

# ImpactPPA

Decentralize | Thrive

## White Paper

April 2018

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Version 1.3



# Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>5</b>
<b>2</b>	<b>PROBLEM SUMMARY .....</b>	<b>9</b>
<b>2.1</b>	<b>Alternative Energy Solutions Need Alternative Funding Solutions .....</b>	<b>9</b>
2.1.1	The Legacy System for Energy Project Funding.....	11
2.1.2	Disrupting the System .....	12
<b>3</b>	<b>ImpactPPA'S INNOVATION .....</b>	<b>14</b>
<b>3.1</b>	<b>The Operating System for Social Good .....</b>	<b>14</b>
<b>3.2</b>	<b>Pay-As-You-Go--A Payment Rail into Every Community .....</b>	<b>15</b>
<b>3.3</b>	<b>The SmartPPA.....</b>	<b>16</b>
<b>3.4</b>	<b>The System Architecture .....</b>	<b>17</b>
<b>3.5</b>	<b>A Foundation of Trust.....</b>	<b>18</b>
<b>3.6</b>	<b>Impact Equilibrium.....</b>	<b>20</b>
<b>3.7</b>	<b>Technological Change Leads to Cultural Change .....</b>	<b>21</b>
<b>3.8</b>	<b>Future Position in the Market .....</b>	<b>22</b>
<b>3.9</b>	<b>Types of Projects .....</b>	<b>22</b>
3.9.1	Evolution of the Platform .....	23
<b>4</b>	<b>TOKEN DESIGN AND MECHANICS.....</b>	<b>24</b>

<b>4.1</b>	<b>Impact Token (MPQ)</b> .....	<b>25</b>
<b>4.2</b>	<b>GEN Credit (GEN)</b> .....	<b>26</b>
<b>4.3</b>	<b>Participation Opportunities</b> .....	<b>27</b>
4.3.1	Purchase MPQ Tokens.....	27
4.3.2	Sponsorship and Mentorship .....	27
4.3.3	Bounty .....	27
<b>5</b>	<b>PARTNERS</b> .....	<b>28</b>
<b>5.1</b>	<b>Launch Products and Solutions</b> .....	<b>28</b>
<b>5.2</b>	<b>Earth Day Network (EDN)</b> .....	<b>29</b>
<b>6</b>	<b>LEADERSHIP</b> .....	<b>31</b>
<b>6.1</b>	<b>Management Team</b> .....	<b>31</b>
	Dan Bates – President and Chief Executive Officer.....	31
	John C. Dong – Chief Financial Officer .....	32
	Venkat Kumar Tangirala – International Business Development Lead.....	32
	James Young – Chief Technical Officer.....	32
	David Miller – Project Development Lead .....	33
<b>6.2</b>	<b>Board of Advisors</b> .....	<b>33</b>
	Vinay Gupta.....	33
	Dr. Michael K. Dorsey .....	33
	Michael Terpin.....	34
	Matt McKibbin .....	35
	Enrique Martinez .....	35
	Kwasi Asare .....	36
	Scott Holmes.....	36
	Ben Mendelson.....	37
	Carmine Farnan .....	37
	Rage Adan.....	38

7	MPQ TOKEN SALE .....	39
7.1	Token Allocation .....	39
7.2	Token Sale.....	42
8	DISCLAIMER .....	43
9	APPENDIX .....	46



January 3, 2009

At the core of Block 1 is decentralization for social change.  
At the core of ImpactPPA is decentralized social impact.



# Introduction

## 1 INTRODUCTION

Energy is the key to improving quality of life, yet approximately 1.2 billion people across the globe lack access to clean, reliable electricity. Distributed, renewable energy solutions empower underserved and impoverished communities—both literally and figuratively—while they reduce the use of fossil fuels and mitigate the effects of climate change. Many economists agree that in the coming years great wealth creation will emerge from these 1.2 billion people who will ascend to middle class status. But ImpactPPA believes that this can only happen if they are given access to energy.

