



Taxonomy

for Off-Grid Energy Companies





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This document is part of a sector-wide initiative to enhance data use and harmonization of metrics for financial performance measurement for off-grid energy companies. For more information, please go to goo.gl/vxP25n and goo.gl/wp2oq9

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INTRODUCTION

Background Context

The World Bank Group and GOGLA have developed a framework for common Key Performance Indicators (KPIs) for off-grid energy companies, with a particular focus on indicators that are relevant to companies operating Pay-As-You-Go (PAYG) style business models. By establishing standardized definitions and reporting standards, the KPI framework is intended to complement the broader vision of improving the sector's sophistication in data and analytics as well as to increase transparency and understanding of the sector by potential investors and policy makers. To this effect, the KPI framework is not to be seen as a scorecard but rather as a combination of inputs to help understand and track results. Read more on the websites of Lighting Global¹ and GOGLA².

To better account for applicability of KPI metrics and variance in results driven by differing business models, the World Bank Group and GOGLA has developed a taxonomy of different business models being used by off-grid energy companies as a complement to the KPIs. This will also enable appropriate categorization when analyzing potential drivers for differences across sectors on certain KPI outcomes and greater utility of the KPIs to companies, investors, and other stakeholders.


Development of the Taxonomy

The taxonomy draws on existing categorizations of different business models being used within the World Bank and by other stakeholders in the off-grid energy industry. For example, the 2016 Market Trends Report characterized different types of PAYG building blocks, including, for example, type of lease, payment options, and distribution channels.

For each dimension of the taxonomy, there is a (i) building block element and (ii) characteristics within the category. The elements are intended to cover the areas where there may be differences between business models, while

¹<https://www.lightingglobal.org/payg-kpi/>

²<https://www.gogla.org/news/announcing-the-first-ever-key-performance-indicator-framework-for-the-off-grid-solar-pay-as-you>



the characteristics are a standardized approach within that element. The elements are intended to be exhaustive and exclusive: they cover all major potential areas where there may be differences between different off-grid energy companies, and they are independent of each other (e.g., payment options is independent of distribution channels). The characteristics within the elements are both non-exhaustive and non-exclusive: a company could operate using multiple approaches within an element, or may take a unique approach that is not exactly as described in the taxonomy.

Confidentiality

Many of the elements can be known about a company with entirely public data, however some will be only known to certain partners or internally within the company. For an element that relies on private data, it would be expected that the data will be held confidentially for each company along with data on the KPIs by those collecting data, either on a systematic basis (e.g., as part of an industry-wide effort) or a bilateral basis (e.g. if collected by an investor requesting comparable information from a company). Confidentially arrangements would be developed as any data collection effort occurs.

Further Information and Comments

For more information and to provide feedback on the development of the taxonomy, please contact:

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USING THE TAXONOMY

It is envisioned that the taxonomy will serve as a tool for enhancing the understanding of investors, companies evaluating their strategic decisions, and other stakeholders in the off-grid energy industry about the variety of business models in the industry. In addition, it is anticipated that the taxonomy will serve as a data organization tool, particularly as it relates to data collection by investors, stakeholders, or the industry as a whole on the KPIs.

