

**33051**  
**Elephant Energy**  
***Creating Digital Kerosene Project***  
**Monitoring and Evaluation Plan**  
**A Development in Innovations Fund (DIV) Project at the United States**  
**Agency for International Development (USAID)**

**MONITORING AND EVALUATION PLAN OVERVIEW**

The purpose of this document is to set forth a monitoring and evaluation (M&E) plan for Elephant Energy’s *Creating Digital Kerosene Project*. This document is comprised of the following elements:

- I. **Overview:** Overview of Partners; Project Summary & Goals; Elephant Energy Solar Product Distribution Model; divi “pay to own” Technology
- II. **Monitoring and Evaluation Plan Narrative:** M&E Goals and Approach; Expected Project Outputs, Outcomes and Impacts; Target Beneficiaries; Resources dedicated to Project M&E
- III. **Planned Evaluation Activities and Schedule:** Methodologies and planned evaluation activities and scheduling
- IV. **Summary of Indicators and Indicator Tables:** Indicators to be measured in Elephant Energy’s M&E Plans, including sources of data, frequency/schedule, and information use/reporting

**I. OVERVIEW**

**A. Overview of Project Monitoring and Evaluation Partners**

Elephant Energy: Elephant Energy is a non-profit organization whose mission is to pioneer ventures that provide access to appropriate sustainable energy technologies. Elephant Energy engages urban and rural individuals and businesses who see a business opportunity in selling small scale solar products in their local areas, but who lack access to products, the capital to buy them, and the resources and know-how to effectively market and sell them. Elephant Energy partners with existing shops in market centers and a network of rural partner shops and entrepreneurs in surrounding rural areas. Elephant Energy provides its partners an opportunity to generate new revenue streams and tap into a new customer base through the sale of solar-powered technologies. Elephant Energy provides partners 1-on-1 coaching, conducts marketing and awareness-raising campaigns and provides partners an easy product order and delivery system.

divi, Inc. (formerly Sonopro Power & Light): divi’s pay-to-own system provides turn-key distribution and financing to partners in the field working to bring solar lighting and other life-enriching products to rural off-grid communities around the world. divi’s product-development team is comprised of experts in hardware and software development from HP, Silicon Labs, and Colorado State University. For the *Creating Digital Kerosene Project*, divi staff will facilitate the manufacturing of divi’s “pay to own”-enabled products, develop cell phone and online applications to collect payments and track sales and assist in training Elephant Energy staff and Sales Agents on the use of the diviLux product and divi sales systems.

Renewable Energy and Sustainable Energy Institute (RASEI) at the University of Colorado: is a joint institute between the University of Colorado Boulder (CU-Boulder) and the National Renewable Energy Laboratory (NREL) addressing complex problems in energy that require a multidisciplinary, multi-institutional approach. Its mission is to expedite solutions that transform energy by advancing renewable energy science, engineering, and analysis through research, education, and industry partnerships. RASEI's team of experts in the social sciences, market analysis, and the relationship between social science, business models and the ability of new enterprises to scale, will work with Elephant Energy in M&E design, review and assessment in order to make continual improvements and refinements to the project's deployment and M&E goals.

## **B. Project Summary and Goals**

The overall aim of the *Creating Digital Kerosene Project* is to develop new financing and distribution strategies for solar light/cell phone charging products which will lead to an increase access to energy in off-grid households in Namibia and Zambia

Funding of \$490,190.00 from USAID DIV will allow Elephant Energy to conduct a trial of "pay to own"-enabled products in Namibia, followed by full-scale distribution throughout Namibia and Southern Province, Zambia. Year 1 of the *Creating Digital Kerosene Project* will focus on the distribution of "pay to own"-enabled products, through an expansion of Elephant Energy's network of Regional Hub Shops and Rural Sales Agents in Namibia. In Year Two, Elephant Energy will establish a similar distribution network into Southern Zambia.

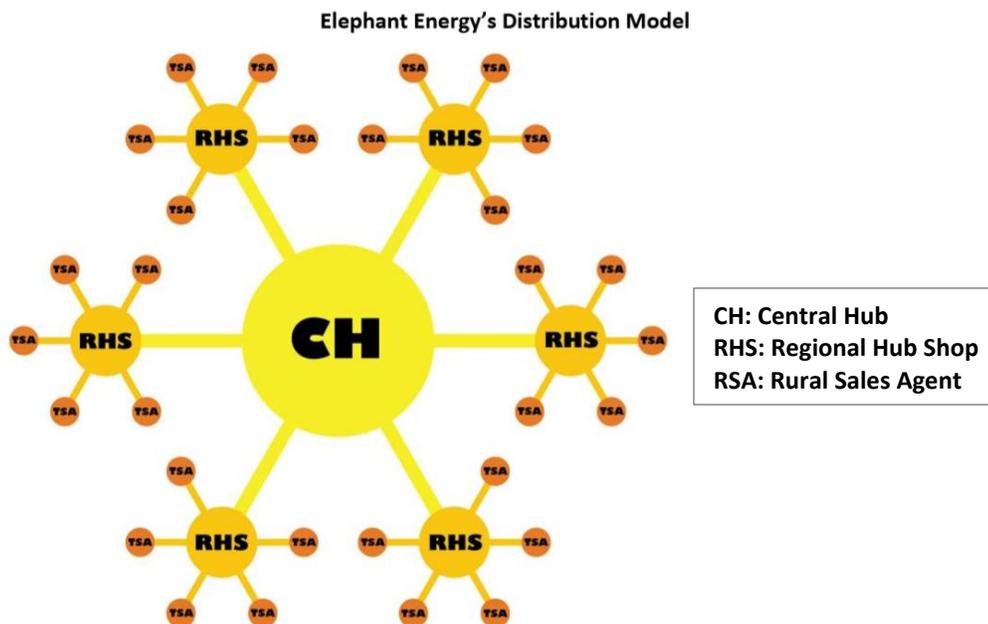
Elephant Energy anticipates that results and income generated via the *Creating Digital Kerosene Project* will allow Elephant Energy to drive adoption of solar products and remove financing and distribution bottlenecks seen in cash-sales models of solar product sales. Elephant Energy anticipates that the project intervention will break down the up-front cost barrier of solar products to customers; ease the ability of identified product sellers and entrepreneurial customers to buy product inventory to resell via installment payments which follow cash inflows from installments payments made by customers; and decrease Elephant Energy's costs of distribution and administration of solar product sales in Namibia and Zambia through "pay to own"-enabled product. "Pay to own" is an innovative technology produced by Elephant Energy's partner, divi, Inc., that builds financing directly into solar-powered lights and chargers.

As a Stage II DIV grant, Elephant Energy and USAID will jointly seek to test market viability, seek operational refinement and build paths to scale this innovation; thus the end goal of this project is to reach break-even in Elephant Energy's Namibian distribution operations by the end of the two-year grant period, and set Elephant Energy's Zambia operations on a similar path to profitability.

## **C. Elephant Energy Solar Product Distribution Model**

Elephant Energy operates a market-based distribution network in Namibia which provides poor customers with access to small-scale solar products in off-grid areas. Elephant Energy's turnkey "hub and spoke" model is comprised of a "Central Hub": an office/product warehouse which provides a central point for support, product sourcing, administration, and organization, a de-centralized distribution network of partner-businesses in urban areas ("Regional Hub Shops") and a network of "Rural Sales Agents" who sell products at the rural level. Elephant Energy's Regional Managers provide training, business coaching, ongoing marketing support and product supply to these two levels of solar product resellers in their

respective region(s) (See Map of Elephant Energy’s current distribution network: <http://elephantenergy.org/about/where-we-work/namibia>).



**D. divi “Pay to Own” Technology**

While over time, solar products save customers money by eliminating recurring expenditures on fuel-based energy sources like candles and cell phone charging services, the up-front product cost presents a financial barriers to many poor customers to purchase, and to potential product sellers wishing to buy inventory for resale but without sufficient capital to do so, thus inhibiting wide-scale adoption and proliferation. Further, ability to scale forms of product-financing such as lay-away, consignment and rent-to-own are limited due to their cost and time-intensive nature.

In 2011, Elephant Energy teamed with divi, Inc., to pilot test a new solar lighting and charging product, the “divi Light”, to address issues of distribution and product affordability. The divi system drastically reduces the costs to administer and track sales and product financing by embedding financing and payment enforcement into the product (thereby reducing instances of theft and increasing pay-off rates); eases distribution through integrated product financing to product sellers (with the up-front cost equal to the first deposit plus shop commission, and subsequent payments made as customers purchase credits); and provides a platform for tracking customers, sales, and revenue on product seller and an organizational levels.

After reviewing encouraging results from the divi Light trial in Namibia, Elephant Energy has teamed with divi to develop Version 2 of the divi Light (the “diviLux”) for mass production, which will be the product focus for the *Creating Digital Kerosene Project*. The diviLux is an electronics and firmware enhancement of a standard Greenlight Planet Sun King Pro 2 (SKP2) lamp –a bright, long-lasting lamp/cell phone charger with 2 USB phone cell-phone charging ports. The diviLux feature set encompasses that of the SKP2 with

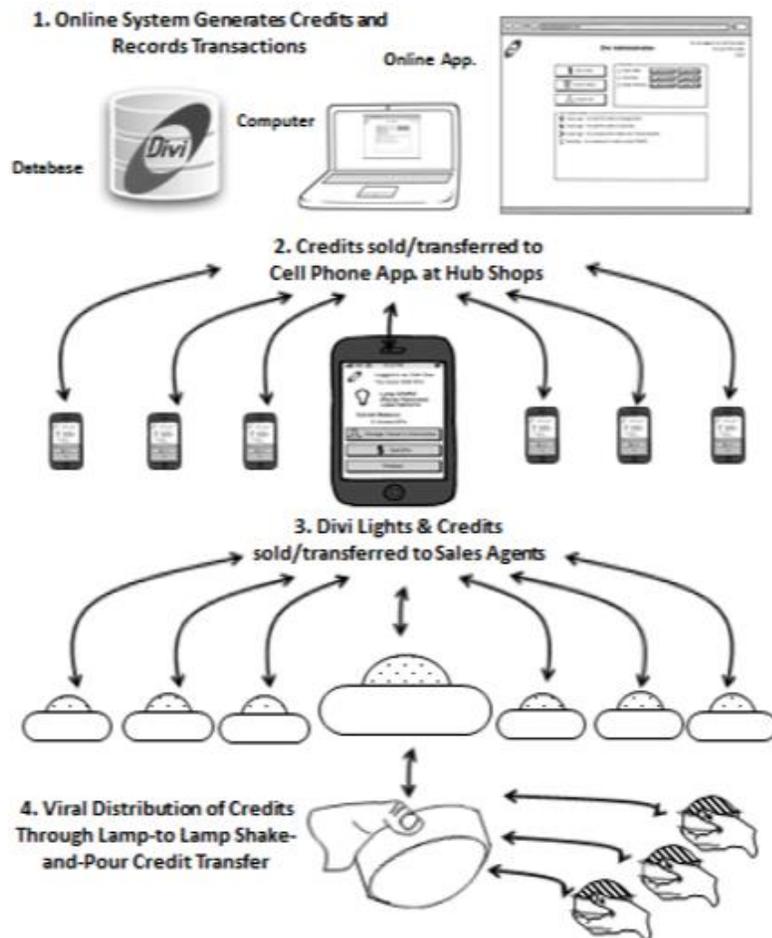
the additional features of divi “pay-to-own” purchasing and lamp- to-lamp (L2L) credit selling capabilities through Bluetooth firmware embedded in the lamp at the point of manufacture.

Significant demand exists in Namibian markets for this product: the SKP2 (and its predecessor, the SKP), have been the top-selling products among Elephant Energy’s product line in Namibia for over 2 years.

For a small down payment, a customer takes home a diviLux enabled with one week of use, and then pays off the remaining cost through weekly installments until the device is paid off and “unlocked” permanently. If the customer fails to make a payment, the device is automatically disabled until a payment is made. Installment payments can be made in three ways:

- (1) From Regional Hub Shops via a smartphone running the diviApp,
- (2) From established Rural Sales Agents located in off-grid, rural areas who use diviLuxes as credit-distributing devices, utilizing L2L connections to conduct transactions with their customers’ lamps and
- (3) From entrepreneurial diviLux users who utilize divi’s L2L credit transfer capability to themselves become divi salespeople.

### Viral Distribution of Products/Credits Via the Divi System



divi, Inc. has built-in data collection capacity via a back-end system which provides lamp use data, sales and payment data, and diviLux seller and customer profiles, accessible to Elephant Energy via a web portal. Each Elephant Energy diviLux seller is assigned a unique profile in the divi system to track their sales and payments, and each customer is assigned a unique lamp ID when a sale is made; both of which are paired with the name of the customer or diviLux seller and their cell phone number. As a diviLux seller or customer purchases credits from a Regional Hub Shop via the diviApp, these transactions are recorded in “real time” in a database that is accessible to an Elephant Energy staff member via the online platform. L2L transactions are recorded by each lamp, and this information is uploaded to the online database when the lamp next connects to the diviApp. As a result, Elephant Energy can collect data on each customer and agent to both track and manage payments, provide valuable data for ongoing monitoring and evaluation, remotely detect technical issues with lamps, and to continually refine and improve execution of the business model.

## II. MONITORING AND EVALUATION PLAN NARRATIVE

### A. Monitoring and Evaluation Goals and Approach

The high-level monitoring and evaluation (M&E) goals of the *Creating Digital Kerosene Project*, as set forth in the Project Contract, are to measure the efficacy of the business and distribution model of divi, Inc.’s “pay to own”-enabled products in enhancing access to energy services, the impact of intervention on Target Beneficiaries, track progress against grant deliverables, and suitability of the business and distribution models to scale.

Elephant Energy’s intended M&E approach will include analysis of data collected against specific performance indicators, Target Beneficiary surveys and focus groups, market analysis and business model analysis (including cost-effective analysis). At each level of implementation, there is a series of evaluation activities that will be conducted. M&E activities will be built into operations wherever possible and data collection will be obtained from existing practices undertaken to ensure successful day-to-day business operations (i.e., agent and shop performance tracking and internal recordkeeping of project activities). Data collection will also be carried out through the divi firmware/portal, which collects and reports information on multiple levels, including:

- 1) *End-user level*: data on the duration and time(s) of product usage;
- 2) *End-user and Rural Sales Agent level*: Transactional, sales/payment data via embedded Bluetooth lamp firmware and user interface displaying payments made/payments remaining;
- 3) *Regional Hub Shop level*: Rural Sales Agent and Regional Hub Shop and customer sales/payment data; Rural Sales Agent and customer profiles via the divi Smartphone app;
- 4) *Central Hub/Head Office level*: Transactional, sales/payment data; Regional Hub Shop, Rural Sales Agent and customer profiles; lamp use data via the web portal.

Data collection will be assessed regularly in order to monitor performance against targets and prescribe actions that need to be taken to improve performance through future actions throughout the course of the Project. Evaluation reports will be produced, analyzed and shared quarterly within the internal project team, project partners and USAID.

Ongoing data collection and quarterly (Milestone) reporting will be oriented toward overall Project goals and a project-end Final Evaluation and Scaling Report. This will be an end line assessment of project

progress based on indicators and methodologies approved in Milestone 1 and will help to determine the follow up strategy, the suitability to scale, and the incorporation of evidence-based insights to strengthen the design of the next stage of the project by determining strengths and weaknesses of the system. The following will be measured and included in the final report:

1. **Social impact:**
  - a. Money savings at the customer/household level.
  - b. Availability of Regional Hub Shop, Rural Sales Agent, and customer-end financing through the divi system.
2. **Project Improvement:** The report should assess the success to date, lessons learned and action steps regarding other process improvements or unforeseen consequences.
3. **Cost-effectiveness:** The report will include an update on the competitive landscape and on the extent to which the project is (or has the potential to be) more cost-effective than competing alternatives (in terms of cost to customers and any future costs to public inventors). This includes assessing the unit cost of the intervention with any gains in accessibility.
4. **Scaling:** The report will provide an update on anticipated demand for the product (locally and globally) and prospects for financial sustainability. The report will assess the potential for results to continue at scale given cost and quality issues. It will also discuss progress to date on engaging stakeholders, and planned next steps regarding scaling including pro formas, income statements and financial projections.

Additional information about the format of the Final Evaluation and Scaling Report will be provided by the AOR at a later point during the Project's implementation. Per the Project Contract, a revised M&E plan will be created and submitted at Month 9. At any time mutually agreed upon between Elephant Energy and the AOR, Elephant Energy will submit raw datasets procured through this grant for public disclosure.

## **B. Expected Project Outputs, Outcomes and Impacts**

Rigorous outputs assessment of defined Project Outputs will be an integral part of performance management of the *Creating Digital Kerosene Project*. The primary source of data will be the monthly financial and narrative reporting conducted by Regional Managers which detail progress against performance indicators in each region. On a monthly basis, this information will be collected by the Project Manager and shared with members of the project team along with sales data collected via divi firmware and Regional Manager record-keeping. During this regular exercise, staff will assess performance against scheduled activities across regions, identify problems and opportunities, and take actions as needed. Progress will be reported during the relevant Milestone Report following the implementation/conclusion of the scheduled activity to reflect status and/or completion of activity.

The products, delivery approaches, "pay to own" products and business models utilized in the *Creating Digital Kerosene Project* are expected to have broad ranging impacts across a variety of categories. These include: combating poverty (income generation and money savings); access to energy (and associated social and economic benefit); gains in accessibility of energy from access to "pay to own"-enabled products; gender; good governance; and inclusion of persons with HIV/AIDS as agents and employees within the supply and distribution system. Elephant Energy will utilize quantitative and qualitative methodologies to perform evaluation of a broad-ranging suite of indicators measuring success in achieving desired impacts. An impact assessment included in the final report will analyze the significant changes resulting from project activities.

Sections III. - A, C, D and E provide narrative explanations of M&E activities planned to measure performance, efficacy of the business model and project impact. For further detail, including specific indicators to be measured, schedule of data collection and reporting and sources of data, please refer to Tables 1-3.

### **C. Target Beneficiaries**

Target Direct and Indirect Beneficiaries who are expected to benefit from project include:

#### **1. Direct Beneficiaries:**

- a. Individuals who, because of divi financing, are able to purchase a high-quality solar-powered light/charger and are expected to benefit from improved quality of life resulting from the product's use.
- b. Established partner distributors (Regional Hub Shops and Rural Sales Agents) and entrepreneurial customers who are expected to benefit from income derived from sales of diviLux and credit sales

#### **2. Indirect Beneficiaries:**

- a. The other household and family members of purchasers of diviLux product owner who will have indirect access to lighting and charging services and thus are expected to benefit from improved improved quality of life resulting from the product's use.
- b. The other household and family members of sellers of diviLuxes who will benefit indirectly from the new streams of household income derived from sales of diviLux and credit sales.

Target Direct and Indirect Beneficiaries who are expected to benefit from the use of diviLux solar products are focused in off-grid households in towns, cities and villages in the *Creating Digital Kerosene* project area. Target Direct and Indirect Beneficiaries who are expected to benefit from participation in the distribution and sales of divi-enabled solar products are located in off and on-grid areas (focused in urban-located "Regional Hub Shops" and rural-located "Rural Sales Agents") throughout the project area. The geographic focus areas of the project area are as follows:

- Namibia: Zambezi, Kavango, Oshana, Otjozondjupa, Oshikoto, Omusati, Oshikoto and Khomas Regions
- Zambia: Southern Province

### **D. Resources allocated for M&E Activities**

M&E activities will be carried out by Elephant Energy staff and University of Colorado Boulder researchers at the Renewable Energy and Sustainable Energy Institute (RASEI). Elephant Energy staff engaged in M&E activities includes one full-time Project Director (1/4 time in Namibia), one full-time Project Manager (full-time, Namibia), and six Regional Managers (full-time, Namibia). M&E will be led by the Project Director and field-level coordination will be carried out by the Project Manager and project partner, RASEI. Data collection will be carried out by Regional Managers, with training and oversight from the M&E Project Team. RASEI will work with the M&E team to design survey instruments and engage Master's student researchers to conduct field visits to the Namibia project site in Month 10-12 and to the Zambian project site in in month 22-24 to work with Elephant Energy staff in conducting field-level evaluations.-Data analysis and reporting will be performed by the M&E team, led by the Project Director and with the direct involvement of the RASEI team and Project Manager.

Elephant Energy has dedicated funds to cover staff time, RASEI researchers, training/capacity building, staff and consultant travel and per diems relating to the execution of M&E activities, and costs included in the overall project budget, including field transportation, printing and publishing of M&E documents, communication, etc. with a total estimated cost of approximately 6% (\$29,400) of the Total Project Budget.

### III. PLANNED MONITORING & EVALUATION ACTIVITIES

#### A. Establishment of New Regional Hub Shops (Activity 4)

In Months 2-4 and 14-16, Regional Market Assessments will be conducted for Namibia and Zambia, respectively. The Regional Market Assessments will begin with visits to 1-2 cities or towns in each Region that was not served or is underserved by Elephant Energy's existing operations. During this process, Regional Managers will assess suitable locations and potential candidates for Regional Hub Shops. Regional Managers will conduct up to ten (10) surveys of existing retailers to serve as Regional Hub Shops, using Elephant Energy's internal evaluation of willingness, entrepreneurship, and their technical, commercial, and financial capacity to engage in sales of Elephant Energy products.

After conducting surveys, Regional Managers will return to the head office to discuss the results of the market surveys. This exercise will be carried out through a team meeting with Regional Managers and a Project Manager to discuss surveyed shops and engage in a "white board" comparison of potential shops. This approach will be intended to drive participation in selection, ownership of shop selection among Regional Managers and draws from valuable local knowledge of Regional Managers. A narrative summary report of the process and outcomes will be provided in the Month 6 Milestone Report.