Using the transformative power of the blockchain, ImpactPPA offers a unique solution to today's energy problems—and tomorrow's as well. The Company is creating a decentralized energy platform that disrupts and reimagines the energy funding, distribution and payment process. ImpactPPA is establishing an "end to end" solution for energy generation from funding, construction through to payment and ultimately, revenue recognition. This model breaks the funding bottleneck by decentralizing Power Purchase Agreements (PPAs), using Smart Contracts which eliminate the layers of intermediaries between the funding and consumption of energy.

ImpactPPA's innovative approach brings together capital and consumers in a way that is direct, responsive, and expedient. The process is:

- Fully scalable. The smallest village, a single entrepreneur, or a government utility company—projects of any size can be accommodated by ImpactPPA's global platform and the funding pool behind it.

- Open and egalitarian. Communities and proxies access the network through a “SmartPPA” whereby anyone, anywhere may submit a project to the platform.
- Versatile. The service architecture ImpactPPA has developed is designed to grow and adapt not just to increasing demand, but to as yet unforeseen developments in technology.
- Game-changing. By creating a payment a platform upon which other applications can build, ImpactPPA has the potential to build economies, reconfigure livelihoods, and promote inclusive and equitable economic activity.

While the global market for renewables is immense and largely untapped, with billions of potential consumers who are unconnected and unbanked, ImpactPPA’s scope reaches beyond the energy market. Ultimately the Company is designed to move into and provide a decentralized global platform for all types of social good: communication, healthcare, education, emergency response, disaster relief, water purification, refrigeration, and more. In short, the Company is creating a payment rail upon which any number of services can be layered. But it all starts with electricity and the essential components of ImpactPPA’s architecture.

1. **The MPQ Token.** Built on the Ethereum platform, ImpactPPA will sell its MPQ Token for funding projects. MPQ Token holders will review and vote on proposed projects for funding by the Company, giving the token-holding community a voice in the conversation about which projects should be funded.
2. **The SmartPPA.** Using ImpactPPA’s Smart Contract on the Ethereum platform, the SmartPPA will connect projects with capital and be managed with the transparency and trust that can be effectively provided by the blockchain.
3. **The Smart Meter.** All energy generated in SmartPPAs will be managed through the deployment of Smart Meters, which will accurately monitor the entire process from energy generation through to payment. The Smart Meter also provides a valuable feedback loop: it creates a transparent transaction on the blockchain from which we can collect data about consumers’ habits in order to optimize their interactions with the network.
4. **The GEN Credit.** Using their mobile devices and local currency, consumers will purchase GEN Credits to pay for the generated power or services, in a “pay-as-you-go” system, much like the way they “pre-pay” for their minutes or data from the local telecom.



- 5. The GEN Pool.** All net revenues from implemented PPAs will be credited towards our “GEN Pool.” On a quarterly basis and as long as the GEN Pool has a value of at least \$100,000 USD, ImpactPPA will use 30% of the pool’s funds to repurchase MPQ Tokens on a randomized basis across the given quarter; the remaining net revenues (70%) will be used primarily as a pool of capital to fund future projects. After “freezing” any Repurchased MPQ Tokens for at least 3 months, ImpactPPA may sell Repurchased MPQ Tokens if needed to fund projects or operations.
- 6. Impact Equilibrium.** As ImpactPPA continues to deploy more projects the company will generate large amounts of revenue that will be credited to the GEN Pool. Once the GEN Pool is large enough, it will allow the ImpactPPA platform to reach a state of equilibrium in which no additional sales of MPQ Tokens are needed. This state of self-sustainment will be known as “Impact Equilibrium”.

As these parts work in harmony, they build an ecosystem for social good, created by mindful individuals and responsive to the needs of energy consumers worldwide. The ImpactPPA platform will accelerate the electrification of remote areas and the transition away from fossil fuels, enabling communities through self-determination to rise out of poverty and move forward in the global economy.

ImpactPPA focuses on and strives to operate as a double bottom line company. The main goal of the Company is to provide renewable energy to those in need, but in order to do so, it needs to be a successful business. The way ImpactPPA is set up allows us to do both. ImpactPPA intends for each implemented project to provide a 20 to 25 year (depending on the contract) revenue stream in the form of a Power Purchase Agreement (PPA). These revenue streams will serve to fund the GEN Pool, allowing more projects to be deployed and eventually reach Impact Equilibrium.