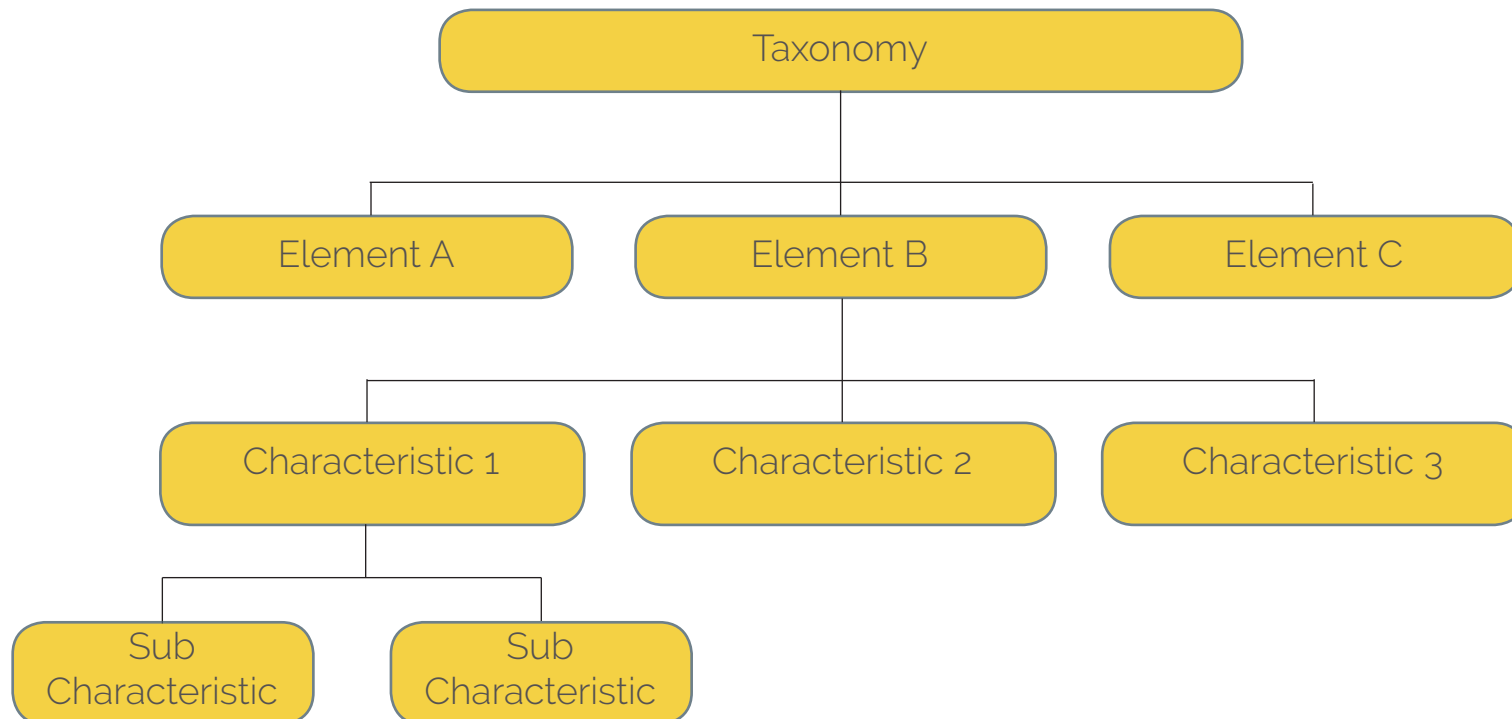
When completing inputs into data collection for the KPIs, a company would also describe their company operations using the taxonomy. Company-wide elements would only require a single response, but those elements that are on a product line or user segment basis would require responses on a product-by-product basis, both for the taxonomy elements as well as the KPIs performance data. Companies, investors and other stakeholders may also use the taxonomy to identify peer companies based on the elements they find most relevant.

It is likely that both company-wide elements and product line/user segment elements will be dynamic and thus change over time. It is anticipated that each time a data collection event occurs for the KPI performance data or sales data that all elements will need to be updated, for example, as data is collected on a semi-annual basis. This will enable the taxonomy to capture how company activities change over time, and may enable discovery of particular drivers to changes in performance on certain KPIs.