Elephant Energy will also use survey data to track the various attributes of each selected shop, for later use in mid-line and end-line assessments determining patterns among selected Regional Hub Shops that may influence their relative level of success in administering diviLux sales.

#### B. M&E Site Selection

In Namibia, two Regional Distribution Networks (comprised of one Regional Hub Shop and the selection of one affiliated Rural Sales Agent per region) will be selected for the focus of the diviLux pilot project and for ongoing evaluation of the business model throughout the life of the project. In Zambia, where one Regional Hub Shop will be established, the one Regional Hub Shop and two Rural Sales Agents will be the focus of data collection. Selection of three areas (2 in Namibia and 1 in Zambia) to measure and evaluate throughout the project will provide in depth understanding of local realities, the business model and trends in sales and operations. A longitudinal study of customers, through baseline, mid-point and end of project surveying will provide valuable data on impact via surveying of diviLux customers and non-customers.

Elephant Energy will to maximize retention of survey respondents in a variety of ways by collecting detailed questionnaire personal information during baseline surveying (i.e., name, phone number and house/village location, family members) and providing incentives for participating in surveys and/or focus groups (ex: hot lunch provided for participants, a discount coupon for a future product purchase). Further, Namibia's low population density and small village size, and the familiarity and knowledge Regional Hub Shops, Rural Sales Agents, and Elephant Energy Regional Managers have with local populations and the continued connectivity Regional Hub Shops and Rural Sales Agents have with customers is expected to reduce

respondent attrition. Incentives will be utilized in maintaining contact with respondents over the course of the project. Incentives for repeat participation will be determined in tandem with local stakeholders and RASEI research team to be appropriate to each locality.

Data collected via these three Regional Distribution Networks will begin with baseline surveys performed at the launch of the Namibia diviLux pilot project (Month 4), followed by evaluations at the close of the diviLux pilot project (Month 6). Long-term analysis of the business model and/or impact evaluation will be collected at the project mid-point in Namibia (Months 10-12). In Zambia, baseline surveys will be performed at Month 18 and follow up surveys at project end, in Months 22-24.

To inform the selection of Regional Distribution Networks for evaluation, control for exogenous factors, and distinguish impact of the intervention from other causal factors, secondary data will be collected on a list of characteristics of the area which may influence the development, functioning, scalability of the business model. The following is a non-exclusive listing of potential baseline characteristics that the Elephant Energy team, in collaboration with RASEI experts, will identify:

- Demographic data on the population: median age, income, ethnicities/cultural groups, gender
- Population, population density of city/town in which Regional Hub Shop is located
- Population, population density of surrounding areas
- Proximity to other major towns/shopping centers
- Catalogue of community assets and institutions
- Local political landscape
- Prevalence of banks
- Profile of retail shopping market in area
- Transportation options to surrounding rural areas
- Environmental factors (weather, geography)
- Presence of competitors in the market
- Religious factors
- Ethnic group(s) in the region and cultural norms and practices and gender dynamics

Secondary data characteristics, along with comparative white-boarding exercises, will be used to develop a set of discrete and semi-discrete set of differences for each of the three chosen Regional Distribution Networks. This information will be collected prior to the launch of the pilot project and will ultimately be informed by availability of reliable, recent data. As noted in the evaluation and impact section below, this data will enable the project to assess the extent to which exogenous factors—apart from the business model—likely impacted the results of the pilot project for each of the two specified regions.

### **C. Baseline Data Collection**

Following the selection of Regional Distribution Networks for surveying and collection of characteristic information on regions, Elephant Energy will conduct baseline surveys of local populations (including divi and non-divi customers) in tandem with the first sales via the diviLux Pilot Project. Importantly, data collected through surveys for non-divi customers will serve as a “control group” for the project’s impact analysis.

At Month 4 (Namibia) and Month 18 (Zambia), Elephant Energy Regional Sales Managers will work with Regional Hub Shop staff and Rural Sales Agents in the selected Regional Distribution Networks to initiate diviLux sales in their regions. This will begin with in-store marketing events at Regional Hub Shops and village meetings organized by Rural Sales Agents in rural areas. During these events, Elephant Energy will conduct baseline surveys with attendees who buy diviLuxes (treatment group) and those who do not buy the product. In Namibia, Elephant Energy will carry out a total of 50 baseline surveys between two Regional Hub Shops and two Rural Sales agents (1 agent per Regional Hub Shop), or 25 baseline surveys per Regional Distribution Network. In Zambia, Elephant Energy will carry out 25 baseline surveys between one Regional Hub Shop and one Rural Sales Agent. These surveys will be administered to customers and non-customers, and collect a range of demographic, socioeconomic and energy use data, which will be compared against follow-up surveys conducted in Month 10-12 in Namibia, and 22-24 in Zambia.

Elephant Energy will work with stakeholders at the Regional Hub Shop and Rural Sales Agent levels to design a culturally relevant questionnaire that provides a high response rate and drive understanding of key indicators. Elephant Energy will work with RASEI and local stakeholders to identify survey respondent sampling criteria, according to the realities and characteristics of given local realities of points of diviLux sales.

#### **D. diviLux Pilot Project (Activity 5)**

In Months 4-5, Elephant Energy will conduct a diviLux pilot project with 100 diviLuxes through two different Regional Distribution Networks. This pilot project will act as a follow-up to Elephant Energy's trial of the divi Light conducted in the Zambezi Region of Namibia in 2011.

Each of the two Regional Managers overseeing these regions will be responsible for facilitating sales of 50 diviLux products in their respective Regions, via one Regional Hub Shop and one Rural Sales Agent. Sales will be initiated during launch events conducted at each Regional Hub Shop and the home village/appropriate gathering place in the sales territory of the Rural Sales Agent.

diviLux Pilot Project M&E will aim to gain knowledge on the functioning of the diviLux product, Sales Agent/customer satisfaction and analysis of the overall sales model. At the conclusion of the diviLux Pilot (Month 6), data from the divi back-end system will be collated and analyzed to gather information on sales and payment information on the Rural Sales Agent and Regional Hub Shop levels, and product pay-off rates at a customer level.

In addition, Elephant Energy will conduct two focus groups (one at the Regional Hub level and one at the Rural Sales Agent level, with between 8-12 participants each for a total of 16-24 persons) to obtain qualitative customer-level feedback, attitudes, perceptions and personal experiences as a diviLux customer. An Elephant Energy Regional Sales Manager will moderate the discussion using a prepared list of questions to elicit discussion. The customer focus groups conducted at the close of the diviLux pilot project will additionally be used to inform the production of a marketing campaign around the diviLux product. Customer preferences, attitudes, uses for diviLux, likes and dislike of the product, user interface and method of payment, will all contribute to the Marketing Campaign Development research and assessment phase that will guide the Rural Marketing Expert in producing a marketing strategy outlining strategies tailored to marketing the "pay to own" diviLux.

Elephant Energy will engage diviLux seller feedback by administering in-person questionnaires to Regional Hub Shops and Rural Sales Agents involved in the diviLux pilot, with a target of all diviLux sellers at the close of the pilot project: 2 Regional Hub Shops and 2 Rural Sales Agents, and a number of customer-turn-diviLux sellers to be determined based upon the organic growth of this component of the sales model. Questionnaires will be administered to the person directly responsible for managing diviLux sales of lamps and credits, and will be conducted with a component of a carefully organized list of questions, along with a semi-structured discussion on experience as a diviLux product seller. In the case of a Regional Hub Shop where there is more than one person directly responsible for managing diviLux sales of lamps and credits at the shop, the person who is primarily responsible for managing sales will be sought out for administration of the questionnaire. Continual feedback from diviLux product sellers will be elicited through Regional Sales Managers frequent (1-2 times monthly) contact with diviLux product sellers.

The M&E team, including Regional Sales Managers and local stakeholders, will come together to review surveys, focus group and questionnaire results, along with regional characteristics to understand the reasons for the model's relative success in each region, differences between the regions and factors which may influence observed results. This includes a review of Regional Hub Shop and Rural Sales Agent characteristics, information gathered during Month 2 Market Assessments.

These activities will contribute to Elephant Energy's understanding of how the sales model and technology can be improved to be more customer and diviLux seller-friendly, with the goal of refining systems and performing firmware modifications to drive more rapid and widespread adoption and ease of use during full-scale roll out in Namibia in Month 7.

Impact evaluations will not be conducted in follow-up M&E to the Namibia diviLux pilot, but will be measured, as indicated in the preceding and following sections, in follow-up customer surveys in Months 10-12.

#### **E. Evaluation & Impact Assessment (Activity 10)**

With the help of RASEI researchers, Elephant Energy will carry out M&E to examine two key elements of the Project: (1) An Impact Assessment of the intervention on Target Beneficiaries (2) An evaluation of the business/distribution model, including cost effectiveness and scalability, and success in driving adoption of solar products through divi "pay to own"-enabled products.

In Month 10-12, Elephant Energy will return to the areas in Namibia where baseline surveys were conducted in Month 4 to carry out 50 follow-up surveys. In Month 22-24, Elephant Energy will return to the areas in Zambia where surveys were conducted in Month 18, to carry out 25 follow-up surveys with customers and non-customers. These follow-up surveys will seek to track impact of the intervention on customers against a number of social indicators. Differences observed across and within regions will be measured and evaluated and RASEI social scientists will work with Elephant Energy to draw conclusions on the impact diviLux sales may have had on change in responses among control and treatment populations.

To gain diviLux seller level feedback on the efficacy of the business model, including impact of reducing the cost-barrier imposed by needing to made up-front payments for solar product inventory in full, and the model's success in achieving viral credit distribution through the entrepreneurial customers who transition to diviLux sellers, Elephant Energy will carry out one-on-one questionnaires with Regional Hub Shops, Rural Sales Agents and customer-agents. This information will be supplemented by data obtained by divi firmware which will track sales, payment and other transactional data on product sellers.

In Months 23-24, the M&E team will come together to review surveys, focus group and questionnaire results, along with regional characteristics and sales data to make an end-line assessment of the model's, by comparing relative success in each region, differences in performance, impact and sales between the three regions, and what results can be directly attributed to the intervention and/or to external factors. Baseline and follow up data collection conducted in Month 4, 10 and 18, will be assessed against sales trends and profiles built on of Regional Hub Shops and Rural Sales Agents in Month 2 to determine the various attributes that make a Regional Hub Shop or Rural Sales Agent successful in diviLux sales, and inform the selection of Regional Hub Shops and Rural Sales Agents in future replication of the model.

The Project Director, Project Manager, and RASEI will work together to perform a comprehensive end-line analysis of objectives met, sales, profitability, and cost-effectiveness. This will extensive internal analysis of divi firmware data, and include a comparative analysis of historical sales data of the divi-enabled Sun King Pro2 against the traditional product line in order to determine the intervention's success in driving solar adoption. End line assessments will further include an analysis of progress toward/success in reaching an end goal of this project to reach break-even in Elephant Energy's Namibian distribution operations by the end of the two-year grant period, and set Elephant Energy's Zambia operations on a similar path to profitability. To this end, Elephant Energy will present financial analysis of the model, including a presentation of total sales and sale trends, revenue, profitability, cost-effectiveness and sales projections.

An update on the competitive landscape and on the extent to which the project is (or has the potential to be) more cost-effective than competing alternatives in terms of both cost to customers and future costs to public inventors. This involves performing a Cost Effectiveness Analysis (CEA) on end-user and distributor/organizational levels. On end-user level, Elephant Energy will compare the relative costs and outcomes of the divi intervention to other alternatives on the market that provide gains in access to energy. On an organizational level, the model will be compared to other alternatives in terms of relative cost to achieve gains in accessibility of light and Elephant Energy will draw comparisons against its own distribution of non-financed products. Cost Benefit Analyses will be expressed in terms of a ratio where the denominator is a gain in energy access from the project and the numerator is the cost associated with the intervention.

The Final Evaluation and Scaling Report will also include a full financial audit of the granting period, to be conducted by an external auditor. 90 days following project end, Elephant Energy will deliver a final evaluation and scaling report which will include an end line assessment of project progress based on indicators and methodology approved in M1, report documents challenges in implementation that could threaten the integrity and quality of the data and steps taken to mitigate these threats and any data analysis. To review, this report will address the following:

1. **Social impact:**
  - a. Money savings at the customer/household level.
  - b. Availability of retail, Sales Agents, and customer-end financing through the divi system.
2. **Project Improvement:** The report will assess the success to date, lessons learned and action steps regarding other process improvements or unforeseen consequences.
3. **Cost-effectiveness:** The report will include an update on the competitive landscape and on the extent to which the project is (or has the potential to be) more cost-effective than competing alternatives (in terms of cost to customers and any future costs to public inventors). This includes assessing the unit cost of the intervention with any gains in accessibility.

4. **Scaling:** The report will provide an update on anticipated demand for the product (locally and globally) and prospects for financial sustainability. The report will assess the potential for results to continue at scale given cost and quality issues. It will also discuss progress to date on engaging stakeholders, and planned next steps regarding scaling including pro formas, income statements and financial projections.

#### **IV. SUMMARY OF INDICATORS**

The M&E plan set forth here specifies indicators to be tracked including the frequency of data collection, methods/sources, scheduling and reporting of data, in line with the Milestone Chart in the Project Contract. Indicators set forth in this document include those which are required by USAID in the Project Contract and those which have been custom selected by Elephant Energy. These indicators are marked in the tables below as (R) Required and (C) Custom. Any change in indicators based upon stakeholder input or changing project realities will be presented to the AOR for review and pre-approval. Note that Impact Evaluation instruments will also gather demographic data (ex: income, gender, age, location (urban/rural), number of people in household, etc.), as locally relevant.

**TABLE 1: PROJECT EXPECTED OUTPUTS**

<b>PROJECT MILESTONES DELIVERABLES/OUTPUTS</b>				
<b>Result</b>	<b>Indicator(s)</b>	<b>Source/Method</b>	<b>Frequency/Schedule</b>	<b>Information use/reporting</b>
<p><b>Result 1</b> Expand distribution network within eight regions in Namibia in Year 1 &amp; Expand distribution network to one new region in Zambia in Year 2</p>	<ul style="list-style-type: none"> <li>No. of Regional Hub Shops established</li> <li>No. of Regional Hub Shops active at project end in project regions</li> <li>No. of Sales Agents established</li> <li>No. of Sales Agents active in project regions</li> </ul>	Internal project records, sales data	Months 10-12, Month 22-24	Mid-term evaluation report, Project final report
<p><b>Result 2</b> 6,300 total Products sold in Year 1, and 12,600 total Products sold in Year 2.</p>	No. of solar products (divi and non-divi) sold	Sales data	Months 6, 10-12, Month 18, Months 22-24	Quarterly reports, Mid-term evaluation report, Project final report
<p><b>Result 3</b> Regional Market Assessments conducted with up to ten potential Regional Hub Shop partners per new region</p>	No. of potential Regional Hub Shop partners per region surveyed	Internal records	Months 3, Month 15	Quarterly reports
<p><b>Result 4</b> Establishment/maintenance of eight Regional Hub Shops for solar products in Namibia and one Regional Hub Shop for solar products in Zambia (one new shop in each project region)</p>	No. of Regional Hub Shops established	Internal records	Months 6, Month 20	Quarterly reports
<p><b>Result 5</b> divi-focused marketing strategy document created</p>	<ul style="list-style-type: none"> <li>No. of customers surveyed/focus groups performed per region</li> <li>Marketing strategy document produced</li> </ul>	Internal records	Month 9, Month 18	Quarterly reports

<b>Result 6</b> Production of divi-focused collateral and media	<b>Indicators</b> <ul style="list-style-type: none"> <li>• No. of print/sign advertisements produced</li> <li>• No. of radio ads produced<sup>1</sup></li> </ul>	Internal records	Month 9, Month 18	Quarterly reports
<b>Result 7</b> Implementation of divi focused demand-generating and marketing strategy activities	<b>Indicator</b> <ul style="list-style-type: none"> <li>• No. of radio plays</li> <li>• No. of product demonstrations conducted by Sales Agents and Regional Hub Shops<sup>2</sup></li> </ul>	Internal records	Month 9, Month 18	Quarterly reports
<b>Result 8</b> 40 Rural Sales Agents are recruited, trained, stocked and financed with resupply links to Regional Hub Shops (35 in Namibia and 5 in Zambia)	<b>Indicator</b> <ul style="list-style-type: none"> <li>• No. of Rural Sales Agents established</li> <li>• No. of trained Rural Sales Agents active at project end</li> </ul>	Internal records	Month 12, Month 24	Mid-term evaluation report, Project final report
<b>Result 9</b> diviLux products and sales system integrated into Rural Sales Agent model, providing financing options for customers	<b>Indicator</b> No. of Rural Sales Agents with capacity to administer divi System	Internal records, divi firmware data	Month 12, Month 24	Mid-term evaluation report, Project final report
<b>Result 10</b> Namibia Regional Managers transition to independent agents/businesses that cover all salaries and other operating costs via revenue from sales	<b>Indicator</b> No. of active Regional Managers in Namibia at the end of the project	Internal records, divi firmware data	Months 10-12, Months 22-24	Mid-term evaluation report, Project final report

<sup>1</sup> These are sample indicators and will be refined, based upon outcome of marketing strategy drafted by Rural Marketing Expert

<sup>2</sup> These are sample indicators and will be refined, based upon outcome of marketing strategy drafted by Rural Marketing Expert

**TABLE 2: BUSINESS MODEL AND DIVI TECHNOLOGY**

<b>Business Model and divi Technology Analysis</b>					
<b>Business Model/Technology Element</b>	<b>Indicator</b> Required (R), Custom (C)	<b>Methods/Sources</b>	<b>Frequency/Schedule</b>	<b>Unit of Measurement</b>	<b>Information use/Reporting</b>
diviLux Pricing/Commission Model	(R) Price points and payment structure for diviLux (down payment and additional payments)	Internal records	Month 4	USD	Pilot project report, Quarterly report (upon change in pricing)
	(C) Margins (credit and lamps) (Agents, Shops, and customer-agents)	Internal records	Month 4	USD	Pilot project report, Quarterly report (upon change in pricing)
diviLux payment structure/schedule	(R) Product Repayment rates	divi firmware data collection	Month 4, Month 10-12, Month 22-24	# defaults; rate of payments	Pilot project report, Mid-term evaluation and Project-End evaluation
Equipment/technology functioning	(C) Breakages, mechanical issues with lamp, mechanical issues with operation of divi firmware	divi firmware data collection, customer surveys, reports of warranty exchanges	Month 4, Month 10-12, Month 22-24	# of incidents ; Percentage of total	Pilot project report, Mid-term evaluation and Project-End evaluation
Distribution/Virality	(C) Average number of customers per Rural Sales Agent, Regional Hub Shop	divi firmware data collection	Month 4, Month 10-12, Month 22-24	No. of people	Pilot project report, Mid-term evaluation and Project-End evaluation

	(C) Number of customers who become diviLux sellers	Internal analysis, divi firmware data	Month 4, Month 10-12, Month 22-24	No. of people	Pilot project report, Mid-term evaluation and Project-End evaluation
	(C) Ease of credit purchase transactions by diviLux sellers (Agents, Shops and customer-agents)	Sales agent questionnaire	Month 4, Month 10-12, Month 22-24	Qualitative (Likert scale)	Pilot project report, Mid-term evaluation and Project-End evaluation
Customer satisfaction	(C) Level of satisfaction with the payment scheme	customer survey, focus group	Month 4, Month 10-12, Month 22-24	Qualitative (Likert scale)	Pilot project report, Mid-term evaluation and Project-End evaluation
	(C) Level of satisfaction with the diviLux product	customer survey, focus group	Month 4, Month 10-12, Month 22-24	Qualitative	Pilot project report, Mid-term evaluation and Project-End evaluation
	(C) Ease of use/understanding the user interface payment tracking system	customer survey, focus group	Month 4, Month 10-12, Month 22-24	Qualitative	Pilot project report, Mid-term evaluation and Project-End evaluation
Sales agent/shop satisfaction	(C) Level of satisfaction with diviLux sales/payment processes	Sales agent questionnaire	Month 4, Month 10-12, Month 22-24	Qualitative	Pilot project report, Mid-term evaluation and Project-End evaluation
	(C) Level of satisfaction with Incentive structure	Sales agent questionnaire	Month 4, Month 10-12, Month 22-24	Qualitative (Likert scale)	Pilot project report, Mid-term evaluation and

					Project-End evaluation
	(C) Ease of use of the device used for credit distribution (diviLux user interface/smart phone diviApp)	Sales agent questionnaire	Month 4, Month 10-12, Month 22-24	Qualitative	Pilot project report, Mid-term evaluation and Project-End evaluation
Cost Effectiveness	(C) Unit cost to customers vs alternative	Internal analysis secondary and primary data	Month 22-24	USD	Project-end evaluation
	(C) unit cost of the intervention with gains in accessibility.	Internal analysis	Month 22-24	USD	Project-end evaluation
	(C) Administration cost per agent per year to administer (non-divi/divi) comparison	Internal analysis	Month 22-24	USD	Project-end evaluation
	(C) Agent retention/turn over rate (non-divi/divi) comparison	Internal analysis	Month 22-24	percentage	Project-end evaluation