In its initial phase, ImpactPPA will execute on its existing PPAs, contracts, and letters of intent for the deployment of renewable energy projects around the world. Moving forward, the Company will seek out partnerships to expand its reach into the developing world and accelerate the deployment of its clean energy micro-grid technologies.

ImpactPPA’s management team consists of energy experts with over a decade of experience providing renewable energy to countries all over the world. Members of the Company’s Advisory Board have advised 3 U.S. presidents

and have been instrumental in the launching of a major crypto currency. Its software development team has experience in the development of Solidity-based applications and has created tools and mobile apps that have scaled to millions of concurrent users.

The need for this solution is clear, the concept for deployment is well defined, and the team is in place to execute on the vision. ImpactPPA will become the distributed energy platform for a global marketplace, adding value for its users and token purchasers, and providing a financing and payment platform for whatever the future holds.

For more information about how to buy MPQ Tokens or a presale right for MPQ Tokens using a Purchase Agreement, you will need to be qualified by ImpactPPA as an eligible purchaser. On our website, please choose the "Join our Presale" button, which will take you through the steps to determine whether you are qualified as an eligible purchaser. The whitelist period has commenced, and continue through the targeted public launch of the Token Sale in the second quarter of 2018. We will continue to conduct purchaser eligibility reviews throughout the Token Sale period, but potential purchasers who are whitelisted before the public launch of the Token Sale will receive priority in the allocation of MPQ Tokens.





## 2. Problem Summary

### 2 PROBLEM SUMMARY

A paradigm shift is under way in the developing world, where billions of people still live without access to electricity. The cumbersome process of providing electricity access through grid extension alone is becoming obsolete as new business models and technologies enable the development of off-grid markets. Markets for both mini-grids and stand-alone systems are evolving rapidly.

—2017 Global Status Report <sup>1</sup>

#### 2.1 Alternative Energy Solutions Need Alternative Funding Solutions

The traditional infrastructure impedes development

In the past decades, cell phone technology has connected billions of people in the global web of communication and e-commerce, and it has done so by bypassing the traditional infrastructures that previously dominated the market. The cost of extending any physical telecommunication infrastructure to remote areas was clearly prohibitive, so the industry used emergent technology to solve the problem. Now the cords have been cut, the phone lines have disappeared, the steady march of telephone poles across vast landscapes has been replaced by invisible signals traveling through space. Mobile phones have connected the tiniest villages with the larger commercial world.

The same problem faces the energy industry, but even more limitations apply. The large centralized power stations that produce electricity and distribute it to

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<sup>1</sup> Source: [http://www.ren21.net/wp-content/uploads/2017/06/GSR2017\\_Highlights\\_FINAL.pdf](http://www.ren21.net/wp-content/uploads/2017/06/GSR2017_Highlights_FINAL.pdf)

consumers along a vast grid of power lines have served us well for 150 years. However, unlike cell phones, energy is a commodity that is subject not just to cost issues, but efficiency and environmental concerns as well.

The cost of extending the traditional energy infrastructure is enormous, so new power generation projects try to optimize potential profitability by building on a large scale with a long horizon, typically 30 years. And the risks to investors are considerable. If the project over-builds to accommodate future projected need, profitability will be delayed. If the project is under-built it will not be able to respond to future increases in demand, leading to brown-outs, unreliable service and a lack of profitability.

That balancing act may have been possible in the last century, but today's economies are changing too fast to predict what will be needed 30 years down the road. Economic development accelerates rapidly as access to energy improves and new technologies come into existence, but a traditional infrastructure cannot respond quickly to these changes. In the energy market, bigger is not necessarily better.

Perhaps even more significant in today's world, power transmission over long distances is inefficient. The power loss can be as much as 30% from peak-use transmission over long distances. In the United States in 2013, 69 trillion BTu of power was lost while moving electricity through the grid. This loss is unacceptable.

Off-grid power generated at the site of use has typically involved stand-alone generators powered by diesel fuel. The kerosene used for lighting and cooking by millions of people is expensive, polluting, and dangerous. Diesel and kerosene are not just dirty fuels—they are expensive. The high cost of purchasing fossil fuels keeps billions of people out of the larger commercial world.

