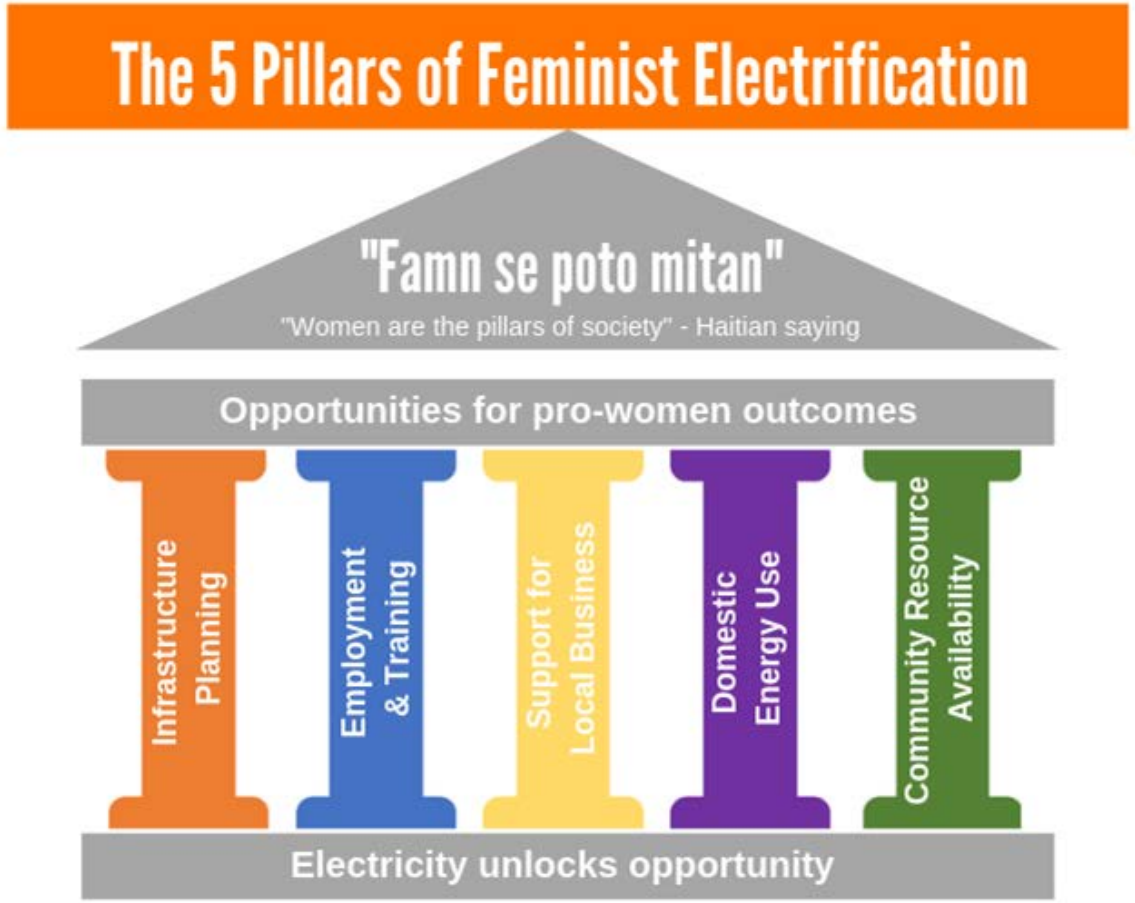
	Ownership & control over assets	Jobs & economic opportunities	Voice & agency
Supply Side factors	Enhancing access to finance for women-owned OGS enterprises	Actions to close gaps for women's participation in the workforce	Enhance women's voice and participation in decision-making and challenge gender norms
	Integrate gender equality as core business operations focus and have leadership speak-out	Supply technologies that create job opportunities for women or target productive uses	Engage women in after-sales care and maintenance follow-up
Demand Side factors	Actions to close gaps for women's access to technology and finance	Investigate opportunities to employ women across value-chains on the demand side	Enhance women's access to information and education around technology benefits
	Partner with MFIs, distribution networks and organizations that can facilitate access to women customers		
Ecosystem factors	• Inequity in ownership and assets • Lack of training and mentorship opportunities that aim at closing skills gaps • Lack of business and technical skills • Cultural and social norms • Lack of policies that address gender equality issues		

Source: [ESMAP Gender Equality in the Off-grid Solar Sector]