**TABLE 3: PROJECT IMPACTS**

<b>PROJECT IMPACTS</b>					
<b>Project Impact</b>	<b>Indicator</b> Required (R), Custom (C)	<b>Methods/Sources</b>	<b>Frequency/Schedule</b>	<b>Unit of Measurement</b>	<b>Information use/Reporting</b>
<b>Combating poverty</b>					
Household-level economic savings from reduced expenditures on energy	(R) Money savings at the customer/household level	customer surveys (baseline and follow up)	Months 4, 10-12, 18 Month 22-24	Dollars/month	Mid-term evaluation report, Project final report
Creation of employment	(R) No. of people employed (full and part	Internal project records	Months 10-12, Month 22-24	No. of Jobs created	Mid-term evaluation

	time) as a result of the project (Sales Agents)				report, Project final report
	(R) No. of active Elephant Energy staff members by country (full and part time)	Internal project records	Months 10-12, Month 22-24	No. of active employees	Mid-term evaluation report, Project final report
Increase in income level among product resellers	(R) Average earnings per Elephant Energy product reseller	Sales reports, divi firmware	Months 10-12, Month 22-24	Dollars/month	Mid-term evaluation report, Project final report
Work that is enabled because of increased access to light/cell phone	(C) Gain in number of productive hours of light/cell phone use per day (C) Activities enabled due to increased access to energy	customer surveys (baseline and follow up), focus groups	Months 10-12, Month 22-24	Hours/day	Mid-term evaluation report, Project final report
<b>(C) Gains in accessibility of energy from “pay to own“-enabled products</b>					
Increased availability of energy because of finance-enabled products	(C) monthly product sales pre and post introduction of diviLux sales	Quarterly sales reports, customer surveys	Months 10-12, Month 22-24	No. of units	Mid-term evaluation report, Project final report
<b>Increased access to energy</b>					
Increased access to/use of lighting and charging technologies	(R) Total No. of lights sold (divi-enabled and other solar products)	Quarterly sales reports	Months 10-12, Month 22-24	No. of units	Mid-term evaluation report, Project final report
	(C) Total No. of users of each product (all HH and other users)	customer surveys	Months 10-12, Month 22-24	No. of people	Mid-term evaluation report, Project final report
	(R) Ongoing light usage rates for users	divi firmware data collection	Months 10-12, Month 22-24	Cummulative run time per day of use	Mid-term evaluation

					report, Project final report
	(C) Ongoing cell phone charger usage rates for users	divi firmware data collection	Months 10-12, Month 22-24	Cummulative charge time per day of use	Mid-term evaluation report, Project final report
<b>Gender</b>					
Participation of women as product resellers	(R) No. of Sales Agents, staff, and partner shop staff who are women	Internal project documentation	Months 10-12, Month 22-24	No. of people	Mid-term evaluation report, Project final report
Participation of women in project preparation and implementation	(R) No. of staff who are women	Internal project documentation	Months 10-12, Month 22-24	No. of people	Mid-term evaluation report, Project final report
<b>Good Governance</b>					
Participation of stakeholders in project planning, implementation and management	(R) No. of focus groups/workshops conducted	Internal project documentation	Months 10-12, Month 22-24	No. of surveys	Mid-term evaluation report, Project final report
Participation of customers in project planning, implementation and management	(R) No. of customer surveys conducted (R) No. of focus groups/workshops conducted	Internal project documentation	Month 4-6, Months 10-12, Month 22-24	No. of surveys, No. of workshops	Mid-term evaluation report, Project final report
<b>HIV/AIDS</b>					
Persons with HIV/AIDS will be free to participate in all aspects of the project	(R) Persons with HIV/AIDS are free to participate in the project.	Project records demonstrating adherence to Namibian and Zambian law prohibiing the discrimination	Months 10-12, Month 22-24	Qualitative analysis	Mid-term evaluation report, Project final report

		against any individual for their AIDS or HIV status in any employment decisions			
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## **Project Implementation Plan**

### **Activity 1: Project Establishment and Management (4/1/2014-3/31/2016)**

All training, record-keeping and support activities will be undertaken by the Project Director, Project Manager, and other administrative staff throughout the duration of the project from Months 1 to 24. During Month 1, the Project Manager and the Project Director will work together to carry out project establishment and management activities, including re-evaluating the job performance of current Regional Managers in Namibia and establishing reporting procedures for staff throughout Namibia, including the Zambezi and Otjozondjupa Region that were not included in the Solar for All Partnership.

Also in Month 1 in Namibia the Project Director and Project Manager will work to hire one additional Regional Manager to coordinate activities in Namibia's capital city, Windhoek (Otjozondjupa Region). In month 13, a Regional Manager will be hired in the Southern Province, the project focus area in Zambia. Regional Managers capable of overseeing all of the business development, support, monitoring and reporting will be selected from their respective regions. This process will involve scouting applicants through advertisements in the newspaper, announcements through local organizations, and referrals by partner organizations.

The newly hired Regional Managers will spend the last week of Month 1 (Namibia) or Month 13 (Zambia) at the Elephant Energy main office in Ondangwa, Namibia, during which time they will undergo new employee orientation. Accounting, monitoring, supply chain, and reporting procedures already in place in Namibia will be established to effectively organize and track activities across regions. During this training period, Regional Managers will participate in staff meetings and regional strategy planning. They will learn about and review project goals and time plans, and discuss implementation of project strategy. During this regional strategy planning meeting, the Regional Managers, Project Manager and Project Director will plan and coordinate Regional Market Assessments to take place during the remainder of Months 2 and 14 of project implementation for Namibia and Zambia, respectively.

During this time, the Project Manager will identify a Product Repair Manager with solar energy technical expertise who will be suitable for conducting repairs and trainings on basic product repair to Regional Hub Shops and Rural Sales Agents. The Repairperson will also work with each Regional Manager to identify and train person(s) within each Regional Hub (either at the Regional Hub Shop or another retailer in town) that can do more complex repairs.

### **Activity 2: Web-Based Sales Platform Development (4/1/2014-6/28/2014, 4/1/2015-5/28/2015)**

In months 1-3 and 13-14, for Namibia and Zambia, respectively, divi, Inc. will assist Elephant Energy in the installation of hardware to allow for large-scale distribution of the "pay to own", diviLux solar light & cell phone charger. The divi back-end system requires the establishment of a country-specific web-based platform for managing and tracking sales. While a mobile phone application and web-based program has been developed to manage and track sales, hardware must be installed in-country to allow the system to synch with the cell phone network, and additional refinements to the apps will be made to meet Elephant Energy's specific needs.

### **Activity 3: Marketing Campaign Development (7/1/2014-9/30/2014, 6/1/2015-7/30/2015)**

In Month 4, the Rural Marketing Expert will evaluate Elephant Energy's current marketing campaign and demand generation strategy in Namibia and adapt it to the *Creating Digital Kerosene Project*. To begin this process, the Rural Marketing Expert will review the results of end-user surveys conducted by Elephant Energy during the EEP-funded *Solar for All Partnership Project*. These surveys contain valuable information, including the energy habits, levels of income, and product preferences of local communities in each region.

In Month 5 in Namibia, Regional Managers will conduct customer surveys in areas where diviLux products have been distributed in the divi Pilot Project. Informed by this research and assessment phase, the Rural Marketing Expert will produce a marketing strategy document recommending marketing strategies tailored to the diviLux solar light & cell phone charger. In Month 15 in Zambia, the Rural Marketing Expert will carry out a full review of the Namibian strategy document and end user surveys conducted during Month 5 of the Project. This will be used, along with field level assessments of marketing strategies and collateral created for Namibia to adapt as appropriate for the Zambia market, including new strategies and production of marketing materials and outreach (i.e., radio ads, print materials, etc.)

In Months 6 and 16 in Namibia and Zambia, respectively, the Rural Marketing Expert will present the market strategy document to Regional Managers and the Project Manager for review and discussion. Following staff member input, the Rural Marketing Expert will produce marketing activity protocol and collateral. While the marketing strategy will be determined based upon the Rural Marketing Expert's recommendations and staff input, Elephant Energy's experience via the *Solar for All Partnership Project* will be drawn upon, and existing resources will be adapted for use for diviLux marketing. Marketing activities could include: instructions for conducting night-time product demonstrations, radio advertisement scripts, flyers, point-of-sale displays, and contracting local artists to paint shop signage. Additional training and the implementation of marketing activities will be conducted during the Nationwide roll-out of the diviLux in Namibia, and a similar process will be conducted in Zambia during the roll-out of the project in that country.

#### Activity 4: Establishment of New Regional Hub Shops (5/1/2014--3/31/2016)

In Months 2-4 in Namibia (14-16 in Zambia), Regional Market Assessments will take place. The Regional Market Assessments will begin with visits to 1-2 cities or towns in each Region that were not served or underserved by areas of EE's existing operations and currently lack a Regional Hub Shop. During this process, the Regional Manager will also assess suitable locations and potential candidates for Regional Hub Shops. New Regional Managers will conduct up to 10 surveys of existing retailers, as well as other retailers which are deemed suitable candidates to serve as Regional Hub Shops due to Elephant Energy internal evaluation of their willingness, entrepreneurship, and their technical, commercial, and financial capacity. Survey information will be used along with further field-level assessments, to select the town or city as the regional hub using a variety of means, including windshield surveys and input from local stakeholders. Regional Managers will return to the head office to process and analyze market survey data and partner input. Along with input from the Project Manager, this information will be used to determine selection of Regional Hub Shops. An assessment of the financial standing of Regional Hub Shops conducting during the initial market assessment will be utilized by Regional Managers to determine the need for financing mechanisms to purchase initial product inventory.

Also in Month 2 in Namibia (14 in Zambia), Regional Managers will conduct Regional Hub Shop Partnership Initiation and Staff Training. The training will cover the use, sales, marketing, and

maintenance of solar products, as well as recordkeeping procedures. The owner and/or manager of the shop will be responsible for overseeing all aspects of partnership and sales of Elephant Energy solar products, and will receive additional training on the ordering process and monthly reporting procedures. Each shop will be provided with signage and materials to promote their business. Shops will be provided a starting inventory based on terms of payment agreed upon with Regional Managers.

In Months 5, 8 and 11 in Namibia (17, 20, and 23 in Zambia), Regional Managers will conduct refresher trainings to train new staff members, address problems or concerns in operating strategies, assess progress against targets, and inform shops about new product offerings and marketing strategies. In Months 8 and 11 in Namibia (20 and 23 in Zambia), these will be combined with refresher trainings for Sales Agents.

In Months 3-24 in Namibia (15-24 in Zambia), Regional Managers will begin to conduct monthly meetings with Regional Hub Shop owners and staff to provide business support and mentoring, plan and carry out marketing activities, collect records, and monitor performance. During this time, Regional Managers will also receive and fill product orders by Regional Hub Shops.

#### Activity 5: Namibia – Regional Pilot Project (7/1/2014-8/30/2014)

In Months 4-5, Elephant Energy will conduct Regional-Scale diviLux pilot projects at two sites in Namibia. These pilot projects will act as a follow-up to the diviLux Trial conducted in the Zambezi Region of Namibia, and additional work to distribute divi-enabled products in East Africa by divi, Inc. An examination of diviLux sales in these regions will provide data to guide the full-scale roll-out of the diviLux Product. Regional Managers in each of the participating pilots will be trained on the use of the diviLux and associated cell phone applications that manage and record sales and customers. Each Regional Manager will then be responsible for selling diviLux products to customers in their Region via established hub shops and sales agent networks.

#### Activity 6: divi Sales Model Establishment: Agent Selection, Training and Marketing (8/1/2014-10/31/2014, 7/1/2015-9/31/2016)

In Months 5 and 6 in Namibia (16 and 17 in Zambia), all Regional Managers will scout and select five Rural Sales Agents (shops and traveling agents) in the areas surrounding the Regional Hub Shop. Regional Managers will select Rural Sales Agents by sharing job announcements with cooperating partners, community-based organizations, and disseminating job announcements in targeted areas surrounding Regional Hubs. Selection will occur through an application and interview process in which promising applicants will be interviewed and selected based on a number of factors, including their skills, enthusiasm, entrepreneurship and geographic location.

In Months 6-7 in Namibia (16-18 in Zambia), all Elephant Energy Regional Managers and Hub Shop Staff will be trained in the use, marketing, and distribution of diviLux products. Elephant Energy Regional Managers will be equipped with the materials required to distribute diviLuxes, including a smart phone, and will be equipped with up to 250 diviLuxes for initial product sales in their region. Regional Managers will then return to their areas and conduct trainings to facilitate the distribution of diviLux products with Regional Hub Shop owners/managers, Rural Sales Agents and other entrepreneurs.

In Month 7 in Namibia (18 in Zambia), Regional Managers will conduct Rural Sales Agent Initiation and Trainings at each Regional Hub Shop, including training relating to the diviLux System for both the hub shop staff and Sales Agents. Regional Managers will provide Rural Sales Agents with training in marketing, sales, product use and maintenance, product restocking through Regional Hub Shops, and bookkeeping and reporting. Upon satisfactory completion of training, Elephant Energy will provide each new Rural Sales Agent with resources to enable them to sell products in their communities, including product samples, catalogues, distribution materials, sales recording sheets, and a starting inventory of products.

Activity 7: Namibia - Nationwide Product Roll-Out (10/1/2014-1/31/2015, 10/1/2014-4/31/2015)

In Months 7 to 10, Regional Managers will work with Regional Hub Shops and Rural Sales Agents to implement marketing activities in targeted areas in and around the Regional Hub and Sales Agent/rural shop home areas to jumpstart product sales in their home communities. The marketing assistance provided by Regional Managers is geared toward high initial investment and assistance and will catalyze demand and awareness in targeted markets. Regional Managers will reduce their direct support over the project period, transitioning the primary responsibility for marketing products to Regional Hub Shops and Rural Sales Agents.

In Month 7 to 13 in Namibia, Elephant Energy will conduct a nationwide rollout the diviLux via a network of six Regional Managers with defined distribution areas: 1) Ohangwena, 2) Oshikoto/Oshana, 3) Kunene/Omusati, 4) Kavango, 5) Zambezi, and 6) Otjozondjupa. Initial distribution in Months 7 to 9 in Namibia will focus on Regional Hub Shops. Each shop will receive training in marketing and demand-generating activities designed to introduce new customers to the use and benefits of the diviLux. Regional Managers will train Hub Shop staff members on various marketing strategies and work with the Regional Hub Shop to determine marketing goals and schedules of activities.

Activity 8: Namibia – Regional Manager Transition to Independent Agents (4/1/2015-3/31/2016)

Months 13 through 24 in Namibia will be spent continuing to distribute diviLuxes and other products via the distribution channels and expertise developed via the EEP-funded *Solar for All Partnership Project* and the first year of the *Creating Digital Kerosene Project*. One of the main goals of the project is, after three years of work (including both EEP and USAID funding), to achieve an independently sustainable/profitable distribution network in Namibia. As a result, Year 2 of the project will eliminate all grant funding available for supporting Regional Managers in Namibia.

Through the diviLux innovation, and the initial support provided by Elephant Energy via grant funds, these Regional Managers will be able to support their activities via revenue from sales. While it is Elephant Energy's goal to operate a fully sustainable/profitable distribution network, support by USAID will remain throughout Year 2 for the Program Manager and administrative staff to maintain some support for Regional Managers during this transition. Monthly meetings will continue to be held for Regional Managers at the Main Office throughout this period with a focus on training in accounting, marketing, and sales to support the operations of these newly-independent businesses.

Activity 9: Zambia – Provincial Product Roll-Out (9/1/2015-3/31/2016)

In month 18 to 24, Elephant Energy will conduct a rollout the diviLux product through its Regional Manager in Zambia via the same process utilized in Namibia, which was detailed in Activity 7.

Activity 10: Evaluation & Impact Assessment (7/1/14-9/30/14, 1/1/15-3/31/15, 1/1/15-3/31/16)

Elephant Energy, with the help of researchers from the Renewable Energy and Energy Efficiency Institute (RASEI) at the University of Colorado, will measure the success of the *Creating Digital Kerosene Project* by conducting monitoring evaluation to examine the benefit to rural Namibians provided by increased access to energy and by evaluating the financial viability of the divi sales model. Elephant Energy will conduct customer and sales agent surveys in Months 4 to 6 (Pilot Project Evaluation) and 10 to 12 in Namibia and 21 to 23 in Zambia and Namibia (full scale production/distribution evaluation) to evaluate a number of social impact indicators detailed separately in the M&E plans. Indicators include: 1) money-savings at the end-user/household level, 2) availability of retail, sales agent and customer-end financing, 3) average dollars earned per entrepreneur per month, 4) number of people employed as a result of the project, 5) number of sales agents, staff, and partner shop staff who are women, and 6) customer satisfaction. Additional indicators that relate to the success of the diviLux business model include: 1) number of products sold, 2) total revenue, 3) total profit, and 4) average pay-back period. A full list of indicators are including in the *33051 Monitoring & Evaluation Plan*.

Activity 11: Project Close-out and Transition (2/1/2016-3/31/2016)

In Months 23 and 24, the Project Director, Project Manager, and Regional Managers will work together to produce the final evaluation and scaling report, including an end line assessment of project progress based on indicators and methodology approved in M1. The report will document the challenges in implementation that could threaten the integrity and quality of the data, steps taken to mitigate these threats and any preliminary data analysis. The final report will also include a full financial audit of the granting period, to be conducted by an external auditor.

**Creating Digital Kerosene Project, AID-OAA-F-13-00060  
Milestone 2 Report**

**Submitted by Elephant Energy  
July 1, 2014**

**For the United States Agency for International Development (USAID)  
Development in Innovations Fund (DIV) Project**

This Milestone 2 report will document the following sections:

1. **ACTIVITIES UPDATE** – An update on Elephant Energy’s progress regarding the activities currently in progress, including:
  - A. **Activity 1: Project Establishment and Management (4/1/2014–3/31/2016)**
  - B. **Activity 2: Web-Based Sales Platform Development (4/1/2014–6/28/2014)**
  - C. **Activity 4: Establishment of New Regional Hub Shops (5/1/2014–3/31/2016)**
2. **PROJECT ESTABLISHMENT IN NAMIBIA** – Further detail regarding the project.
3. **REVIEW OF REGIONAL SALES MANAGERS** – A re-cap of the Regional Sales Managers hired and progress during their first two months of work.
4. **PRODUCT REPAIR** – An update on current plans regarding in-country product repair services
5. **REGIONAL ASSESSMENTS UPDATE** – Summarized information regarding ongoing regional assessments.
6. **ACCOUNTING, MONITORING, AND SUPPLY CHAIN REPORTING PROCEDURES FINALIZED** – A review of progress regarding these procedures.

## **1. ACTIVITIES UPDATE**

Elephant Energy has made significant progress on Activities 1, 2, and 4. While Elephant Energy has encountered some challenges, particularly related to Activity 4 (the establishment of new regional hub shops), these challenges, and the associated plans for overcoming these challenges, will be discussed.

### **A. Activity 1: Project Establishment and Management (4/1/2014 – 3/31/2016)**

#### Hiring New Regional Sales Managers

During the first month of the grant, Elephant Energy's Program Manager successfully hired and trained four new Regional Sales Managers (RSM), whose sales territory covers the relatively heavily populated northern sections of the country (Kunene, Omusati, Oshana, and Zambezi), the main corridor between the north and the capital area in the country's center (Otjozondjupa), and the capital region itself (Khomas). More information regarding these new hires and their progress so far will be provided in Section 3 below. Additionally, information regarding RSM training is provided in Section 2.

#### Securing Product Repair Services

The Program Manager and Program Director have been working with Elephant Energy's potential Repair Technician, Mr. Leonard Sankaria based in the Oshana region, to define a work arrangement. This topic is discussed further below under Section 4. Mr. Sankaria's resume was attached with Milestone Report 1, submitted April 15, 2014.

#### Program Manager Hiring

Elephant Energy has spent time during the last two months conducting a search for a new Program Manager who can begin work in August 2014. Elephant Energy has identified and interviewed a number of potential candidates for the position, making special effort to identify local applicants. To date, a hire has not been made.

### **B. Activity 2: Web-Based Sales Platform Development (4/1/2014-6/28/2014)**

Elephant Energy continues to work with divi, Inc. to fully develop an automated, web-based sales platform to track inventory and sales and that monitors—in real time—each sale and payment made on a divi-enabled light. With the existing system, the Program Manager, Program Director and Executive Director are able to monitor inventory and sales remotely and are also able to use the existing platform to “freeze” accounts if sales agents are not making timely payments, etc., introducing a much higher level of organizational accountability. Elephant Energy continues to field-test the functionality of this web-based platform and to make country-specific adaptations. Elephant Energy is also in conversation with mobile and app developers to expand the platform to be used for all inventory tracking, not only of divi-enabled products.

### **C. Activity 4: Establishment of New Regional Hub Shops (5/1/2014--3/31/2016)**

This activity is divided into: 1) conducting Regional Market Assessments; and 2) using those Assessments to establish new regional hub shops. While the Regional Market Assessments are progressing well (see Section 4 below), the process of identifying potential hub shops and conducting hub shop surveys has been problematic. All RSMs have completed at least one hub shop survey to date; and all RSMs have found multiple retail outlets in their respective regions interested in carrying Elephant Energy's products. That said, all RSMs have reported difficulties in identifying hub shops. As a result, and based on additional feedback from existing hub shops and in-country staff, Elephant Energy is reevaluating the hub shop model to determine if it is, in fact, the most

effective model for rural outreach/sales. Staff in-country are questioning the model for the following primary reasons:

- In the current model, hub shops are expected to work with and provide reduced prices to Rural Sales Agents who are vetted by Elephant Energy's Regional Sales Managers. According to many existing hub shop owners, this introduces an unattractive risk, as the hub shops are not involved in the hiring or vetting of these Agents;
- Despite the hope that hub shops would increase their income dramatically as a result of direct sales of Elephant Energy products to customers, and through sales to Rural Sales Agents, many hub shop owners are not experiencing this increase and do not feel the return on investment warrants the increased risk discussed above;
- Many existing hub shop owners remain skeptical of a system they struggle to understand; and
- New potential hub shop owners are hesitant to take on the additional inventory and sales tracking required in order to hold Rural Sales Agents accountable.

For these primary reasons, Elephant Energy is taking a critical look at its implementation model to determine if the benefits of the hub shop model (including remote warehousing of products, deferral of risk from Elephant Energy to the hub shop, and increased overall sales) outweigh the challenges. While in the process of assessing the viability of the model, Elephant Energy is continuing to require RSMs to approach retail outlets to discuss the hub shop model and to collect surveys whenever possible.