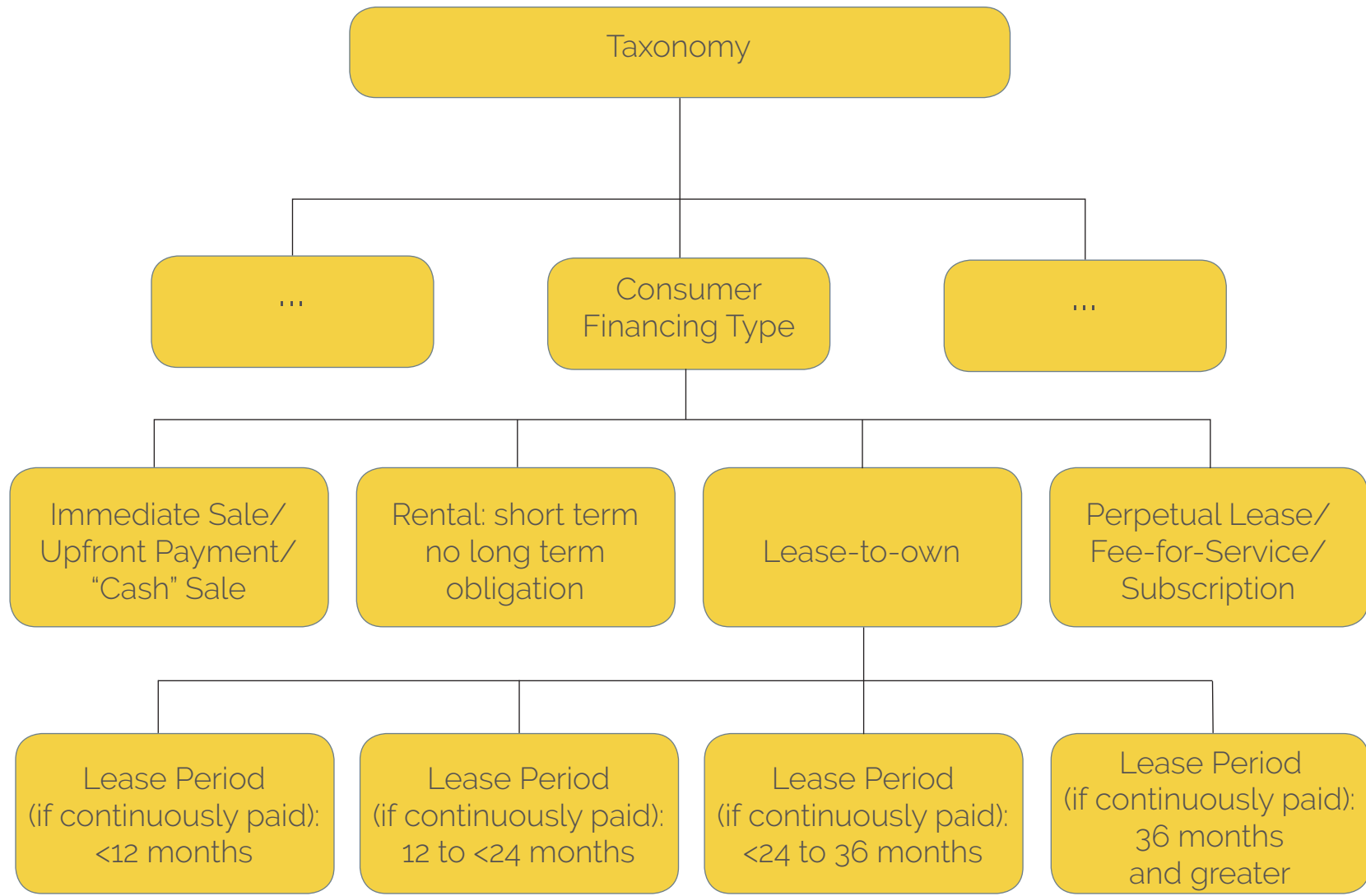
Taxonomy Organization

Elements demonstrate areas of difference between business models and are **exhaustive** and **exclusive**. Characteristics and sub-characteristics represent common/standard approaches with an element and are **non-exhaustive** and **non-exclusive**.


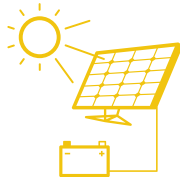
Some elements are **offering-specific**: these are different depending on the product or customer segment and have different choices within the elements. Each offering is treated as a separate business model. **Company-wide** elements are common to all offerings and do not depend on the product or customer segment. These are corporate-level and singular for each company.







Taxonomy Organization






TAXONOMY FOR OFF-GRID ENERGY COMPANIES


Company-Wide Elements	Element	Characteristic	Sub-Characteristic
	Value Chain Focus		
	 Value Chain Focus	Product design & manufacturing	
		Distribution	
		After-sales services	
		Software/B2B services	
		Finance	
		OtherFocus.Specify_____	
	Product Offering		
	 Technology (Hardware)	Design own technology (own IP)	
		External provider	License arrangement
			Purchase wholesale
		Not applicable (no hardware technology component)	

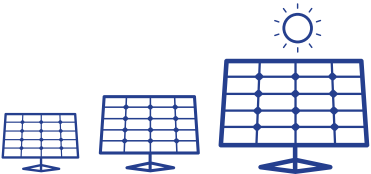
Company-Wide Elements	Element	Characteristic	Sub-Characteristic
	Product Offering		
	 Technology (software/customer management)	Design own technology (own IP)	
		External provider	License arrangement
			Purchase wholesale
		Not applicable (does not utilize a software platform)	
	 Appliances	Provide core energy products standalone	
		Appliances are/can be bundled with core product	
		Appliance is the primary product offering (along with supporting energy system)	
		Not applicable (software/finance/B2B focus)	
	 Additional Services/Products Beyond Energy Producing or Consuming Products	Financing of non-energy consuming assets	Education loans
		Loans for other purposes beyond energy producing/consuming products or assets purchased through the company	Other loans (specify, if for particular purposes): -----