Spotlight: Feminist Electrification in Haiti

EarthSpark International developed the Feminist Electrification framework to guide development of their solar microgrids in Haiti. The Framework has 5 key pillars:

- **Infrastructure Planning** - Increasing women's roles in planning; ensuring women's priorities are elevated; ensuring energy assets are designed to meet women's needs and priorities
- **Employment and Training** - Increasing women's roles in technical workforce and professional roles
- **Support for Local Business** - Empowering women-led enterprises through electricity access, capacity building, and expanded access to finance
- **Domestic Energy Use** - Improving women's health by limiting exposure to household air pollution, reduced drudgery, increased usable work and leisure hours
- **Community Resource Availability** - Improving women's maternal healthcare by improving electricity access in healthcare facilities; improving women's safety through street lighting

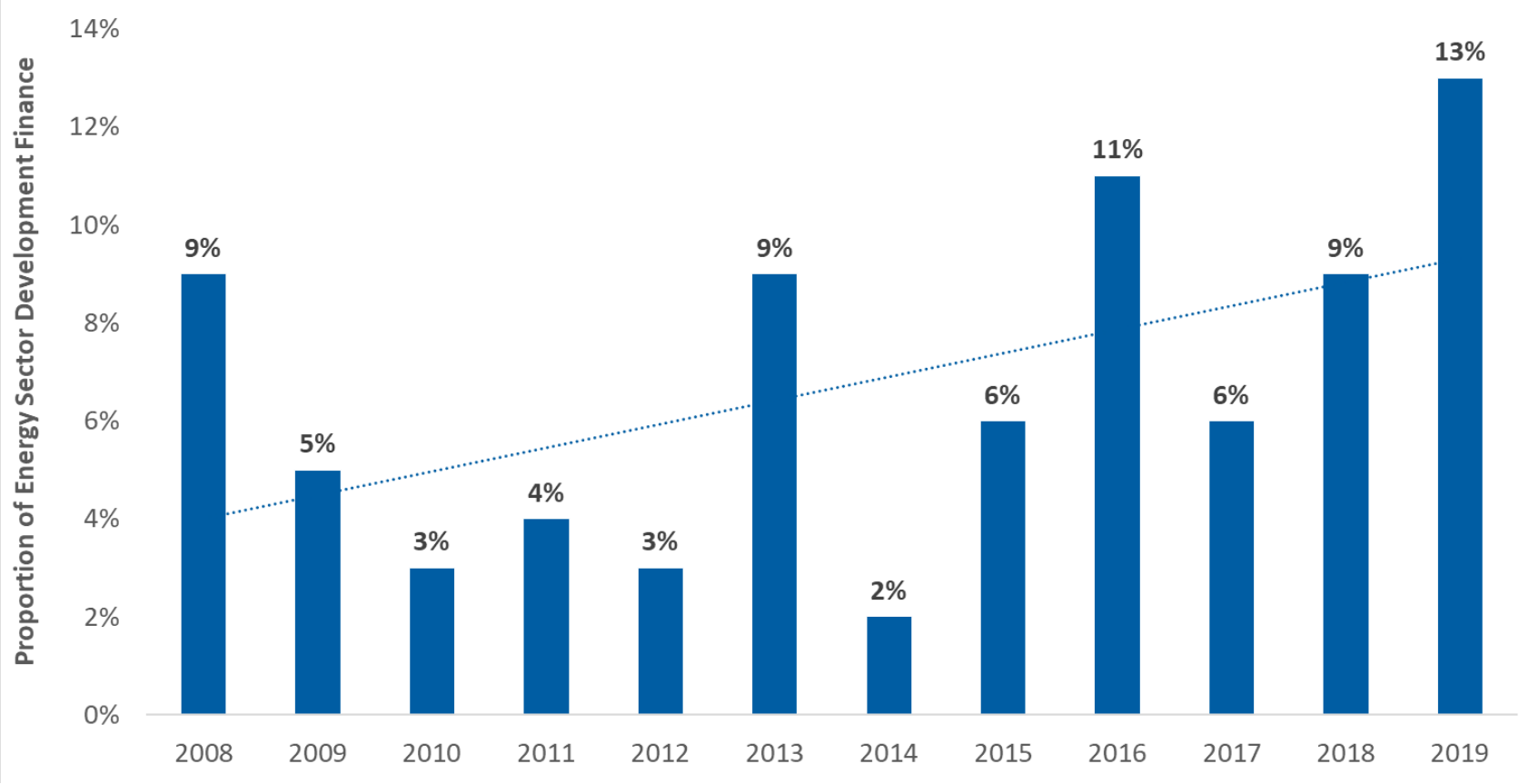


Source: EarthSpark International Feminist Electrification

How is gender integrated into investor due diligence and planning?