## **2. PROJECT ESTABLISHMENT IN NAMIBIA**

In addition to the information provided regarding project establishment and management above under Activities Update, Activity 1, some details regarding Regional Sales Manager Training and Elephant Energy's warehousing are described here.

### Regional Sales Manager Training

The RSMs were provided periodic group training sessions at Elephant Energy's main office in Ondangwa during the months of April, May, and June, and in person training by the Program Manager, Program Director, or both at each of the RSM's regions during June. The managers' trainings covered the following topics:

- Proper completion of invoices;
- Receipts and invoice filing and tracking;
- General and region-specific marketing strategies;
- Online inventory and sales tracking and reporting procedures;
- Situation-specific sales techniques;
- Prospective account identification;
- Region-specific transportation logistics; and
- Other items related to conducting hub-shop surveys and regional assessments.

Both existing and new RSMs were involved in these trainings, creating an opportunity for knowledge and best-practices transfer from the existing staff to the new members. As Elephant Energy was bringing inventory and sales tracking and reporting procedures online, these combined group sessions also gave the opportunity to train all RSMs at the same time on how to use the new system properly. Additionally, it is notable that commission-based sales structures are uncommon in Namibia, and these trainings also allowed the Program Manager and Program Director to familiarize the RSM staff with the commission structure to be implemented in August.

## Warehousing

The Program Manager and Program Director have also begun an evaluation of Elephant Energy's current warehousing arrangements throughout the country. Currently, there is warehousing set up in the Oshana, Kavango, and Zambezi regions. These facilities are rented rooms housed on the premises of other governmental (in the case of Oshana) and non-governmental (in the case of Kavango and Zambezi) facilities. While secure, these storage facilities are relatively expensive and are occasionally unavailable at times when the organizations owning the larger facilities are closed. Elephant Energy is currently exploring options in each region for equally secure, cheaper and more accessible storage.

### **3. REVIEW OF REGIONAL SALES MANAGERS**

As mentioned above under Activities Update, Activity 1, Elephant Energy has hired four new RSM staff members. All were hired under probationary status for the first 3 months of their employment. Should they perform satisfactorily during that period, they have the opportunity to be converted into full RSM staff.

The new RSMs include the following individuals in the given regions.

- Ms. Anna Namwandi – Kunene, Omusati, and Oshana regions
- Mr. Cecil Kaangundue – Otjozondjupa region
- Mr. Dominic Simpindu – Zambezi region
- Mr. Travolta Kanagnai – Khomas region

These new RSMs joined our two existing RSMs – Ms. Elizabeth Ndivaye in Oshikoto and Ohangwena regions and Mr. Theo Hamukoto in Kavango region – in late April for their first staff meeting and training.

During these months, the Program Manager and Program Director have conducted evaluations of both the old and new RSMs. For new RSMs, this meant tracking how quickly they were picking up information from their trainings and how they were progressing in tasks and reporting related to hub shop identification and regional assessments. For the existing RSMs, this meant a review of their performance in their regions since having been hired. Additionally, the evaluation included all RSMs' abilities to follow the new online reporting format. This evaluation is ongoing, and has identified some concerns related to proper identification of potential accounts and invoice filing by Mr. Kanagnai in the Khomas region and to the travel expenses being tallied by Mr. Kaangundue in the Otjozondjupa, as well as proper completion of online tracking by all RSMs. Remedial actions include additional trainings by phone and in person with Mr. Kanagnai, alternative route mapping and travel budget review with Mr. Kaangundue, and additional trainings and reminders for all RSMs regarding the online tracking. Additionally, the Program Director is reviewing the existing online tracking system and exploring alternative systems that may be easier to use for RSMs with less IT experience.

### **4. PRODUCTS REPAIR**

As mentioned in Activities Update, Activity 1, Elephant Energy is exploring a work arrangement with a Repair Technician, Mr. Leonard Sankaria, based in the Oshana region. Mr. Sankaria had initially agreed to work with Elephant Energy, but upon further discussing the terms of the contract, Elephant Energy learned that Mr. Sankaria operates a solar energy installation and general electrician business and is not willing to shut down this business in order to accept the Repair Technician position as described in the grant. While Mr. Sankaria believes that he can assist with repairs in and around the Oshana region, he does not believe that he will be able to effectively act as technician for all regions. As a result, Elephant Energy is in communication with Mr. Sankaria to define an arrangement whereby Elephant Energy pays Mr. Sankaria a fixed amount each month and Mr. Sankaria agrees to repair all lights sent to him during

that month. Additionally, RSMs in the Kavango and Zambezi regions are exploring similar opportunities with local repair people who are currently repairing Elephant Energy lights on a case-by-case basis. Completing these arrangements is a top priority for Elephant Energy, and will be settled within one month from submission of this report.

## **5. REGIONAL ASSESSMENT UPDATE**

As mentioned above under Activity Updates, Activity 4, significant progress has been made in all regions of Elephant Energy's operations regarding conducting Regional Market Assessments. Presently, all RSMs have visited at least one town that was not served or was underserved by Elephant Energy's existing operations, and identified multiple retail outlets in each which would be good candidates for carrying Elephant Energy's suite of products. The new RSMs, most of whom (with the exception of Mr. Simpindu in the Zambezi region) are operating in new markets for Elephant Energy, have visited up to six towns and cities, identifying multiple retail outlets which serve the target rural customer base and which are interested in carrying Elephant Energy's products. These assessments are ongoing, and findings have been and will continue to be discussed regularly during monthly RSM meetings.

In addition to surveying retail outlets and potential hub shops, Elephant Energy is working with M&E specialists to design baseline and follow-up surveys to conduct with customers. The findings from these surveys, as well as copies of the surveys, will be submitted in subsequent Milestone Reports.

## **6. ACCOUNTING, MONITORING, AND SUPPLY CHAIN REPORTING PROCEDURES FINALIZED**

In the past, Elephant Energy's operational procedures have been developed as necessary and administered by the Program Manager with some oversight by the Program Director. In tandem with organizational expansion to new regions throughout the country, Elephant Energy is working to finalize specific procedures related to accounting, monitoring, and supply chain management. The following section outlines progress made towards finalizing organizational procedures.

### Accounting

Closely related to inventory tracking, Elephant Energy's accounting consists largely of tracking accounts receivable, as well as ensuring that timely and accurate financial statements are provided on a monthly basis. During May and June, Elephant Energy's Program Manager and current contracted accountant researched firms in Namibia with the capacity to not only provide accounting services and payroll services, but also assist in inventory management. After an exhaustive search of firms operating locally, BDO Namibia (BDO) was identified as the top candidate. Elephant Energy has contracted with BDO to begin providing payroll services, the first having already been issued on June 24<sup>th</sup>. Additionally, Elephant Energy has received a quote from BDO for monthly accounting and inventory tracking services of N\$4,266.50. The Program Director will be meeting with BDO to finalize this agreement during the first week of July and can provide the DIV staff with an update as requested.

### Monitoring

Monitoring will be key to ensuring that Elephant Energy is reaching the target customers, expanding effectively and efficiently, and having a measurable positive impact on the lives of the light/energy-impooverished in Namibia. As discussed in the document Creating Digital Kerosene Monitoring & Evaluation Plan, "the primary source of data will be the monthly financial and narrative reporting conducted by Regional Managers which detail progress against performance indicators in each region." As so many regions are new to Elephant Energy's operations, it has been difficult to solidify sales/market penetration projections in these areas. Additionally, due to concerns with the hub shop model, Elephant Energy may explore the option of making modifications to the planned evaluation criteria.

That said, Elephant Energy continues to believe that other indicators of project success listed in the M&E document, including total product sales and ongoing regional market assessments, offer good indicators of success. Information regarding these indicators is collected via online sales and progress tracking systems and is confirmed by the Program Manager at monthly RSM staff meetings. All information collected from these meetings is summarized and reported to the Program Director within one week of the staff meeting. The Program Director then checks reported progress against the Monitoring and Evaluation plan to ensure that the project is keeping up with or surpassing grant requirements. While these processes are finalized, the specific reporting process from the RSMs to the Program Manager is still somewhat flexible. This is important, for example, while the organization is still experimenting with what online reporting is best for RSMs to use and will be most useful for the new Program Manager.

#### Supply Chain Reporting

Elephant Energy is working to more closely integrate its online sales and inventory reporting with its purchase process in order to better understand stock needs in real time. To ensure that Elephant Energy is making the best use of this real time data, staff members have also begun engaging in process modeling exercises to lay out exactly what happens in an ordering cycle (see the attached document), and is working with a project management specialist to aid in the selection of project management software that will help create clear connects between all components of the supply chain. The combination of better, timelier data and a solid process for ordering will help to more effectively predict supply chain needs. Additionally, Elephant Energy is continuing to strengthen relationships with manufacturers, particularly Greenlight Planet—the makers of the majority of Elephant Energy’s products—to ensure smooth communication regarding inventory needs and supply availability. Finally, Elephant Energy is exploring joint ordering of stock with other organizations that carry Greenlight Planet products, in order to more effectively capture economies of scale.

**Creating Digital Kerosene Project, AID-OAA-F-13-00060  
Milestone 3 Report**

**Submitted by Elephant Energy  
October 1, 2014**

**For the United States Agency for International Development (USAID)  
Development in Innovations Fund (DIV) Project**

This report for Milestone 3 will document the following sections:

- 1. SALES DATA AND QUARTERLY METRICS** – Update on sales and quarterly metrics for first six months of grant implementation.
- 2. UPDATE ON REGIONAL MARKET ASSESSMENTS AND SHOP SELECTION** – Further detail regarding these project components.
- 3. UPDATE ON TRAINING AND EQUIPPING RSMs AND SAs** – A recap of the Regional Sales Managers hired, the Sales Agent selection process and progress during their first several months of work.
- 4. WEB-BASED SALES PLATFORM UPDATE** – An update on current web-based sales platform for monitoring the sale of divi-enabled lamps; and an update on progress towards selecting a web-based app for tracking non-divi-enabled inventory.
- 5. UPDATE ON PROJECT SUCCESSES AND CHALLENGES** – Summarized information regarding project successes and challenges.

**1. SALES DATA AND QUARTERLY METRICS** – Update on sales and quarterly metrics for first six months of grant implementation.

The following table includes sales data for sales of non-divi products in each of Elephant Energy’s six regions from April 1, 2014 through September 30, 2014.

<b>REGION</b>	<b>TOTAL SALES IN \$NAD</b>	<b>TOTAL # OF PRODUCTS SOLD</b>
Zambezi	\$9,304.34	24
Khomas	\$25,226.09	65
Kavango	\$125,502.61	345
Ohangwena	\$100,637.81	263
Otjizondjupa	\$17,286.95	44
Oshana	\$18,906.52	48
<b>TOTAL IN ALL REGIONS</b>	<b>\$296,864.32</b>	<b>790</b>

In addition to these sales, and during the same time period, 148 diviLites were sold (or were in the process of being paid off). Especially notable with regard to the diviLite sales is that in the three weeks since completing training for RSMs and SAs, 44 lamps have been sold or are in repayment. Elephant Energy is confident that this trend will continue with the introduction of the divi-enabled Sun King Pro 2 and additional divi-enabled products.

While operating under the assumption that divi-enabled products would be readily available much more quickly than they have been, Elephant Energy set an ambitious goal of selling 6,300 total products in Year 1. As a result of design and manufacturing delays, as well as delays in arrival of a recent shipment from Greenlight Planet, products have not been available in country to meet these aggressive sales targets. Elephant Energy’s Program Director and Program Manager are working with BDO (Elephant Energy’s accounting firm in Namibia), and project management experts in the United States, to develop more accurate and appropriate sales/inventory tracking and monitoring systems. The use of these new systems will facilitate more timely and accurate product orders, thus reducing the likelihood of stock outages. With new systems in place and once the divi-enabled Sun King Pro 2 is commercially available, Elephant Energy anticipates rapidly catching up with Year 1 sales projections. Further, with staffing challenges in the two new regions for this project (discussed in subsequent sections), and ramp-up challenges in additional regions, sales have been slow in the newer regions. The project team anticipates that once all new regions are established and relationships are solidified with Retail Shops and Sales Agents, sales in all six regions will increase. If all six regions begin to demonstrate sales data that mirror (or come close to mirroring) Elephant Energy’s most successful regions, it is likely that sales of 1,400–1,800 products per quarter will be attained. Elephant Energy will continue to closely monitor sales and inventory data and will keep USAID informed regarding sales targets.

In addition to the sales data, this Milestone 3 and 4 report includes the following quarterly metrics:

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
Result 2: 6,300 products sold in Year 1	Number of solar products sold	See sales data above
Result 3: Regional market assessments conducted	Number of potential Retail Shop* partners	In total, 42 potential Retail Shops have been surveyed/interviewed in six regions.

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
with up to 10 potential Retail Shop* partners per region	per region surveyed	
Result 4: Establishment/maintenance of partnerships with existing Retail Shops* for solar products in Namibia	Number of Retail Shop* partnerships established	In total, 37 partnerships with Retail Shops* have been established and maintained in six regions.
<b>BUSINESS MODEL AND divi TECH. ANALYSIS</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
Divi product pricing/commission model	Price points and payment structure for divi products	After careful consideration of the divi model, and the best approach to create a consistent sales model, Elephant Energy decided to charge Sales Agents a \$20 NAD per lamp deposit and to charge customers \$25 NAD per installment for a total of \$200 NAD for the diviLite. Elephant Energy is working with divi and Greenlight Planet to determine appropriate price points and payment structure for the divi-enabled Sun King Pro 2 and other divi-enabled lamps.
Divi product pricing/commission model	Margins (credit and lamps)	Based on the price points and payment structure for the diviLite, Sales Agents will earn a \$40 NAD commission on each diviLite sold.

\* As is discussed in Section 2 (below), Elephant Energy is shifting the Regional Hub Shop model in favor of partnerships with Retail Shops. As a result, there is now slightly modified language in this table regarding Regional Hub Shops versus Retail Shops.

## **2. UPDATE ON REGIONAL MARKET ASSESSMENTS AND SHOP SELECTION** – Further detail regarding these project components.

As was introduced in the Milestone 2 report (submitted July 2014), after receiving mixed-to-negative feedback from Elephant Energy in-country staff and former hub shop partners, Elephant Energy began re-thinking the hub shop model. In the time since completing Milestone 2, Elephant Energy has decided to shift the model. Instead of partnering with hub shops as a “middleman” between the Regional Sales Managers (RSMs) and the Sales Agents (SAs), Regional Sales Managers (RSMs) now distribute products directly to Sales Agents who are selected to conduct outreach and sales into rural communities. Additionally, RSMs sell products wholesale to already-established stores in target areas throughout their regions. These stores, referred to in this document as “Retail Shops,” purchase products up-front from Elephant Energy RSMs and shelve the products like they do with the other products they sell. While this model is very similar to the Hub Shop model, it will help streamline the distribution process and give RSMs, and Elephant Energy, more direct control over inventory and SAs.

Regional Market Assessments and Shop Selection are ongoing, as two new regions in particular continue to require additional relationship building and market assessing. The RSMs representing new regions for Elephant Energy have conducted surveys with potential Retail Shop partners and in total Elephant Energy products are available in 37 shops in six regions throughout Namibia. Shop partners were

selected as a result of interviews or surveys conducted with shop owners, asking questions about the types of products they currently sell, their typical customer, their ability to manage inventory, their excitement for or knowledge of solar energy/products and many other topics. Potential shop partners also need to agree to pay for products up-front, as credit is not available to Retail Shop partners.

In addition to the surveys/interviews conducted with shop owners described above, RSMs were tasked with completing a Community Assessment Survey (attached as Appendix A). This survey explored regional information more broadly, asking demographic, socioeconomic, geographic and other market-related questions. When possible, RSMs used information from regional and national Namibian government offices to inform their responses to survey questions. The result is a set of information that paints a clearer picture than Elephant Energy has ever had of various aspects of the market in which it operates. For example, Elephant Energy has historically based sales projections on national census data. Through these surveys, however, the team now has regional data including numbers of population, land area, electrification rates, and names and, in some cases, populations of large towns in the regions. Using this data, Elephant Energy staff members will be able to more accurately and efficiently target marketing efforts at, for example, unelectrified populations living in relative high population-to-area density. This data can help RSMs to make better choices about where in their region they should work to recruit SAs and retail shops.

One very notable finding from the surveys is that all regions reported that the biggest sellers of batteries, candles, fuel, etc. in their regions are “China shops,” or shops that are typically owned and operated by Chinese immigrants and which are not known to carry quality products. Another finding of interest is that there seems to be widespread belief in “witchcraft,” and other beliefs tied to traditional religions. Such a finding may prove helpful in understanding market adoption patterns of unfamiliar solar energy products. A final finding of interest is that while the political landscape varies throughout the regions in which Elephant Energy operates, they tend to all be largely in favor of the SWAPO party, which is the nation’s current ruling party.

Finally, in addition to retail shops, RSMs have recruited, trained and equipped Sales Agents (SAs) to support rural outreach and sales efforts. To date, RSMs have recruited a total of 33 SAs in six regions.

**3. UPDATE ON TRAINING AND EQUIPPING RSMs AND SAs – A recap of the Regional Sales Managers hired, the Sales Agent selection process and progress during their first several months of work.**

Since submission of the Milestone 2 report, Ms. Anna Namwandi (Oshana region) and Mr. Dominic Simpindu (Zambezi region) have completed their probationary period and were converted into full RSM staff. Unfortunately, due to underperformance, Mr. Travola Kanagnai (Komas region) was not converted to full RSM status and Mr. Cecil Kaangundue (Otjozondjupa region) has been experiencing health challenges and stepped down from his position. Elephant Energy hired Mr. Manycoloured Nowaseb to cover the Otjozondjupa region and Mr. Bobby Namaseb to cover the Komas region. Since hiring, Mr. Namaseb resigned due to his family being relocated to southern Namibia. The Program Director and Program Manager are currently conducting interviews for his replacement. Despite human resource challenges this quarter, the five remaining RSMs have participated in monthly staff meetings and staff development (including an all-day training for new RSMs).

In addition to regular staff meetings and staff development opportunities, all RSMs have participated in three trainings, two as a group and one in individual settings, on the sale and product management of

divi-enabled products, including use of the cell phone the divi application needed for tracking payments, and how the divi technology interacts with the lamp. Select SAs have also received similar divi trainings, one in groups and one in individual settings, equipping them to increase sales of divi products.

- 4. WEB-BASED SALES PLATFORM UPDATE** – An update on current web-based sales platform for monitoring the sale of divi-enabled lamps; and an update on progress towards selecting a web-based app for tracking non-divi-enabled inventory.

The web-based sales platform for monitoring divi-enabled lamps continues to effectively track inventory and to provide Elephant Energy with valuable sales data. Based in part on feedback from Elephant Energy's initial sales and trials in Namibia, divi, Inc. is in the process of developing a v2.0 of both the web and mobile app. The new apps will have better user functionality and the phone-based app will include a dashboard feature that highlights key data and information.

Elephant Energy continues to explore mobile/web-based platforms to assist with tracking non-divi-enabled lamps and inventory.

- 5. UPDATE ON PROJECT SUCCESSES AND CHALLENGES** – Summarized information regarding project successes and challenges.

#### **Project successes**

- **Successful countrywide launch of diviLite sales**—During the past four months, Elephant Energy has worked with Peace Corps volunteers in the Oshana, Ohangwena, and Zambezi regions to market diviLites. DiviLites are the first generation lights developed in collaboration with divi to show not only the divi technology's effectiveness in the field, but also the interest in pay-to-own payment systems in our target market. The Peace Corps volunteers began distributing the lights in May. Based on their success, in September, Elephant Energy made the decision to include the diviLite in its suite of products marketed throughout the country by the RSM distribution network. As described above, Elephant Energy has been working to train RSMs and SAs in sale of divi products, and has successfully begun distributing these products in Zambezi, Kavango, Oshana and Ohangwena regions.
- **Progress in supply and distribution chain management**—Elephant Energy has been working to professionalize its supply and distribution chain management through more rigorous weekly reporting of sales figures, inventory, product returns, etc. To this end, Elephant Energy has introduced a user-friendly Excel-based weekly RSM report form. Collection of this information on a regular and more frequent basis will allow for more timely orders of stock from all suppliers. Elephant Energy has already begun collecting information through these reports and the most recent stock order was informed partially through this mechanism.

#### **Challenges**

- **Human resource management**—As has been mentioned, human resource management is a continued challenge as the project team has now experienced turnover in two regions (and double turnover in one). As described above, Elephant Energy is now actively engaged in a hiring process to identify a new RSM for the Windhoek region and the leadership team has identified three candidates for the position so far, and plans to have the position filled by mid-October. While Elephant Energy remains optimistic about filling this position soon, turnover in the region has meant a slower start to the establishment of a distribution network in the Khomas region than was initially hoped for. Maintaining consistency among staff (Program Manager and RSMs) will be an important key to the continued and growing success of this project. Especially as the

grant enters into Year 2, and the program grows into Zambia, experienced RSMs will become invaluable resources to new staff members.

- **Partner relationships**– Navigating the timelines of external partners (especially divi and Greenlight Planet) is not a new challenge, but is one that has even greater implications for this initiative because the development and manufacturing of divi-enabled products rests in the timelines of these two key partners. Elephant Energy is continuing a high level of contact with both partners to ensure that the divi-enabled products are ready to enter the distribution network as soon as possible.
- **Slow ramp-up in new regions**– As a result of staffing challenges in some regions and a short-term stock outage affecting the entire distribution network, ramping up sales in all new regions (four of the six regions) has been slower than anticipated. Elephant Energy is working with veteran and new RSMs to streamline many of the processes that impact the supply and distribution chains (see successes section above), and is working with external accounting and project management professionals to expedite and streamline the ramp-up process, hopefully leading to increased sales in all regions.