Company-Wide Elements	Element	Characteristic	Sub-Characteristic
	Product Offering		
	Additional Services/Products Beyond Energy Producing or Consuming Products	Credit data/scoring	
		Micro-insurance	
		TV content bundles	
		Other. Specify _____	
	Channels and Partnerships		
	 Distribution Channels	Proprietary distribution channel	Employee based
			Commissioned agent based
		Partnership with established brand/organization (e.g., Telco, MFI)	Partner implements distribution (partner employees or agents perform product distribution and service)
			Co-location of company agents at partner locations (e.g., at MFI location, at Telco sales locations)
		Third-party distribution on a contract or service provider basis	



Company-Wide Elements	Element	Characteristic	Sub-Characteristic
	Channels and Partnerships		
	Distribution Channels	Third-party distribution on a wholesale basis (your company does not know end users)	
		Not applicable (does not distribute any hardware or software products)	
	 Marketing (Promotion/Advertising/Branding)	Proprietary/company implemented marketing activities	
		Partnership with established brand/organization (e.g. Telco, MFI)	
		Third-party marketing	
		Not applicable (does not market any hardware or software products)	
	 Sales	Proprietary sales activity	Employee based
			Commissioned agent based


Company-Wide Elements	Element	Characteristic	Sub-Characteristic
	Channels and Partnerships		
	Sales	Partnership with established brand/organization (e.g., Telco, MFI)	Partner implements sales activities (partner employees or agents perform product sales activities)
			Co-location of company agents at partner locations (e.g., at MFI location, at Telco sales locations)
		Third-party sales (e.g., wholesale to a distributor/retailer)	
	 Source of Financing for Credit Offerings to Customers	None (immediate sale to end-user or distributor/retailer)	
		Pre-financing by company directly (e.g., corporate debt or equity)	
		Partnership with MFI or local finance institution	
		Factoring or securitisation	
		Crowdfunding	
		Not applicable (does not provide financing to users)	



Company-Wide Elements	Element	Characteristic	Sub-Characteristic
	FOREX Management		
	 <p>FOREX Risk</p>	Company bears FOREX risk (primary revenue is in different currency than debt investment currency)	No hedging
			Partial hedging with external provider
			Complete hedging with external provider
		Customer bears currency risk (customer payments depend on currency external to country of operation/residence)	<p>Pricing is fixed/made in hard currency (e.g. USD, Euro)</p> <p>Payment is in local currency, but pricing is periodically adjusted based on exchange with hard currency</p>
		Investors (equity or debt) bear currency risk (payments to investors are in currency of revenue of company)	


Product or User Segment Elements	Element	Characteristic	Sub-Characteristic
	Product Details		
	 <p>Product Offering (system services and size)</p>	Pico (<11Wp)	Single Light (indicative: <1.5 Wp)
			Single Light plus mobile charging (indicative: 1.5 Wp to <3 Wp)
			Multi-Light plus mobile charging (indicative: 3 Wp to <11 Wp)
		Solar home system (SHS) (11Wp and greater)	Entry level SHS (11 Wp to < 21 Wp) – 3-4 lights, mobile charging, fan, radio, etc.
			Basic capacity SHS (21 Wp to <50 Wp) – above plus TV and extended capability
			Medium capacity SHS (50Wp to <100 Wp) – above with extended capability
			Large capacity SHS (100 Wp and greater) – above with extended capability



Product or User Segment Elements	Element	Characteristic	Sub-Characteristic
	Product Details		
	Product Offering (system services and size)	Standalone appliance as primary energy service (all Wp)	Refrigerator
			Other cooling system
			Water pump
			Milling
			Other agricultural equipment. Specify: -----
			Other standalone appliance. Specify: -----
	 Installation	Product (no set up required), Plug-and-Play (set up required, but no complicated installation or tools required)	
		Installation required	User installation (DIY)
			Technician installation – customer pays
			Technician installation – company pays