Gender-focused energy finance has been increasing, slowly

In 2019, energy sector development finance with a gender equality objective represented **only 13% of total energy sector development finance**, but it is increasingly becoming a priority for investors and funders



Sources: SEforAll Energizing Finance 2021

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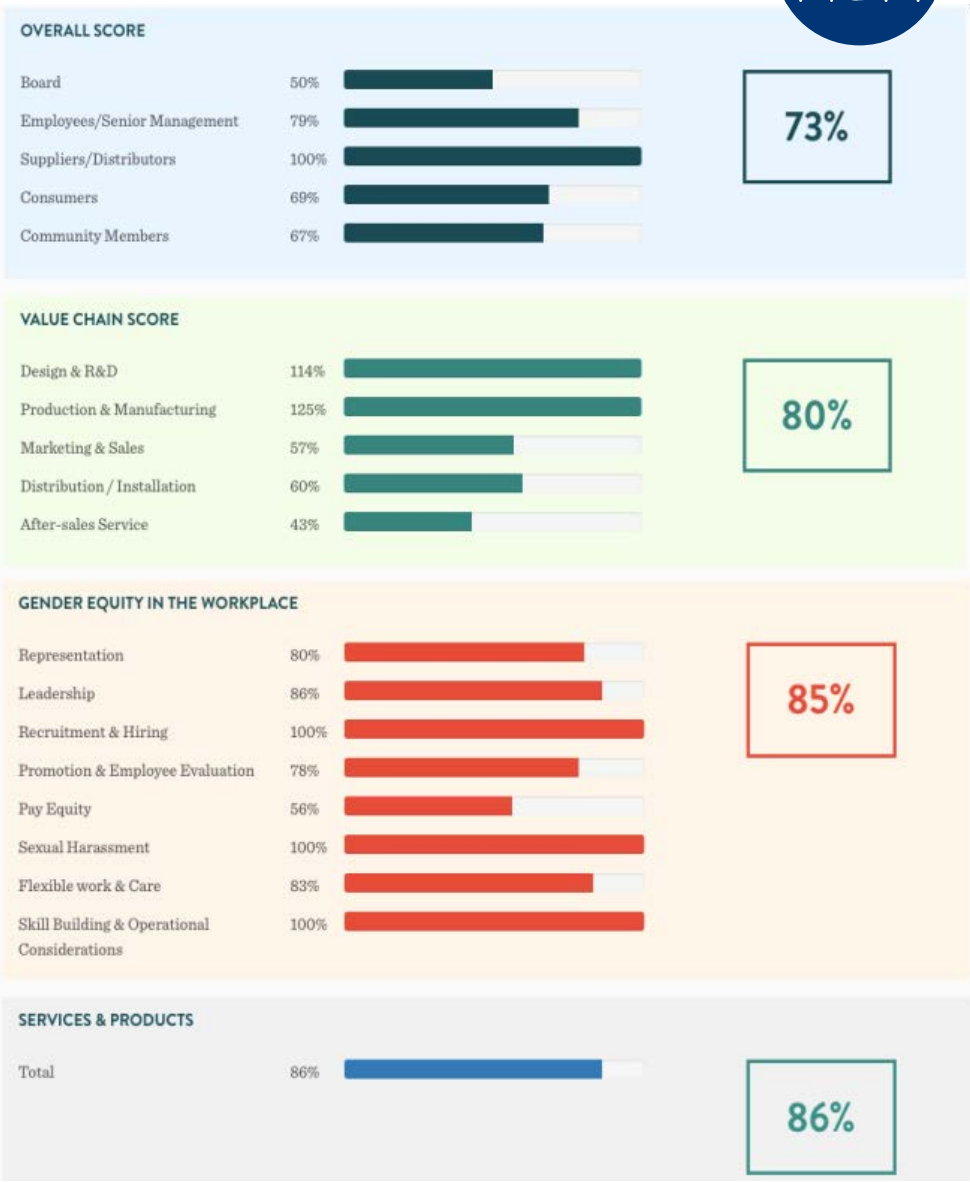
Gender Due Diligence for Portfolio Companies