# APPENDIX A: Baseline Energy Survey



Date of Survey (day/month/year): \_\_\_\_\_

Interviewer Name: \_\_\_\_\_



## General Information

Name:			
Village/Area:			
Age:		How many times per month does the head of your household go to market / the place where you buy most of your household products?	
Number of household members:		How much money did your household earn last month?	\$N

## Lighting and General Electricity

- Does your house have access to electricity through power lines, even if you don't pay for it?  
 Yes       No
- What is your main source of energy for each of the following activities?

	None	Electricity from Power Line	Gasoline Generator	Car Battery	Solar Panels	Solar Lights	Wood	Coal/Charcoal	Dung/Animal waste	Candles	Small batteries	Other
Indoor Lighting												
Outdoor Lighting												
Cooking												
Water Heating												
Home Heating												
TV												
Radio												
Charging Cell Phone												

3. How much time do you use each of these energy sources in a typical day?

	None	Electricity from Power Line	Gasoline Generator	Car Battery	Solar Panels	Solar Lights	Wood	Coal/Charcoal	Dung/Animal waste	Candles	Small batteries	Other
0 hours												
1-3 hours												
4-7 hours												
More than 7 hours												
Other												
Please describe any answers indicating "Other":												

4. How many hours do you spend outside after dark? \_\_\_\_\_ hours  
 a. If you do not spend time outside after dark, why not? Please explain:

\_\_\_\_\_

\_\_\_\_\_

5. What do members of your household do at night? (Check all that apply)

- Go to bed immediately and do nothing else
- Socialize or chat
- Clean or do chores
- Read, study, work or do homework
- Other:
- Bathe or use the toilet
- Cook or prepare food
- Guard fields or livestock
- Watch TV or listen to radio

6. Which is more important to you?

- Indoor lighting
- Outdoor lighting

7. And **how** important is it (whichever was checked in question 6)?

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ 7 \_\_\_\_\_ 8 \_\_\_\_\_ 9 \_\_\_\_\_ 10 \_\_\_\_\_

Not Important

Somewhat Important

Very Important

**Solar Energy Questions**

1. Do you know how solar energy works? If yes, please explain:

---



---

2. Have you ever used solar panels in your home?

Yes       No

3. Have you ever used solar lights in your home?

Yes       No

**General Energy Use**

1. How important are each the following to you?

	Not Important			Somewhat Important				Very Important		
	1	2	3	4	5	6	7	8	9	10
Torches										
Lanterns										
Indoor Lighting										
Outdoor Lighting										
Home Heating										
Water Heating										
Electricity in Home										
Rechargeable Batteries										
Other:										

2. How many of each of the following do you buy and how often?

	How many/How much?	How often?	Cost?
Electricity from power line			
Gasoline generator			
Car Battery			
Solar panels			

	How many/How much?	How often?	Cost?
Solar lights			
Wood			
Coal/Charcoal			
Dung/Animal waste			
Candles			
Small batteries			
Other			

3. If you could pay a little bit each month through a payment plan (similar to lay-by), how much could you spend **PER MONTH** to get the things that are most important to you?

	N\$
Electricity from power line	
Gasoline generator	
Car battery	
Solar panels/lights	
Other	

### **Cell Phones**

1. Do you or a household member have a cell phone?  Yes  No
  - a) If yes, how do you charge it?  
\_\_\_\_\_
  - b) How many times per week do you charge it? \_\_\_\_\_
  - c) What kind of cell phone is it?  Nokia Big  Nokia small  Samsung  Motorola  
 USB Micro  USB mini  Sony Ericsson  Other  
Other: \_\_\_\_\_
  - d) Do you have to pay to charge your cell phone?  Yes  No
  - e) If so, how much do you pay each time? N\$ \_\_\_\_\_
  - f) Do you charge it at home?  Yes  No

g) If not, how far away do you travel to charge it? \_\_\_\_\_ km

2. How important is it for you to charge your cell phone?

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ 7 \_\_\_\_\_ 8 \_\_\_\_\_ 9 \_\_\_\_\_ 10

Not  
Important

Somewhat  
Important

Very  
Important

**Radio**

1. Do you have a radio  Yes  No

a) If yes, how much did you pay for it? N\$ \_\_\_\_\_

b) How do you supply it with power?

solar panels

generator

small batteries: how often do you buy new batteries? \_\_\_\_\_

car battery

other

c) How much money do you spend on your radio per month (including batteries or power)?  
N\$ \_\_\_\_\_

d) How important is it for you to have a radio?

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_ 6 \_\_\_\_\_ 7 \_\_\_\_\_ 8 \_\_\_\_\_ 9 \_\_\_\_\_ 10

Not  
Important

Somewhat  
Important

Very  
Important

**Creating Digital Kerosene Project, AID-OAA-F-13-00060  
Milestone 4 Report**

**Submitted by Elephant Energy  
October 1, 2014**

**For the United States Agency for International Development (USAID)  
Development in Innovations Fund (DIV) Project**

This report for Milestone 4 will document the following sections:

- 1. UPDATE ON DEVELOPMENT AND PRODUCTION OF DIVI LIGHTS** – A review of progress regarding development and production of divi-enabled lights with pay-to-own capacity and lamp-to-lamp transfer.

**1. UPDATE ON DEVELOPMENT AND PRODUCTION OF DIVI LIGHTS** – A review of progress regarding development and production of divi-enabled lights with pay-to-own capacity and lamp-to-lamp transfer.

The first batch of divi-enabled Sun King Pro 2 (SKP2) lamps, with pay-to-own capacity is currently in Namibia and lamps are available for RSMs to use as demonstration lamps or for training purposes with SAs. An additional 90 lamps will be delivered to the country in October and the final specs for the manufacture of the divi-enabled lamps with pay-to-own capacity will be shared with Greenlight Planet in the final quarter of 2014. For reasons outside of Elephant Energy's control, the large-scale production and manufacturing of SKP2s has been delayed and it is anticipated that mass production of the divi-enabled (pay-to-own) SKP2s will began in the final quarter of the year.

Despite a slow-down in the large-scale manufacturing of divi-enabled SKPs, the sale of the diviLite continues to increase countrywide. Upon the completion of divi training for both RSMs and SAs, diviLite sales increased dramatically. Elephant Energy is confident that the overwhelmingly positive response to the diviLite bodes well as an indicator of what can be expected when the divi-enabled SKP2 is available in the market. Customers across four regions currently have the ability to purchase the diviLite and payback rates remain quite high (average default rate of only 2%, compared with 4.5% among other distributors participating in similar trials in other countries). Further, as was explained in the Milestone 3 report (submitted October 1, 2014), while 148 diviLites have been sold in the country since the grant began, 44 lamps were sold in the last three weeks alone. This occurred as a result of Elephant Energy's decision to include RSMs and SAs in the diviLite sales, rather than using only Peace Corps Volunteers in the sale of lamps. Considering it took several months to sell twice as many lamps as has been sold in the last three weeks, Elephant Energy is confident that widespread availability of the divi-enabled Sun King Pro 2 will create a large sales boom in the country for pay-to-own products.

While development of the pay-to-own lamps and the accompanying mobile and online apps continues to progress well, the technology required for successful lamp-to-lamp transfer capabilities is progressing more slowly. As the trial of the diviLite continues, various potential challenges with the lamp-to-lamp technology present themselves. Engineers at divi are working in partnership with Elephant Energy to think critically about the questions related to lamp-to-lamp design so it can be perfected before the lamps are produced. Elephant Energy is confident that the diviLite sales and the initial manufacturing and distribution of divi-enabled SKP2 lights during the last quarter of 2014 and first quarter of 2015 will further inform the design and development of the divi-enabled SKP2 with lamp-to-lamp transfer capabilities.

**Creating Digital Kerosene Project, AID-OAA-F-13-00060  
Milestone 5 Report**

**Submitted by Elephant Energy  
January 1, 2015**

**For the United States Agency for International Development (USAID)  
Development in Innovations Fund (DIV) Project**

This report for Milestone 5 will document the following sections:

- 1. UPDATE ON KEY PROJECT ACTIVITIES, INCLUDING EVALUATION ACTIVITIES** – An update on Elephant Energy’s progress regarding the activities currently in progress, including:
  - A. Sales Data**
  - B. Activity 3: Marketing Campaign Development (7/1/2014–9/30/2014)**
  - C. Activity 4: Establishment of New Regional Hub Shops (5/1/2014–3/31/2016)**
  - D. Activity 5: Namibia–Regional Pilot Project (7/1/2014–8/30/2014)**
  - E. Activity 6: divi Sales Model Establishment: Agent Selection, Training and Marketing (8/1/2014–10/31/2014)**
  - F. Activity 7: Namibia – Nationwide Product Roll-Out (10/1/2014–1/31/2015)**
  - G. Evaluation Activities**
- 2. UPDATE ON KEY QUARTERLY INDICATORS** – An update on the quarterly indicators that were agreed upon during finalization of the grant contract and updated in Milestone 1.
- 3. UPDATED EVALUATION PLAN** – Updated evaluation plan, including updated metrics.

**1. UPDATE ON KEY PROJECT ACTIVITIES, INCLUDING EVALUATION ACTIVITIES** – An update on Elephant Energy’s progress regarding the activities currently in progress, including:

- A. Sales Data:** Since submitting Milestone Report 3, Elephant Energy realized that an accounting error led to a gross under-representation of sales. The Program Director is working quite closely with Elephant Energy’s accounting firm in Namibia to fix the errors and to ensure sales data moving forward is accurate. As soon as accounting for 2014 has been completed, Elephant Energy can resubmit sales data for the first nine months of the grant. Further, because of current accounting, while the sales numbers below are accurate, Elephant Energy does not have a precise breakdown of the exact products sold in each region. This data will be updated and shared with the USAID DIV team as soon as possible.

The following table includes sales data for sales of non-divi products in five of Elephant Energy’s six regions from October 1, 2014 through November 30, 2014. Due to staff turnover in the Otjizondjupa region, there were no sales in that region in October and November. With a new Regional Sales Manager now in place, sales picked back up in Otjizondjupa in December, and those figures will be included in updated sales figures to be sent in 2015.

<b>REGION</b>	<b>TOTAL SALES IN \$NAD</b>
Zambezi	\$63,283.50
Khomas	\$20,698.50
Kavango	\$71,196.00
Ohangwena	\$18,439.00
Oshana	\$29,260.00
<b>TOTAL IN ALL REGIONS</b>	<b>\$202,877.00 NAD</b>

**B. Activity 3: Marketing Campaign Development (7/1/2014–9/30/2014)**

To begin this activity, Elephant Energy has met with two marketing firms that specialize in rural, international marketing strategy development and consultation. Based on findings from the interview and assessment process, Elephant Energy believes it has selected an appropriate firm. That said, and partially as a result of shifting the overall program model in-country, we have not yet engaged a firm to help with the development of a new marketing strategy. Instead, Elephant Energy’s Program Manager in Namibia has been meeting with Regional Sales Managers to determine their marketing needs and to assess existing marketing materials and strategies. Elephant Energy will prioritize the development of a new marketing strategy in the first quarter of 2015.

**C. Activity 4: Establishment of New Regional Hub Shops (5/1/2014–3/31/2016)**

As was introduced in Milestone 2 report (submitted July 2014), Elephant Energy has determined that the Regional Hub Shop model is not the most appropriate model for working in rural Namibia. Instead of emphasizing the development, establishment and strengthening of Regional Hub Shops, Elephant Energy’s Regional Sales Managers are working with brick-and-mortar shops, in addition to individual Sales Agents, to stock and sell solar lights and cell phone chargers.

Despite a slight model shift, Regional Sales Managers continue to conduct ongoing trainings

for Sales Agents and brick-and-mortar shops to keep them abreast of operating strategies, to assess progress towards sales targets, and to discuss new sales and marketing strategies.

**D. Activity 5: Namibia–Regional Pilot Project (7/1/2014–8/30/2014)**

In June 2014, Elephant Energy and divi, Inc. formalized an agreement related to the divi-enabled Sun King Pro 2, and while the finalization of the lamps has been slower than originally anticipated, the first batch of lamps will be ready for distribution in coming weeks. Elephant Energy anticipates that the first lamps will arrive in Namibia from Greenlight Planet in early February, but divi has created a first run of 75 lamps, which will be arriving in Namibia before the end of January. With these first 75 lamps, Elephant Energy will conduct a two-site pilot in Namibia and will collect data to guide the full-scale rollout of the divi-enabled Sun King Pro 2.

**E. Activity 6: divi Sales Model Establishment: Agent Selection, Training and Marketing (8/1/2014–10/31/2014)**

In anticipation of the start of the regional pilot, Sales Agents who will be participating in the sale of divi-enabled Sun King Pro 2's have been selected, and cell phones have been distributed to Regional Sales Managers and Sales Agents throughout the country. In addition, all Regional Sales Managers, and selected Sales Agents have received training on the use of the cell phone app and the connectivity between the app and the lights/cell phone chargers.

**F. Activity 7: Namibia – Nationwide Product Roll-Out (10/1/2014–1/31/2015)**

As has been described, the large-scale development and distribution of the divi-enabled Sun King Pro 2 will begin in mid-late January. As such, the nationwide rollout will be reported in the Milestone 6 report. Regional Sales Managers and select Sales Agents have the training and equipment required to begin sales of divi products as soon as they arrive in-country.

**G. Evaluation Activities**

As was introduced in Milestone Report 2, Elephant Energy conducted baseline surveys in Quarter 3, which will be used in the development of the 2015 marketing plan and the creation of marketing materials. This baseline survey, which was attached in Milestone Report 2, contained demographic information, regional data/information, as well as sales data.

Focus groups with customers who purchase divi-enabled Sun King Pro 2 lamps were to be conducted in July/August, however, the delay in final design and building of the divi-enabled lamps has led to an altered timeline for the focus groups, as well. These focus groups will be designed and conducted in quarter 1 or 2 in 2015, once divi-enabled products are more widely available in the country.

Finally, Elephant Energy has been closely monitoring the sales and payback of the diviLite (the smaller, divi-enabled light that is currently available throughout Namibia). The online sales/monitoring platform contains invaluable data about the payments, sales cycle and demand for this particular product. Since increasing the capacity for Regional Sales Managers and Sales Agents to sell the divi-enabled products (in August/September), the sale and payback of divi-enabled products has increased steadily, with the highest levels of sales occurring in November and December.

- 2. UPDATE ON KEY QUARTERLY INDICATORS** – An update on the quarterly indicators that were agreed upon during finalization of the grant contract and updated in Milestone 1.

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
Result 2: 6,300 products sold in Year 1	Number of solar products sold	Please see sales data above
Result 5: divi-focused marketing strategy created	Number of customers surveyed/focus groups performed per region  Marketing strategy document produced	To date, 39 individuals from three regions have participated in baseline surveys.  Focus groups will commence in Q1 2015, once divi-enabled products are more readily available in the country.  Marketing strategy document will be developed in 2015, based on the pilot of divi-enabled Sun King Pro 2 lamps/cell phone chargers.
<b>BUSINESS MODEL AND divi TECH. ANALYSIS</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
Divi product pricing/commission model	Price points and payment structure for divi products	No change in pricing since Milestone Report 3
Divi product pricing/commission model	Margins (credit and lamps)	No change in pricing since Milestone Report 3

- 3. UPDATED EVALUATION PLAN** – Updated evaluation plan, including updated metrics.

As this time, Elephant Energy does not wish to update its evaluation plan or metrics. It is possible that Elephant Energy will revisit and update metrics to better align with Year 1 realities once the team is equipped with updated sales and revenue data for 2014. Further, once Elephant Energy has a final timeline for the nationwide rollout of divi-enabled Sun King Pro 2 lamps/cell phone chargers, the evaluation plan will be updated to accurately reflect the timeline.

**Creating Digital Kerosene Project, AID-OAA-F-13-00060  
Milestone 6 Report**

**Submitted by Elephant Energy  
April 1, 2015**

**For the United States Agency for International Development (USAID)  
Development in Innovations Fund (DIV) Project**

This report for Milestone 6 will document the following sections:

- 1. UPDATE ON KEY PROJECT ACTIVITIES, INCLUDING EVALUATION ACTIVITIES** – An update on Elephant Energy’s progress regarding the activities currently in progress, including:
  - A. Sales Data**
  - B. Activity 5: Namibia – Regional Pilot Project (7/1/2014–8/30/2014)**
  - C. Activity 6: divi Sales Model Establishment: Agent Selection, Training and Marketing (8/1/2014–10/31/2014)**
  - D. Activity 7: Namibia – Nationwide Product Roll-Out (10/1/2014–1/31/2015)**
  - E. Activity 10: Evaluation & Impact Assessment (1/1/15–3/31/15)**
- 2. UPDATE ON KEY INDICATORS** – An update on the quarterly indicators that were agreed upon during finalization of the grant contract and updated in Milestone 1.
- 3. UPDATED FINANCIAL STATEMENTS** – Sales and revenue projections for Namibia.

**1. UPDATE ON KEY PROJECT ACTIVITIES, INCLUDING EVALUATION ACTIVITIES** – An update on Elephant Energy’s progress regarding the activities currently in progress, including:

**A. Sales Data:** The following table includes sales data (excluding sales of all divi-enabled products) from April 1, 2014 through February 16, 2015 in each of Elephant Energy’s six regions. March data has not yet been compiled. It will be included in subsequent Milestone Reports.

<b>REGION</b>	<b>TOTAL SALES IN \$NAD</b>	<b>TOTAL PRODUCTS SOLD</b>
Zambezi	\$88,410.00	250
Khomas	\$34,950.00	99
Kavango	\$243,640.00	709
Ohangwena	\$207,970.00	563
Otjizondjupa	\$21,830.00	61
Oshana	\$54,950.00	155
<b>TOTAL NON-DIVI SALES</b>	<b>\$651,750.00 NAD</b>	<b>1,837</b>

**DIVI-ENABLED LIGHTS**

<b>LAMP</b>	<b>TOTAL SALES IN \$NAD</b>	<b>TOTAL PRODUCTS SOLD</b>
Sun King Pro 2	\$17,160.00	39
diviLite	\$55,536.00	312
<b>TOTAL DIVI SALES</b>	<b>\$72,696.00 NAD</b>	<b>351</b>
<b>TOTAL SALES</b>	<b>\$724,446.00 NAD</b>	<b>2,188</b>

**B. Activity 5: Namibia–Regional Pilot Project (7/1/2014–8/30/2014)**

Since the Milestone 5 Report, two small shipments of divi-enabled Sun King Pro 2s have arrived in Namibia. While the initial shipment of 70 lamps were distributed to Senior Regional Sales Managers in just two regions (Kavango and Ohangwena), the second batch of lamps have now been distributed among remaining regions with active divi Sales Agents. In the weeks since lamps have been distributed throughout the country, 39 lamps have been sold. A third shipment of divi-enabled Sun King Pro 2s will arrive in Namibia in the next few weeks.

**C. Activity 6: divi Sales Model Establishment: Agent Selection, Training and Marketing (8/1/2014–10/31/2014)**

To date, 15 Sales Agents have been trained to sell divi-enabled lights. These 15 individuals have received information on how to best sell these new products and how to talk about the benefits of the pay-to-own technology.

**D. Activity 7: Namibia – Nationwide Product Roll-Out (10/1/2014–1/31/2015)**

divi-enabled Sun King Pro 2 lights are currently readily available throughout Elephant Energy’s distribution network in Namibia. Distribution of these lamps is happening exclusively through Sales Agents, rather than involving retail shops. Elephant Energy hopes that focusing on sales through Agents will help increase reach to the most rural individuals,

while building strong relationships between customers and Agents.

**E. Activity 10: Evaluation & Impact Assessment (1/15/2015–3/31/2015)**

Because the initial sales of divi-enabled Sun King Pro 2s began later than expected, Elephant Energy has not yet completed follow-up surveys to determine money-savings, financing, average earning per entrepreneur, employment/creation of new jobs, and/or customer satisfaction. Additionally, because most customers are still engaged in the payback process, the payback period and energy savings cannot yet be calculated. These indicators will be reported in subsequent reports.

**2. UPDATE ON KEY INDICATORS** – An update on the key indicators that were agreed upon during finalization of the grant contract and updated in Milestone 1.