Product or User Segment Elements	Element	Characteristic	Sub-Characteristic
	Product Details		
	 Device connectivity/activation	No connectivity or remote activation	
		Off-network: code-based (manually entered)	Sent to customer via SMS or similar
			Agent generated/delivered, customer entered
		Off-network: periodic connectivity via (agent) smart phone/device (e.g. Bluetooth, audio, cable)	Agent generated/delivered, agent entered
			One way communication (e.g., activation only)
			Two way communication (activation plus download data)
		On-network: full connectivity via GSM or other communications infrastructure (e.g., long-range radio)	One way communication (e.g., activation only)
			Two way communication (activation plus received data on system operation)
	Financing Details		
	 Financing Type	Immediate sale/upfront payment/"cash" sale	
		Rental - short term with no long term obligation for service payments or lease	

Product or User Segment Elements	Element	Characteristic	Sub-Characteristic
	Financing Details		
	Financing Type	Lease-to own – user eventually owns the product	Lease-period (assuming continuously paid): <12 months
			Lease-period (assuming continuously paid): 12 to <24 months
			Lease-period (assuming continuously paid): 24 to <36 months
			Lease-period (assuming continuously paid): 36 months and greater
		Perpetual lease/fee-for-service /subscription – user does not ever own the product	
	 Payment Flexibility	One payment	
		No flexibility	
		Fixed payment with established grace periods or options for not paying for specified period	
		Flexible top up	

Product or User Segment Elements	Element	Characteristic	Sub-Characteristic
	Financing Details		
	 Upfront Payment	Complete upfront payment (100% of sale)	
		Partial upfront payment	Significant upfront (exceed 15% of total cost of product or expected payments)
			Small upfront (deposit/down-payment, but less than 15% of total cost of product or expected payments)
		No upfront payment required	
	 Payment Process	Cash	Paid at retail sales point
			Paid to agent (e.g., at household)
		Scratch card/receipt	Purchased at retail sales point
			Purchased from agent
		Mobile money	Pay-bill process
			Money transfer process
			Agent account process (customer comes to agent to do transaction for them)

Product or User Segment Elements	Element	Characteristic	Sub-Characteristic
	Financing Details		
	Payment Process	Mobile network credit/airtime	
		Payment aggregator	
		Bank transfer	
		Auto-debit from salary/ paycheck	
		Remittance/third party makes payment	
	Customer and Customer Management		
	 Primary Customer	End-users	Households
			Small enterprises
		Manufacturers	
		Distributors/retailers	
		Financial institution or financial service provider	

Product or User Segment Elements	Element	Characteristic	Sub-Characteristic
	Customer and Customer Management		
	 Customer Vetting	No vetting/credit assessment beyond ability to make (initial) payment	
		Customer assessment based on data collected directly (e.g., questionnaire)	
		Customer assessment based on third-party data (e.g., from MFI, Telco)	Micro Finance Institution (MFI)
			Telco
			Credit Reference Bureau
			Other (specify): -----
		Not applicable (does not select customers)	
	 Enforcement/Repossession	No repossession of product	
		Voluntary return (e.g., in exchange for return of deposit)	
		Involuntary repossession (e.g., if not paid for period of time)	
		Not applicable (not products with customers to potentially repossess)	

About



The World Bank's engagement in the energy sector is designed to help client countries secure the affordable, reliable, and sustainable energy supply needed to end extreme poverty and promote shared prosperity. Its strategy mirrors the objectives of the Sustainable Energy for All Initiative and the Sustainable Development Goal (SDG) on energy, or SDG7: achieving universal access, accelerating improvements in energy efficiency, and doubling the global share of renewable energy by 2030.

Learn more at worldbank.org/energy.



Lighting Global is the World Bank Group's platform to support sustainable growth of the international off-grid solar market as a means of rapidly increasing energy access to the 1.2 billion people without grid electricity. Through Lighting Global, the International Finance Corporation (IFC) and the World Bank work with the Global Off-Grid Lighting Association (GOGLA), manufacturers, distributors, and other development partners to develop the modern off-grid energy market.

Learn more at <https://www.lightingglobal.org/>



GOGLA is a neutral, independent, not-for-profit industry association which acts as a sector enabler and advocate. GOGLA supports the growth and strengthens the market for clean, quality off-grid lighting and electrical systems for households, SMEs and communities in developing countries.

Learn more at gogla.org.

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