ICRW Off-Grid Energy Sector Gender Scoring Tool is used to assess and generate a customized gender scorecard for a portfolio company or potential investee. Scoring tool assesses a variety of questions related to:

- Representation
- Leadership
- Recruitment
- Promotion and Employee Evaluations
- Pay Equity
- Sexual Harassment
- Flexible Work & Care
- Health and Other Considerations
- Gender Integration in the Value Chain

British International Investment (BII) has a different framework for due diligence available through the BII Gender Toolkit Off-grid Solar



Source: ICRW Gender Scoring Tool; ICRW Social Impacts Visual for Gender Equity in Off-grid Energy; ICRW Advisors Gender Materiality

2x Challenge

The 2X Challenge was launched in June 2018 as a major new commitment of the development finance institutions (DFIs) to unlock resources that will help advance women's economic empowerment and gender equality. The 2X Challenge provides a specific framework for:

- Encouraging investees to collect data on women employees and consumers;
- Measuring the development impact of investing with women and in women, over time; and/or
- Making a business case for investing with women and in women

In order to be 2x compliant an enterprise / institution should demonstrate…

2X CHALLENGE CRITERIA:

			Threshold
Direct Criteria	1 Entrepreneurship	1A. Share of women ownership	51%
		1B. Business founded by a woman	Y/N
	OR		
	2 Leadership	2A. Share of women in senior management	30%
		2B. Share of women on the Board or IC	30%
	OR		
	3 Employment	3A. Share of women in the workforce	30% - 50%*
		3B. One "quality" indicator beyond compliance	Y/N
	OR		
	4 Consumption	4. Product or service specifically or disproportionately benefits women	Y/N
	AND		
Indirect	5 Investments *through* Financial Intermediaries (FIs)	5A. *On-Lending facilities:* Percent of the Investor / FI loan proceeds or percent of FI's portfolio supporting businesses that meet direct criteria	30%
		5B. *Funds:* Percent of portfolio companies that meet the direct criteria	30%

Source: 2x Challenge Criteria Guidance

2X Challenge Definition Details

Entrepreneurship

- **Ownership:** Percentage of the organization that is directly woman owned (# shares owned by women / total # of shares).
- **Founded:** Investee founded by a woman or a group of women that retain(s) an active role in the organization.

Leadership

- **Senior Management:** Includes C-Suite or equivalent (e.g. Managing Directors, Partners).
- **Boards:** Excludes female Board members that do not play an active role on the Board. Share of women on the Board should also exclude the legal minimum.

Employment

- **Workforce:** Includes direct, indirect and/or supplier employees as makes sense in the investee context.
- **Quality indicator:** A policy or program, beyond those required for compliance, addressing barriers to women's quality employment (e.g. wage inequality, lack of child care, discrimination / harassment), with evidence of implementation or a commitment to implement.

Consumption

- **Products and services qualify if they:**
  - Are designed for women's unique needs, or
  - Address a problem that disproportionately impacts women, or
  - Have a majority of women customers (including individual women borrowers for financial intermediaries), or
  - Have a majority of women beneficiaries (e.g., a male household member may purchase product, but the end users are female household members).

Source: 2x Challenge Criteria Guidance

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Additional Resources

- Value for Women Gender Smart Nexus
- ENERGIA Knowledge Center
- IDS Bulletin Gender and Energy Opportunities for All
- ARE Women Entrepreneurs as Key Drivers in the Decentralised Renewables Sector
- ICRW Social Impacts Visual for Gender Equity in Off-grid Energy
- CGAP Examining PAYGo Solar Through a Gender Lens
- ENERGIA Powering a Gender-Just Energy Transition
- UN Women Guidance Note For Gendered Dimensions of Energy
- ESMAP Gender Equality in the Off-grid Solar Sector
- IEA Gender and Energy Data Portal
- World Bank Haiti Gender Landscape
- World Bank Gender Data Portal - Haiti
- UN Women Counted and Visible Toolkit
- USAID Haiti Strategic Framework and Gender Analysis
- SDG 7 and SDG 5 Policy Brief
- A VIRTUOUS CYCLE? Reviewing the evidence on women's empowerment and energy access, frameworks, metrics and methods

Thank you

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