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
Result 1: Expand distribution network within eight regions in Namibia in Year 1 & expand distribution network to one new region in Zambia in Year 2	Number of Retail Shop partnerships established	10
	Number of Retail Shops active at project end in project regions	TBD at the end of the project
	Number of Sales Agents established	48
	Number of Sales Agents active in project regions	48
Result 2: 6,300 products sold in Year 1	Number of solar products sold	Please see sales data above
Result 8: 40 Sales Agents are recruited, trained, stocked and financed with resupply links to Retail Shops	Number of Sales Agents established	48
	Number of trained Sales Agents active at project end	TBD at the end of the project
Result 9: diviLux products and sales system integrated into Sales Agent model, providing financing options for customers	Number of Sales Agents with capacity to administer divi system	15
Result 10: Namibia Regional Managers transition to independent agents/businesses	Number of active Regional Sales Managers in Namibia at the end of the project	TBD at the end of the project
<b>BUSINESS MODEL AND</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
<b>divi TECH. ANALYSIS</b>		
Divi product payment structure/schedule	Product repayment rates	This will be reported on once divi-enabled lights have been included in the distribution network for more time
Equipment/technology functioning	Breakages, mechanical issues with lamp, mechanical issues with operation of divi firmware	This will be reported on once divi-enabled lights have been included in the distribution network for more time
Distribution/virality	Average number of customers per Sales Agent and Retail shop	This will be reported on once divi-enabled lights have been included in the distribution network for more time
Distribution/virality	Number of customers who sell divi products	This will be reported on once divi-enabled lights have been included in the distribution network for more time
Distribution/virality	Ease of credit purchase transactions by divi sellers	This will be reported on once divi-enabled lights have been included in the distribution network for more time
Customer satisfaction	Level of satisfaction with the payment scheme	Will be assessed in follow-up customer surveys
Customer satisfaction	Level of satisfaction with divi products	Will be assessed in follow-up customer surveys
Customer satisfaction	Ease of use/understanding the user interface payment tracking system	Will be assessed in follow-up customer surveys
Sales Agent/Retail Shop satisfaction	Level of satisfaction with divi sales/payment process	Will be assessed in follow-up customer surveys
Sales Agent/Retail Shop satisfaction	Level of satisfaction with incentive structure	Will be assessed in follow-up customer surveys
Sales Agent/Retail Shop satisfaction	Ease of use of the device used for credit distribution (divi user interface/phone app)	Will be assessed in follow-up customer surveys
<b>PROJECT IMPACTS</b>		
<b>INDICATOR(S)</b>		
<b>FINDINGS</b>		
<b>COMBATING POVERTY</b>		
Household-level economic savings from reduced expenditures on energy	Money savings at the customer/household level	Will be assessed in follow-up customer surveys
Creation of employment	Number of people employed (full- and part-time) as a result of the project (Sales Agents)	48

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
Creation of employment	Number of active EE staff members by country (full- and part-time)	Currently EE employees two full-time staff in the US and 6 full-time in Namibia
Increase in income level among product resellers	Average earnings per EE product reseller	While there are significant discrepancies between the commissions earned by Regional Sales Managers, the average earnings above and beyond monthly salary are N\$1,037 (US\$104)
Work that is enabled because of increased access to light/cell phone	Gain in number of productive hours of light/cell phone use per day  Activities enabled due to increased access to energy	Estimates point to a four-hour increase in productive hours  Will be assessed in follow-up customer surveys
<b>GAINS IN ACCESSIBILITY OF ENERGY FROM “PAY TO OWN”-ENABLED PRODUCTS</b>		
Increased availability of energy because of finance-enabled products	Monthly product sales and pre- and post-introduction of divi products	This will be reported on once divi-enabled lights have been included in the distribution network for more time
<b>INCREASED ACCESS TO ENERGY</b>		
Increased access to/use of lighting and charging technologies	Total number of lights sold	Please see sales data above
Increased access to/use of lighting and charging technologies	Total number of users of each product	Will be assessed in follow-up customer surveys
Increased access to/use of lighting and charging technologies	Ongoing light usage rates for users	Will be assessed in follow-up customer surveys
Increased access to/use of lighting and charging technologies	Ongoing cell phone charger usage rates for users	Will be assessed in follow-up customer surveys
<b>GENDER</b>		
Participation of women as product resellers	Number of Sales Agents, staff and partner shop staff who are women	29 female Sales Agents
Participation of women in project preparation and implementation	Number of staff who are women	Three full-time staff members (out of eight) are women
<b>GOOD GOVERNANCE</b>		
Participation of stakeholders in project planning,	Number of focus groups/workshops conducted	Elephant Energy consistently engages customers, staff, partners and other stakeholders in project planning and

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
implementation and management		implementation.
Participation of customers in project planning, implementation and management	Number of customer surveys conducted  Number of focus groups/workshops conducted	39 surveys have been completed to date  Focus groups will commence once divi-enabled lights have been in distribution longer
<b>HIV/AIDS</b>		
Persons with HIV/AIDS will be free to participate in all aspects of the project	Persons with HIV/AIDS are free to participate in the project	Elephant Energy adheres to all Namibian laws prohibiting discrimination against any individuals for their AIDS/HIV status

### **3. UPDATED FINANCIALS–**

Please see attached spreadsheet for updated sales and revenue projections. Please note, this spreadsheet does not include sales projections for Zambia, as market assessment is still being completed.

**Creating Digital Kerosene Project, AID-OAA-F-13-00060  
Milestone 8 Report**

**Submitted by Elephant Energy  
August 3, 2015**

**For the United States Agency for International Development (USAID)  
Development in Innovations Fund (DIV) Project**

This report for Milestone 8 will document the following sections:

- 1. UPDATE ON KEY PROJECT ACTIVITIES, INCLUDING EVALUATION ACTIVITIES** – An update on Elephant Energy’s progress regarding the activities currently in progress, including:
  - A. Sales Data**
  - B. Activity 1: Project Establishment and Management (4/1/2014–3/31/2016)**
  - C. Activity 2: Web-Based Sales Platform Development (4/1/2015–5/28/2015)**
  - D. Activity 3: Marketing Campaign Development (6/1/2015–7/30/2015)**
  - E. Activity 4: Establishment of New Regional Hub Shops (5/1/2014–3/1/2016)**
  - F. Activity 6: divi Sales Model Establishment: Agent Selection, Training and Marketing (8/1/2014–10/31/2014; 7/1/2015–9/31/2016)**
  - G. Activity 7: Namibia – Nationwide Product Roll-Out (10/1/2014–1/31/2015)**
  - H. Activity 8: Namibia – Regional Manager Transition to Independent Agents (4/1/2015–3/31/2016)**
  - I. Activity 10: Evaluation & Impact Assessment (1/1/15–3/31/15)**
- 2. UPDATE ON KEY INDICATORS** – An update on the quarterly indicators that were agreed upon during finalization of the grant contract and updated in Milestone 1.
- 3. UPDATED FINANCIAL STATEMENTS** – Quarter 2 updated financial statements.

**1. UPDATE ON KEY PROJECT ACTIVITIES, INCLUDING EVALUATION ACTIVITIES** – An update on Elephant Energy’s progress regarding the activities currently in progress, including:

**A. Sales Data:** The following tables include sales data from April 1, 2014 through June 30, 2015 in each of Elephant Energy’s regions.

**NON-DIVI-ENABLED LIGHTS**

<b>REGION</b>	<b>TOTAL SALES IN \$NAD</b>	<b>TOTAL PRODUCTS SOLD</b>
Zambezi	\$139,050.00	434
Khomas	\$65,270.00	177
Kavango	\$294,280.00	855
Ohangwena	\$253,270.00	689
Otjizondjupa	\$31,690.00	87
Oshana	\$97,320.00	304
Head Office*	\$4,010.00	11
<b>TOTAL NON-DIVI SALES</b>	<b>\$884,890.00 NAD</b>	<b>2,557</b>

**DIVI-ENABLED LIGHTS**

<b>LAMP</b>	<b>TOTAL SALES IN \$NAD</b>	<b>TOTAL PRODUCTS SOLD</b>
Sun King Pro 2	\$47,520.00	108
diviLite	\$68,874.00	483
<b>TOTAL DIVI SALES</b>	<b>\$116,394.00 NAD</b>	<b>591</b>
<b>TOTAL SALES</b>	<b>\$1,001,284.00 NAD</b>	<b>3,148</b>

\* Elephant Energy has only been tracking sales from the head office separately since March 2015. Prior to that, sales from the head office were incorporated into the Oshana regional sales.

**B. Activity 1: Project Establishment and Management (4/1/2014–3/31/2016)**

This activity was modified per a June 29, 2015 email with Alex Riehm. Details related to Elephant Energy’s expansion into Zambia are detailed in Milestone Report 9.

**C. Activity 2: Web-Based Sales Platform Development (4/1/2015–5/28/2015)**

This activity was modified per a June 29, 2015 email with Alex Riehm. Details related to Elephant Energy’s expansion into Zambia are detailed in Milestone Report 9.

**D. Activity 3: Marketing Campaign Development (6/1/2015–7/30/2015)**

This activity was modified per a June 29, 2015 email with Alex Riehm. Details related to Elephant Energy’s expansion into Zambia are detailed in Milestone Report 9.

**E. Activity 4: Establishment of New Regional Hub Shops (5/1/2014–3/1/2016)**

This activity, as it relates to Zambia, was modified per a June 29, 2015 email with Alex Riehm. Details related to Elephant Energy’s expansion into Zambia are detailed in Milestone Report 9. Regarding activities in Namibia, retail shops, Sales Agents and Regional Sales Managers

continue to meet and receive training on a regular basis. Regional Sales Managers now have a two-day staff meeting each month to increase training and education opportunities. In recent months, staff training has emphasized effective use of Microsoft Excel, basic accounting training and role-playing examples of effective product demonstrations. Training for retail shops and Sales Agents have focused on marketing and sales strategies related to the divi technology.

**F. Activity 6: divi Sales Model Establishment: Agent Selection, Training and Marketing (8/1/2014–10/31/2014)**

This activity was modified per a June 29, 2015 email with Alex Riehm. Details related to Elephant Energy’s expansion into Zambia are detailed in Milestone Report 9.

**G. Activity 7: Namibia – Nationwide Product Roll-Out (10/1/2014–1/31/2015)**

Elephant Energy currently has 13 Sales Agents and five Regional Sales Managers trained in the sale and maintenance of divi-enabled lights. All remaining diviLite products have been sold and Elephant Energy has sold nearly the entire initial run of divi-enabled Sun King Pro 2 lights (now called the Sun King Pro 2 Easy Buy). Sales have been accelerating since the spring and in August, Elephant Energy will begin a new series of radio advertisements that emphasize the value of divi-enabled products. With increased marketing of the product, and continued training on effective sales strategies and accounting, Elephant Energy is confident that sales will increase even more.

**H. Activity 8: Namibia – Regional Manager Transition to Independent Agents (4/1/2015–3/31/2016)**

The process of transitioning Regional Sales Managers to Independent Agents is proving to be a slower one than initially anticipated. While regional sales are sufficient to cover the salaries of Regional Sales Managers, the support they receive from Elephant Energy in the form of training, product purchases and other business supports makes the goal of them becoming independent a bit further down the road. As has been stated, the Program Manager continues to hold monthly meetings to equip Regional Sales Managers with the skills they need to move towards effective business management, but the team is not yet in a position to transition to independence.

**I. Activity 10: Evaluation & Impact Assessment (1/15/2015–3/31/2015)**

Because the first round of divi-enabled Sun King Pro 2 Easy Buy lamps has only recently been paid in full, Elephant Energy has not yet completed follow-up surveys to determine money-savings, financing, average earning per entrepreneur, employment/creation of new jobs, and/or customer satisfaction. These indicators will be reported in subsequent reports.

Regarding payback periods, 81 Sun King Pro 2 Easy Buy lamps have been paid in full. Of those, the following table illustrates the payback period of the lamp:

<b>Payback Period</b>	<b>Percent of total (n)</b>
Immediate payoff	27% (22)
4 Days – 3 Weeks	19% (15)
4 Weeks – 6 Weeks	28% (23)

7 Weeks – 8 Weeks	21% (17)
More than 8 weeks	5% (4)

Elephant Energy’s recommended payback period is eight weeks and, as the data demonstrate, 95% of customers who have paid off their lamps have done so in the recommended payback period and 78% of customers (*n* = 60) have paid off their lamps in under eight weeks.

There are an additional 22 lamps currently in active repayment and 24 that are overdue for payments. Elephant Energy is actively working with Regional Sales Managers to identify strategies to re-engage customers who have overdue lamps and we are providing additional training to both Regional Sales Managers and Sales Agents to ensure staff and the sales force are aware of best practices for initial sales and for accurately and effectively tracking follow-up payments.

**2. UPDATE ON KEY INDICATORS** – An update on the key indicators that were agreed upon during finalization of the grant contract and updated in Milestone 1.

RESULT	INDICATOR(S)	FINDINGS
Result 1: Expand distribution network within eight regions in Namibia in Year 1 & expand distribution network to one new region in Zambia in Year 2	Number of Retail Shop partnerships established	15
	Number of Retail Shops active at project end in project regions	TBD at the end of the project
	Number of Sales Agents established	82
	Number of Sales Agents active in project regions	58
Result 2: 6,300 products sold in Year 1	Number of solar products sold	Please see sales data above
Result 3: Regional Market Assessments conducted with up to ten potential Hub Shop partners in each region	Number of potential Hub Shop partners per region surveyed	This result will be dependent on the final approach utilized in Zambia. Please see Milestone 9 Report for more detail.
Result 8: 40 Sales Agents are recruited, trained, stocked and financed with resupply links to Retail Shops	Number of Sales Agents established	82
	Number of trained Sales Agents active at project end	TBD at the end of the project
Result 9: diviLux products and sales	Number of Sales Agents with capacity to	18 (including Regional Sales Managers)

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
system integrated into Sales Agent model, providing financing options for customers	administer divi system	
Result 10: Namibia Regional Managers transition to independent agents/businesses	Number of active Regional Sales Managers in Namibia at the end of the project	TBD at the end of the project
<b>BUSINESS MODEL AND divi TECH. ANALYSIS</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
Divi product pricing/commission model	Price points and payment structure for divi products	While the pricing scheme/structure to the end user has not been altered, in July Elephant Energy shifted the repayment scheme required for Sales Agents. Rather than requiring an initial deposit of NAD\$250 and two additional payments of NAD\$95 each, the new structure requires an initial deposit of NAD\$150 and additional payments of NAD\$150 and NAD\$140, Our hope is that this new payment scheme will increase access to products for Sales Agents and will increase the number of products in repayment throughout the country.
Divi product payment structure/schedule	Product repayment rates	To date, the repayment rates range from immediate payoff (27% of paid-off lamps) to 3.5 months (1% of paid-off lamps), with 74% ( <i>n</i> = 60) of customers paying off the lamp sooner than the recommended 8-week (or 2 month) repayment scheme.
Equipment/technology functioning	Breakages, mechanical issues with lamp, mechanical issues with operation of divi firmware	To date, there have been no significant challenges with the equipment or the technology.
Distribution/virality	Average number of customers per Sales Agent and Retail shop	This will be reported on once divi-enabled lights have been included in the distribution network for more time
Distribution/virality	Number of customers who sell divi products	This will be reported on once divi-enabled lights have been included in the distribution network for more time
Distribution/virality	Ease of credit purchase transactions by divi sellers	Will be assessed in follow-up customer surveys
Customer satisfaction	Level of satisfaction with the payment scheme	Will be assessed in follow-up customer surveys

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
Customer satisfaction	Level of satisfaction with divi products	Will be assessed in follow-up customer surveys
Customer satisfaction	Ease of use/understanding the user interface payment tracking system	Will be assessed in follow-up customer surveys
Sales Agent/Retail Shop satisfaction	Level of satisfaction with divi sales/payment process	Will be assessed in follow-up customer surveys
Sales Agent/Retail Shop satisfaction	Level of satisfaction with incentive structure	Will be assessed in follow-up customer surveys
Sales Agent/Retail Shop satisfaction	Ease of use of the device used for credit distribution (divi user interface/phone app)	Will be assessed in follow-up customer surveys
<b>PROJECT IMPACTS</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
<b>COMBATING POVERTY</b>		
Household-level economic savings from reduced expenditures on energy	Money savings at the customer/household level	Will be assessed in follow-up customer surveys
Creation of employment	Number of people employed (full- and part-time) as a result of the project (Sales Agents)	58
Creation of employment	Number of active EE staff members by country (full- and part-time)	Currently EE employees two full-time staff in the US and 6 full-time in Namibia (including five Namibian Nationals)
Increase in income level among product resellers	Average earnings per EE product reseller	Since beginning with the commission structure in September 2014, RSMs have continued to experience significant discrepancies with commissions. The average commission since September 2014 is NAD\$760.91 (roughly USD\$77), with the range falling between a low commission of NAD\$63.04 (USD\$6) and a high commission of NAD\$2,422.50 (USD\$242) in a month. Appendix A contains a spreadsheet that demonstrates RSM commission since the structure began.
Work that is enabled because of increased access to light/cell phone	Gain in number of productive hours of light/cell phone use per day	Estimates point to a four-hour increase in productive hours

<b>RESULT</b>	<b>INDICATOR(S)</b>	<b>FINDINGS</b>
	Activities enabled due to increased access to energy	Will be assessed in follow-up customer surveys
<b>GAINS IN ACCESSIBILITY OF ENERGY FROM “PAY TO OWN”-ENABLED PRODUCTS</b>		
Increased availability of energy because of finance-enabled products	Monthly product sales and pre- and post-introduction of divi products	This will be reported on once divi-enabled lights have been included in the distribution network for more time
<b>INCREASED ACCESS TO ENERGY</b>		
Increased access to/use of lighting and charging technologies	Total number of lights sold	Please see sales data above
Increased access to/use of lighting and charging technologies	Total number of users of each product	Will be assessed in follow-up customer surveys
Increased access to/use of lighting and charging technologies	Ongoing light usage rates for users	Will be assessed in follow-up customer surveys
Increased access to/use of lighting and charging technologies	Ongoing cell phone charger usage rates for users	Will be assessed in follow-up customer surveys
<b>GENDER</b>		
Participation of women as product resellers	Number of Sales Agents, staff and partner shop staff who are women	36 female Sales Agents, accounting for 62% of the active Sales Agent network
Participation of women in project preparation and implementation	Number of staff who are women	Four full-time staff members (out of eight) are women
<b>GOOD GOVERNANCE</b>		
Participation of stakeholders in project planning, implementation and management	Number of focus groups/workshops conducted	Elephant Energy consistently engages customers, staff, partners and other stakeholders in project planning and implementation.
Participation of customers in project planning, implementation and management	Number of customer surveys conducted	39 surveys have been completed to date
	Number of focus groups/workshops conducted	Focus groups will commence once divi-enabled lights have been in distribution longer
<b>HIV/AIDS</b>		
Persons with HIV/AIDS will be free to participate in all aspects of the project	Persons with HIV/AIDS are free to participate in the project	Elephant Energy adheres to all Namibian laws prohibiting discrimination against any individuals for their AIDS/HIV status

### **3. UPDATED FINANCIALS–**

Please see attached spreadsheet for updated quarterly financial statements.

## Appendix A: RSM Commission Payments

Employee Name	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March	Apr	May	June	July	Aug
Theo	NAD 0.00	NAD 0.00	NAD 1,830.43	NAD 2,105.00	NAD 1,174.00	NAD 1,705.00	NAD 2,422.50	NAD 726.20	NAD 1,158.70	NAD 1,049.50	NAD 449.00	NAD 620.50	NAD 995.50
Elizabeth	NAD 0.00	NAD 0.00	NAD 361.30	NAD 785.00	NAD 404.00	NAD 1,719.00	NAD 997.00	NAD 391.70	NAD 813.50	NAD 750.50	NAD 514.00	NAD 292.00	NAD 711.50
Dominic	NAD 0.00	NAD 0.00	NAD 639.39	NAD 994.90	NAD 1,529.50	NAD 1,087.00	NAD 63.04	NAD 366.50	NAD 779.20	NAD 786.00	NAD 855.00	NAD 609.00	NAD 530.00
Maria	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 57.00	NAD 156.00	NAD 78.00	NAD 331.50	NAD 670.00	NAD 608.00	NAD 117.00	NAD 539.00	NAD 1,173.00
Ndeyapo	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 681.00	NAD 756.50	NAD 492.50
Nelson	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 200.50	NAD 0.00	NAD 0.00	NAD 0.00
Miriam	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 563.50	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00
Manycoloured	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 97.50	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00
Anna	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 1,772.50	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00	NAD 0.00

### Note:

- 1 The commission are based on the sales from the previous month. e.g. a May commission is based on April invoices
- 2 Commission started in August so September would be the first commission payment.
- 3 There was a stock outage in August, making September a Stock outage pay, no commission paid out.
- 4 All Data except August 2015 is based on reports from BDO
- 5 August 2015 Data based on invoices and calculated by Matt Vanderwerken

**Creating Digital Kerosene Project, AID-OAA-F-13-00060  
Milestone 9 Report**

**Submitted by Elephant Energy  
August 3, 2015**

**For the United States Agency for International Development (USAID)  
Development in Innovations Fund (DIV) Project**

This report for Milestone 9 will document the following sections:

- 1. UPDATE ON KEY PROJECT ACTIVITIES, INCLUDING EVALUATION ACTIVITIES** – An update on Elephant Energy’s progress regarding the activities currently in progress, including:
  - A. Activity 1: Project Establishment and Management (4/1/2014–3/31/2016)**
  - B. Activity 2: Web-Based Sales Platform Development (4/1/2015–5/28/2015)**
  - C. Activity 3: Marketing Campaign Development (6/1/2015–7/30/2015)**
  - D. Activity 4: Establishment of New Regional Hub Shops (5/1/2014–3/1/2016)**
  - E. Activity 6: divi Sales Model Establishment: Agent Selection, Training and Marketing (8/1/2014–10/31/2014; 7/1/2015–9/31/2016)**

**1. UPDATE ON KEY PROJECT ACTIVITIES, INCLUDING EVALUATION ACTIVITIES** – An update on Elephant Energy’s progress regarding the activities currently in progress, including:

**A. Activity 1: Project Establishment and Management (4/1/2014–3/31/2016)**

This activity has several components, including 1.1. Legal establishment in Zambia, 1.2. Building strong partnerships for program implementation, 1.3. Completion of thorough market assessment to justify proposed locations for expansion, and 1.4. Customization of standard operating procedures to align with local contexts.

**1.1 Legal Establishment in Zambia**

In order to determine the best course of action for expansion into Zambia, Elephant Energy has been working with the law firm of Chibesakunda & Co. in Zambia. Through conversations, Elephant Energy has learned that there are several options to consider with regard to expansion:

1. Create a separate Zambian organization to do business through;
2. Register a Zambian branch of Elephant Energy;
3. Partner with an existing Zambian organization that will staff and support Elephant Energy’s work in the country.

**1.2 Partnership Development**

To help facilitate sustainable growth and expansion in Zambia, Elephant Energy is planning to partner with existing NGOs in country to begin distributing lights in the Southern and Western provinces and to then consider registration as a branch, depending on the initial pilot. Elephant Energy has established a relationship with the director of an orphanage who is interested in carrying Elephant Energy products and selling them as an earned income arm of the NGO, and with an organization called Rent-to-Own Zambia (RTO Zambia) that already leases large agricultural products to customers in the Southern province. RTO Zambia is interested in pilot-testing the divi-enabled Sun King Pro 2 lights to see if they can use the light to establish credit with customers who can then apply for larger products in the future. To test this, Elephant Energy will provide lights, training and initial set-up support to this organization to trial the divi-enabled products on the ground. RTO Zambia has been in operation in Zambia for many years, is a trusted entity for communities in Zambia and is very excited about the addition of this product to their product line. While a formal MOU has not yet been established, it is very likely that the divi pilot will begin with RTO Zambia within the next three weeks.

**1.3 Market Assessment**

Attached as Appendix A, please find a market assessment conducted to help articulate the need for Elephant Energy’s programs and products in the Southern and Western provinces of Zambia. As Appendix A illustrates, roughly 20% of Zambia is electrified, with just over 3% of rural Zambia experiencing access to modern electricity. The Southern and Western provinces, in addition to their close proximity to Elephant Energy’s operations in Namibia, have levels of electrification that are below the national average (15.7% and 4.2%, respectively), making them ideal provinces for trial projects and overall expansion.

**1.4 Customization of Standard Operating Procedure**

Elephant Energy is aware that the market in Zambia may well require shifted standard operating procedures than those used in Namibia. That said, final SOP for Zambia cannot be

finalized until the operating model is finalized. For example, if the model moving forward is based on a partnership with RTO Zambia, they will play an important role in determining the price point and the appropriate methods for distribution. One significant benefit to partnerships with existing NGOs is Elephant Energy's ability to leverage supply chains, including warehousing and import support, that are already in place.

**B. Activity 2: Web-Based Sales Platform Development (4/1/2015–5/28/2015)**

Elephant Energy is working with divi to establish an online profile in the divi app for sales in Zambia. Once the final method for distribution/expansion is determined, the final online profile will be created.

**C. Activity 3: Marketing Campaign Development (6/1/2015–7/30/2015)**

According to our research, and not unlike our experience in Namibia, it appears as though radio advertisements will be the best method for communicating with the general public in Zambia. While television, cinema advertising and newspaper ads will be considered, a 2005 thesis on media and advertising in Zambia found that radio is the most important source of news and entertaining and that it has the widest reach of any other form of media in the country.<sup>1</sup> Again, depending on the method of sales and distribution that is chosen, Elephant Energy will either advertise for our own distribution network or to drive customers to the RTO Zambia sales network.

Once appropriate media channels are finalized and the message is clarified based on the distribution network demands, a final marketing plan/campaign will be launched.

**D. Activity 4: Establishment of New Regional Hub Shops (5/1/2014–3/1/2016)**

Because we are no longer using the hub shop model, Elephant Energy staff will not be conducting hub shop surveys as part of the market assessment in Zambia. Rather, the RSM or staff partners on the ground will be responsible for identifying Sales Agents and retail stores for the purpose of distribution. We are hoping that the pilot program with RTO Zambia will give us valuable insight into the opportunities available in Zambia and the best options for distribution in the target provinces.

**E. Activity 6: divi Sales Model Establishment: Agent Selection, Training and Marketing (8/1/2014–10/31/2014)**

Since Elephant Energy is hoping to leverage the existing network of agents who work with RTO Zambia, at least for the initial pilot, the first Agents who will receive training and marketing support are those that are already associated with RTO Zambia. Based on the model selected moving forward, Elephant Energy will use similar recruitment, training and retention strategies to onboard all new divi Sales Agents. Considering ongoing HR challenges in Namibia, Elephant Energy hopes to leverage existing networks as much as possible in Zambia. Based on our experience in Namibia, it seems likely that working alongside established organizations will increase the quality of staff and will increase overall access to qualified individuals in Zambia.

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<sup>1</sup> <http://dspace.unza.zm:8080/xmlui/bitstream/handle/123456789/1173/HamusokweB0001.PDF?sequence=1>

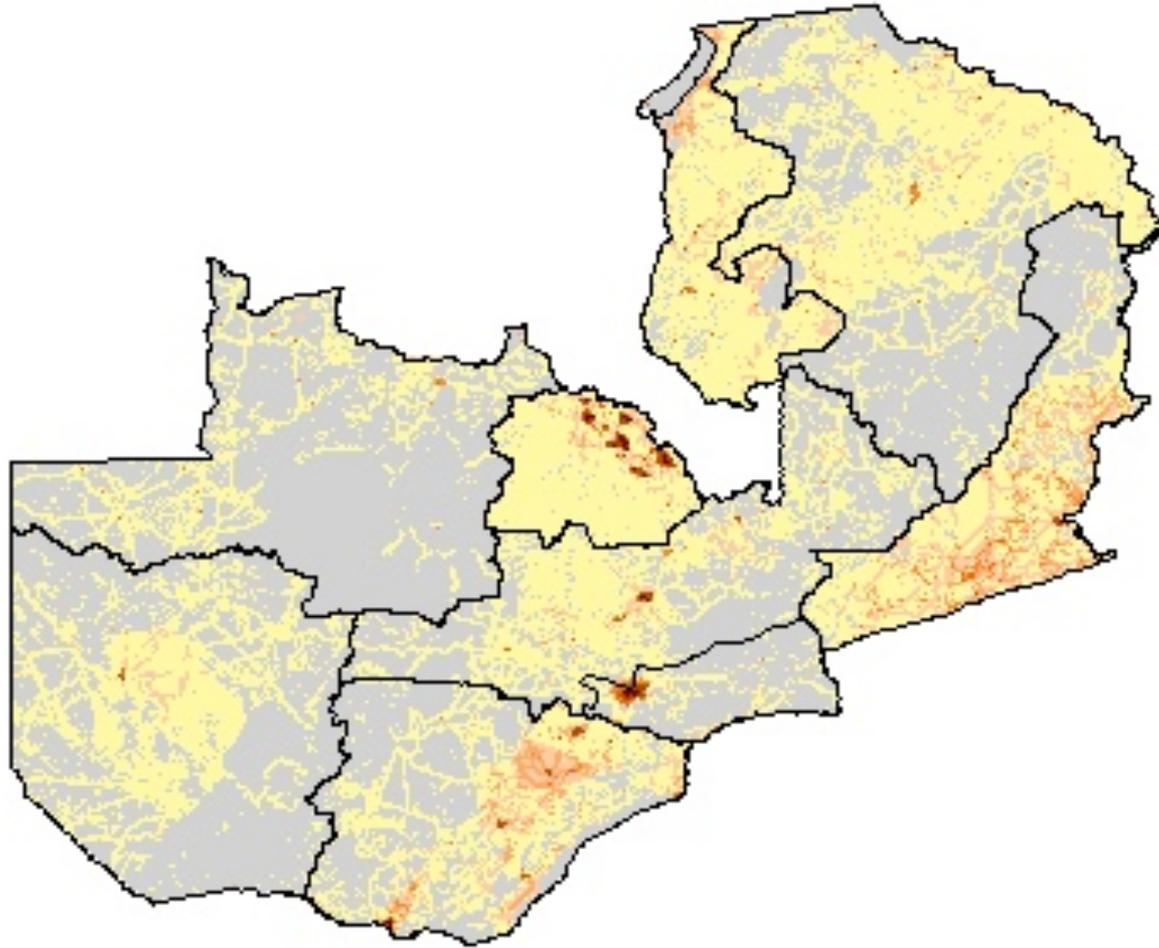
**Appendix A: Market Assessment**



# Political Boundaries

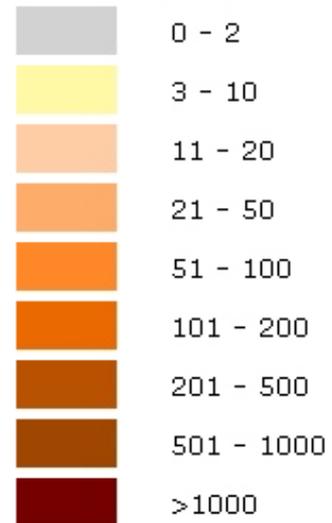


# Population Density



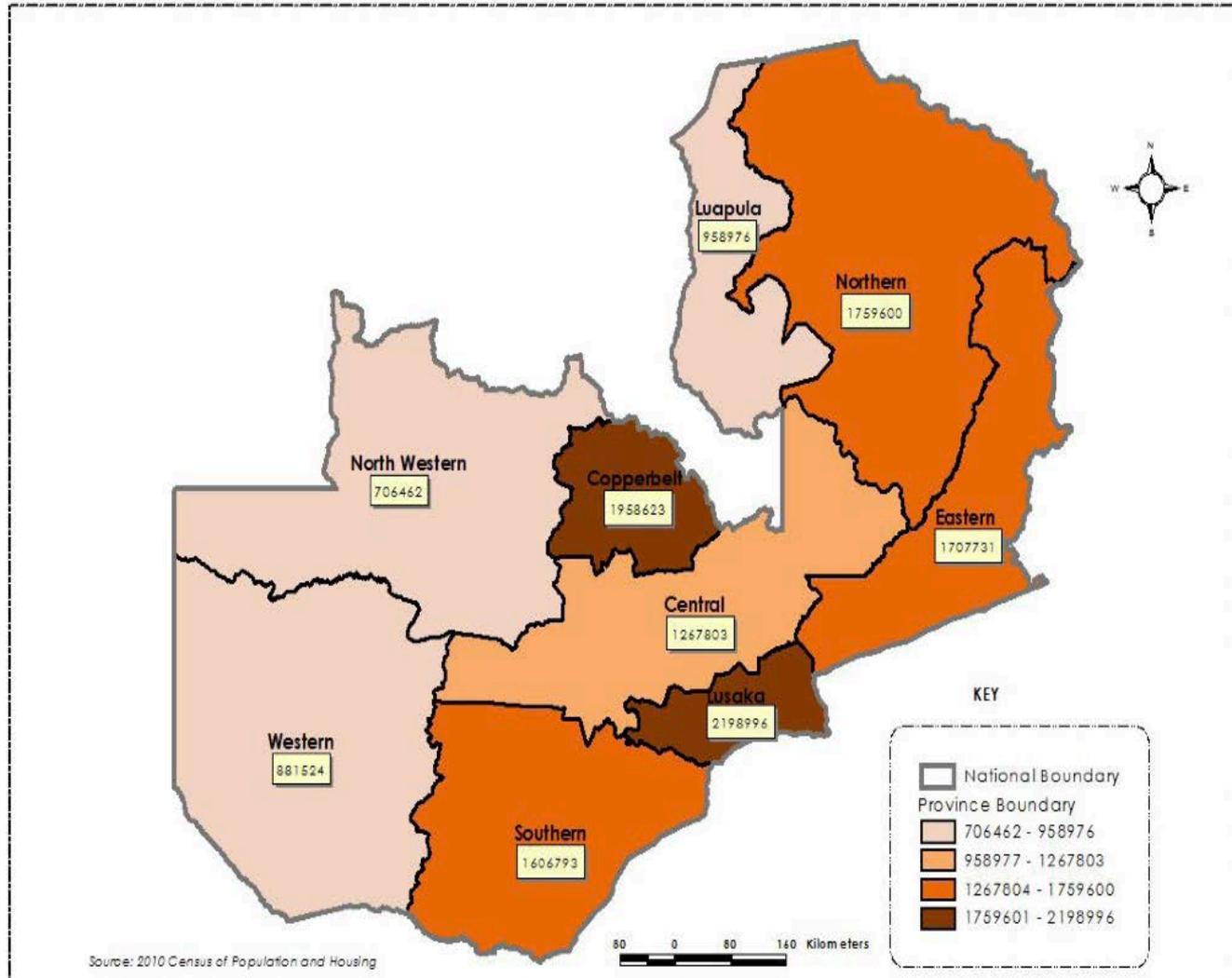
[Zambia Population FAO](#)

Population (People per Sq Km)



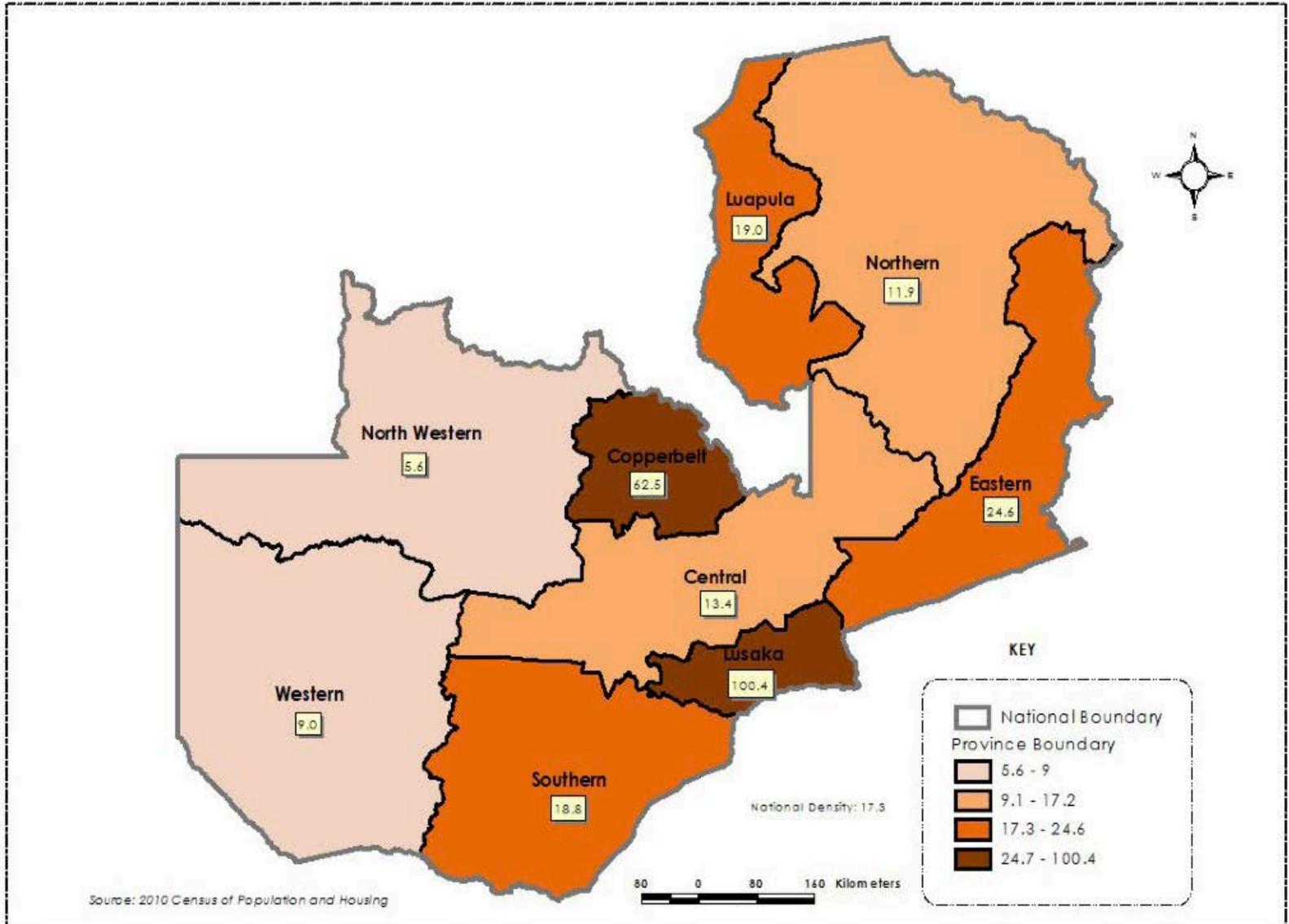
# Population Distribution by Province

Map 1: Population Distribution by Province, Zambia, 2010



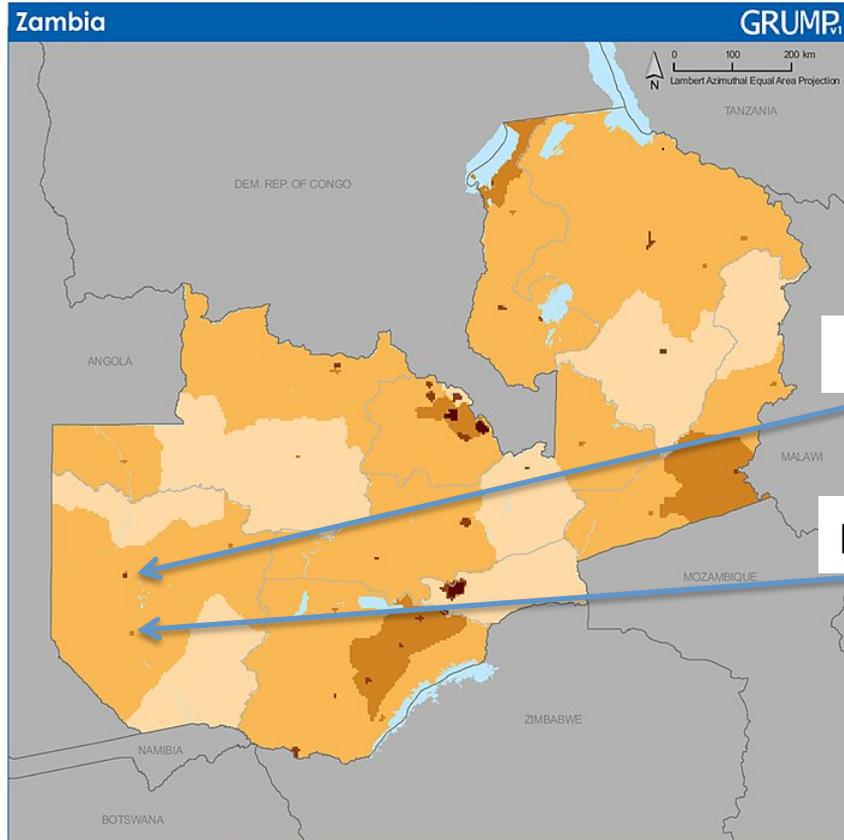
# Population Density

Map 3: Number of Persons per Square Kilometer by Province, Zambia, 2010



# Population Centers

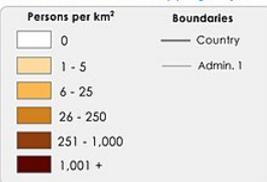
## POPULATION DENSITY, 2000



Lukulu

Mongu

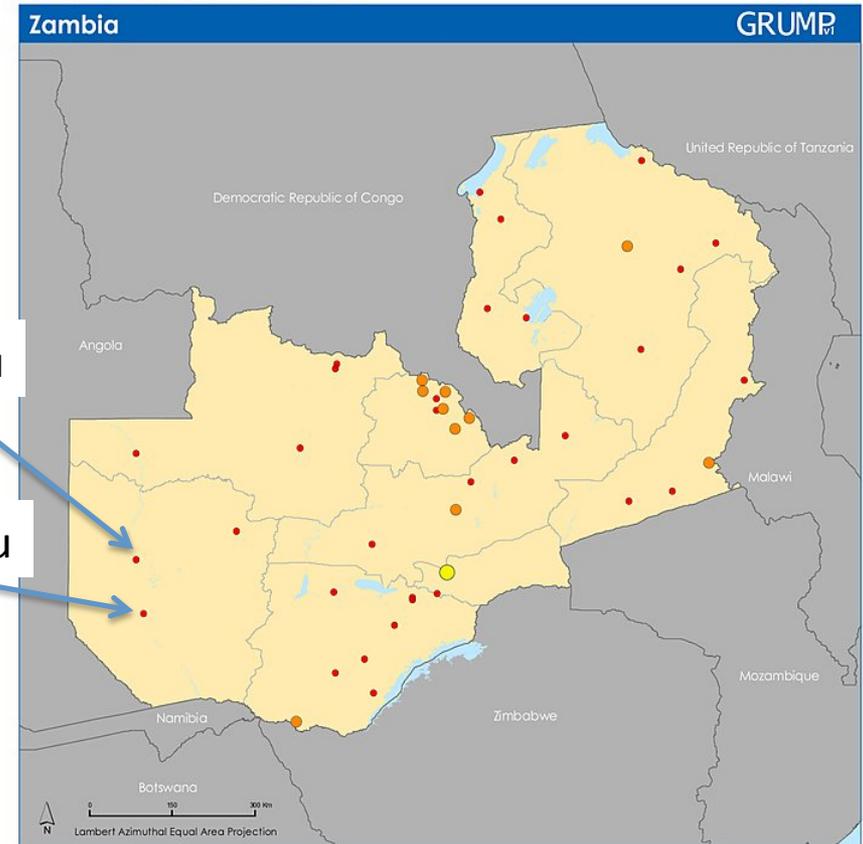
### Global Rural-Urban Mapping Project



Population density measures the number of persons per square kilometer of land area. The data are gridded at a resolution of 30 arc-seconds.

Note: National boundaries are derived from the population grids and thus may appear coarse.

## SETTLEMENT POINTS



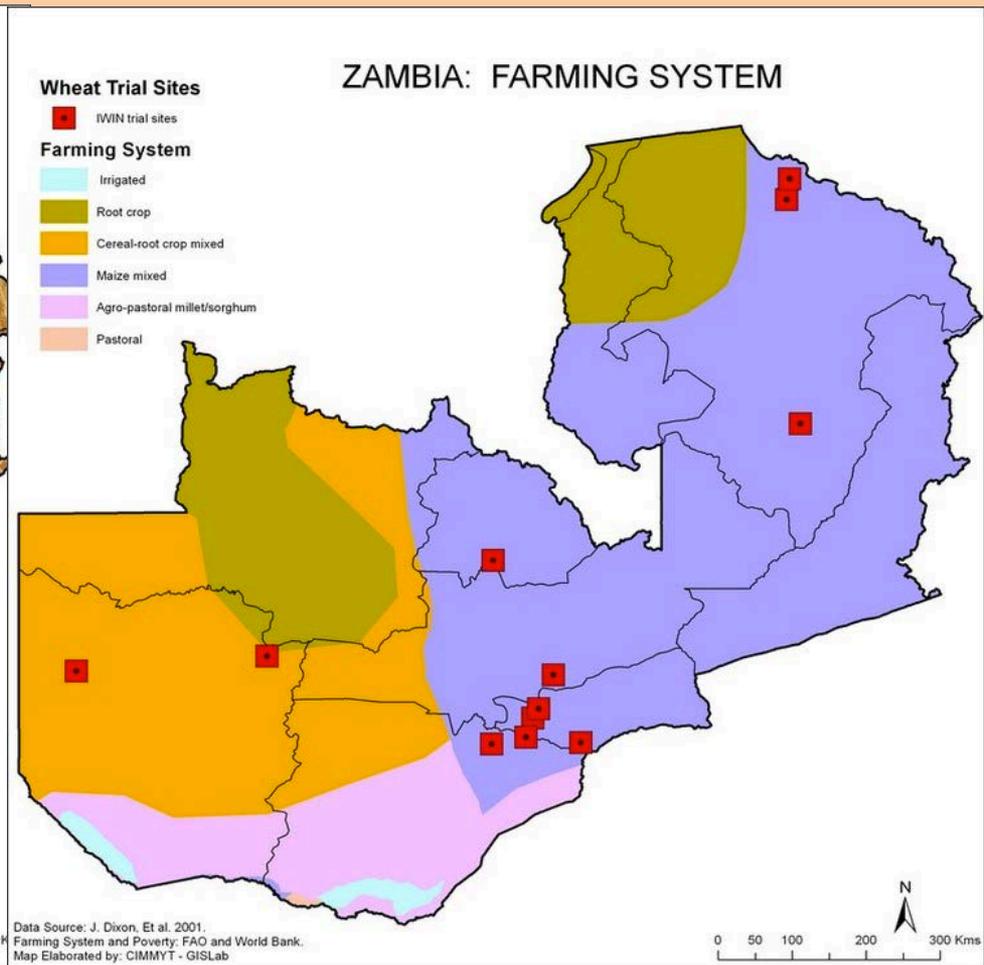
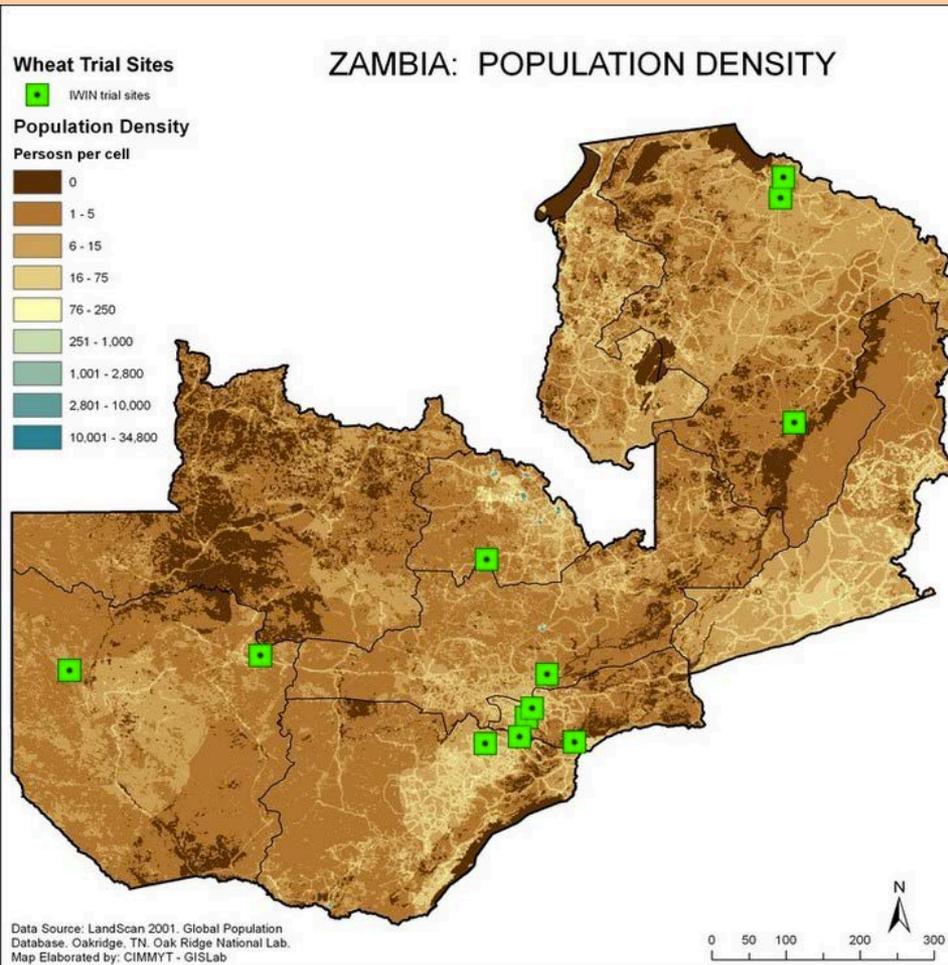
### Global Rural-Urban Mapping Project



Settlement points with population estimates are used in GRUMP as a guide to reallocation of population from rural areas to urban extents defined by stable night-time lights. The level of detail available in the settlement points database varies by country.

Note: National boundaries are derived from the population grids and thus may appear coarse.

# Population and Agriculture





# Population Overview

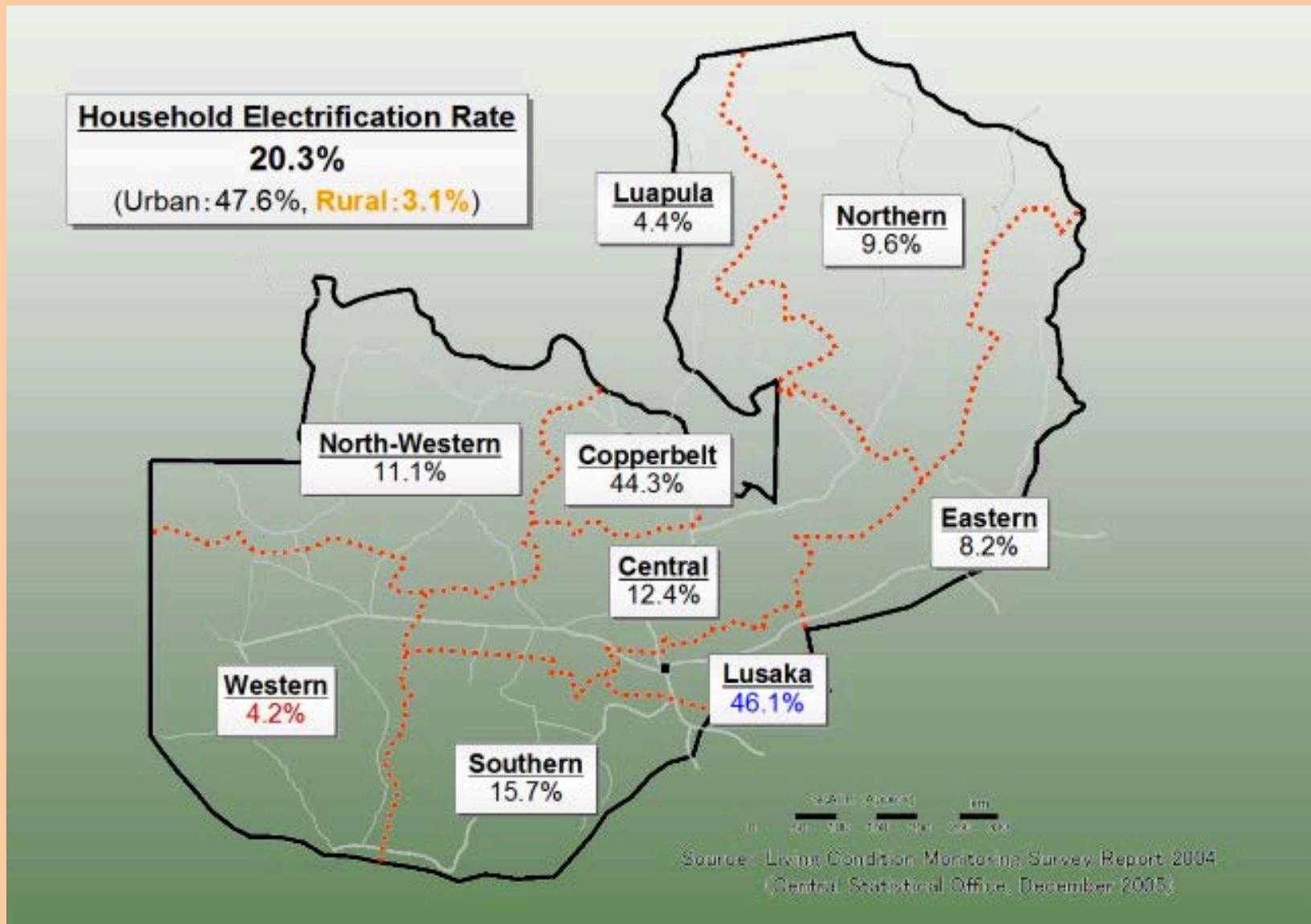
- In comparison with some of its neighbours, Zambia is relatively sparsely populated, particularly in the more remote areas to the west and east, and most of the population is concentrated in the central part of the country, close to the urban areas that grew up around mines and related industries.
- Where are Zambia's rural poor people?

North-western province is one of the poorest, most remote and least developed parts of the country. Eastern and Southern provinces also have a particularly high concentration of poverty. In general the broad central section of the country is more fertile, while in the north the soils tend towards acidity and in the south the climate is drier.

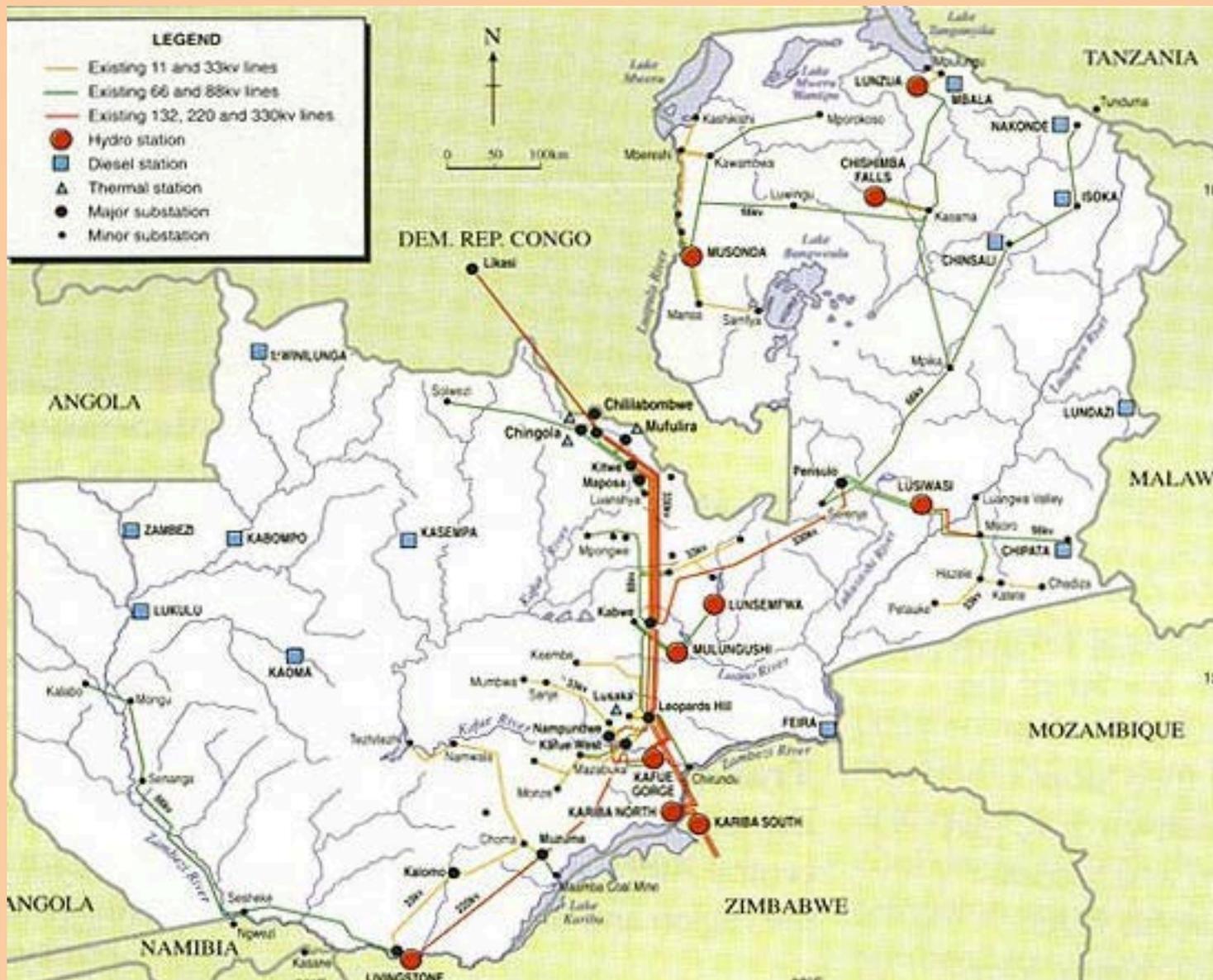
[Population Projections](#)

<http://www.ruralpovertyportal.org/country/home/tags/zambia>

# Household Electrification Rate



# Electrification in Zambia



# Rural Electrification Authority (REA) Projects

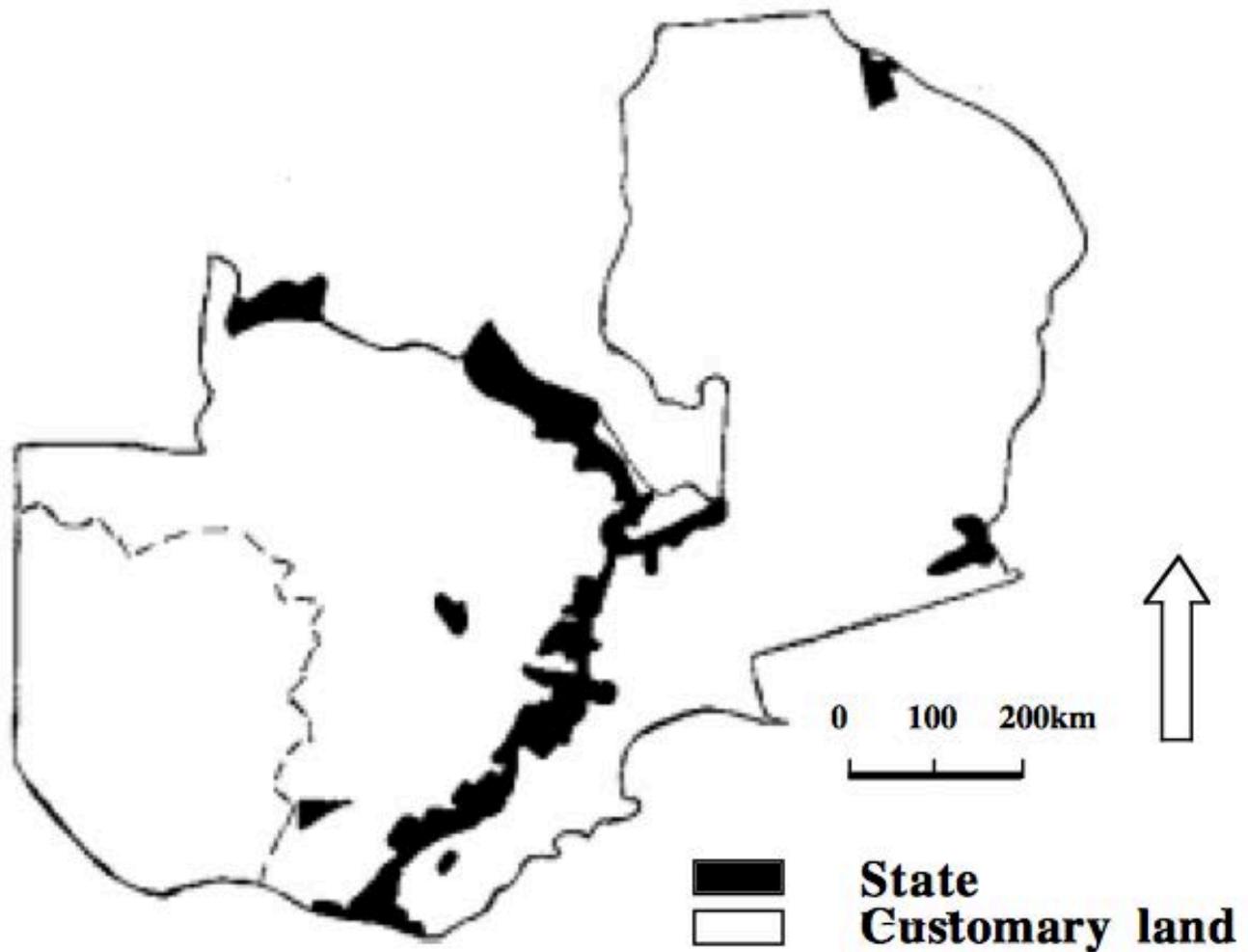
Grid Extension Projects for 2006-02013



# ZESCO Optical Grid



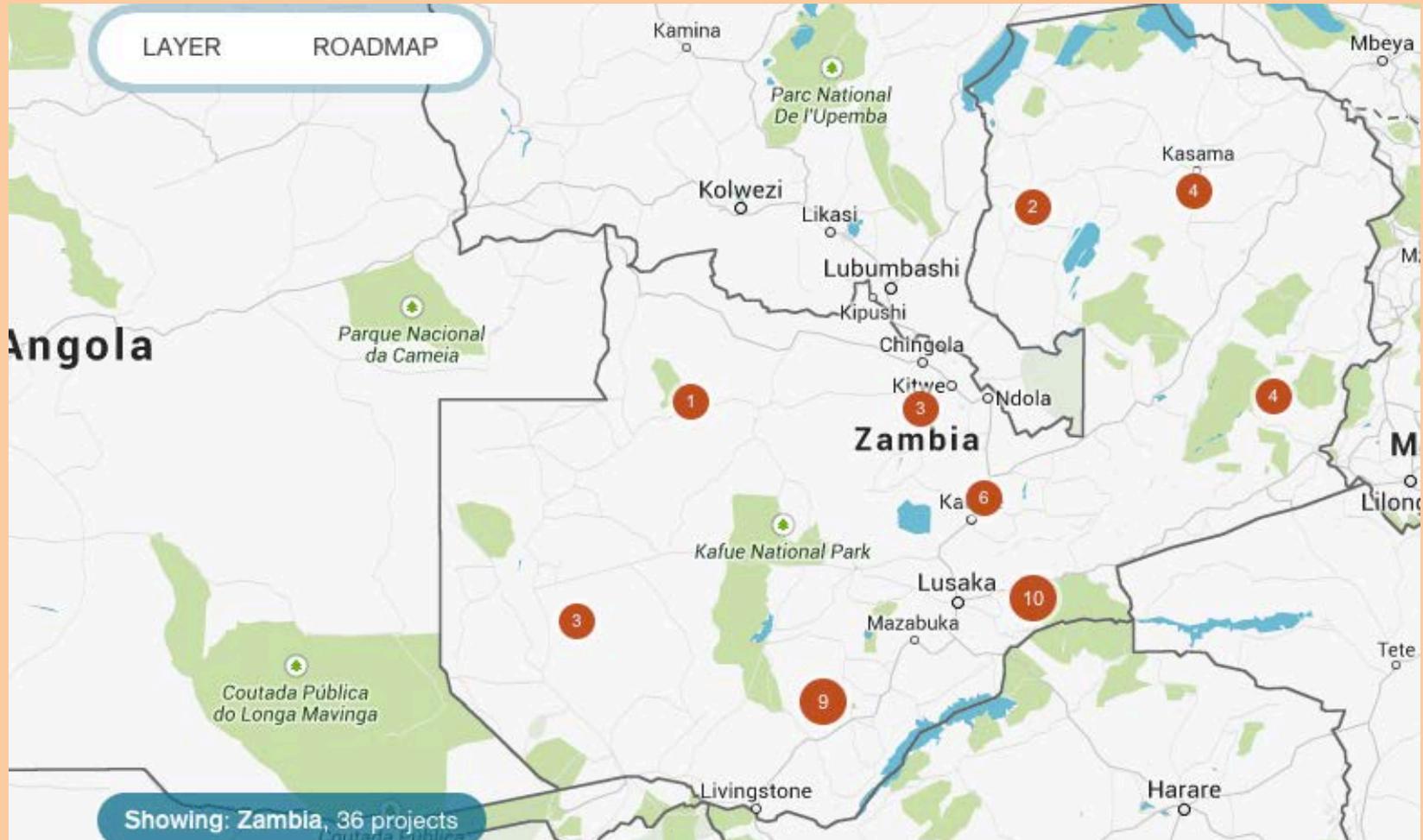
# Land Tenure



*Figure 2: Map of Zambia showing State land and Customary land*

[Land Tenure In Zambia, University of Maine, 1999](#)

# NGO Aid



[Interactive Map of Aid Agencies in Zambia - Western Province](#)

# Useful Resources

- [Zambia Open Data\\*](#)
- [Population Projections](#)
- [FAO Zambia Profile –Maps](#)
- [Wheat Atlas Environment Maps](#)
- [REA website](#)
- [Africa-EU Energy Partnership Power Market Brief Zambia](#)
- [World Bank Projects & Operations \(Interactive Map\)](#)
- [African Development Bank Group](#)

# Supporting Documents

- [State of the Energy sector in Zambia](#)
- [Zambia Rural Electrification Master Plan\\*](#)  
(Figure 2, Page 13, GIS Map of Zambian Schools without Electricity Supply)
- [2010 Zambia Census of Population and Housing](#)