Once again, new technologies offer a solution. Distributed energy generation (DEG) solves the problems of access, adaptability and power loss by generating power right where it is used. The advent of solar and wind technology has allowed clean stand-alone, off-grid installations to supply power to consumers without relying on fossil fuels. Small-scale generation can adapt quickly to market changes and improvements in equipment. And removing the need to purchase costly diesel and kerosene puts money in the pockets of billions of people, driving rapid economic growth and wealth creation.

Using a decentralized model of energy production and transmission, new companies are lighting the darkness, improving quality of life, and growing economies around the world.

### 2.1.1 The Legacy System for Energy Project Funding

The financing systems for new power projects are as unwieldy, inflexible and inefficient as the physical systems. At ImpactPPA, we believe the time has come to apply the same decentralized model to the purchase of power and the implementation of power-generating projects. We are designing an end-to-end solution for energy generation, payment, and revenue recognition that will empower the approximately 1.2 billion people who still lack electricity access, grow their economies, and create value for token purchasers.

Currently, both companies providing DEG products and those seeking to purchase such products come together by means of large, bureaucratic external aid and funding agencies. Power Purchase Agreements (PPAs) for the developing world are negotiated through such NGOs as the World Bank, USAID's PowerAfrica project, and the European Investment Bank, working through existing government-owned infrastructures. Evaluation of projects by these bureaucratic clearing houses proceeds slowly, and even when a project is approved and loans are secured, investors must be found before the project can be initiated. Years upon years may elapse before a single electric fan starts to whirl in sub-Saharan Africa.

Let's look at a few examples:

#### Climate Investment Funds (CIF)

Established in 2008, CIF touts itself as "one of the largest fast-tracked climate financing instruments in the world." But how fast is fast? A group of projects in North Africa and the Middle East was endorsed and received a commitment from the CIF's Clean Technology Fund for \$750 million in 2009. A workshop on the projects was convened in April 2013, and the go-ahead was given the following month with a reduced commitment of \$660 million. Solar power is not expected to produce a single kilowatt of electricity for the region until 2020.

#### Lake Victoria Islands Minigrid Project, Tanzania

Prior to receiving a grant from the US Trade & Development Agency (USTDA) in the summer of 2015, the project proposal lumbered slowly through several stages—Technical Review, Due Diligence, Grant Funding Review, Success Fee/Cost Share Agreement, and Grant Agreement. To date the project has had feasibility studies done and a pilot project designed, but no implementation and no indication of when the energy will be available to these remote off-grid

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<sup>2</sup> Source: <http://www.bsharp.org/physics/transmission>

<sup>3</sup> Source: <http://insideenergy.org/2015/11/06/lost-in-transmission-how-much-electricity-disappears-between-a-power-plant-and-your-plug>

islands.

### Khi Solar One, South Africa

After going through several years of review, a financing agreement with European Investment Bank was signed in November 2012. A PPA was signed two years later. The plant did not begin operations until 2016.

These are all laudable projects and agencies engaged in significant efforts to provide power to underserved regions. Yet the cumbersome process of requesting and receiving project financing from external aid and funding agencies means that progress forward can be measured in years, not months.

There is an additional moral component of our existing outside-in and top-down model. External agencies offer assistance to developing nations while maintaining control of the decision-making. Likewise, the effects of the decisions made at the top levels of large NGOs gradually trickle down to the end users. With the opportunities for corruption rife in many countries and communities, the flow of funding oftentimes diminishes to a mere drip. The end result of the traditional legacy model is that those people most in need are nothing more than a vehicle for institutional capital to gain wealth. The model is one of extraction, rather than contribution, with Western money invested in developing nations and profits flowing out of those nations and back to the West—essentially a holdover from the colonialism of the 18th and 19th centuries.

### **2.1.2 Disrupting the system**

ImpactPPA brings the global energy funding process into the 21st century. The company's innovative platform decentralizes PPAs and eliminates layers of intermediaries between funding and consumption of energy. Using Smart Contracts and a token-based, stake-weighted marketplace, ImpactPPA disrupts and reconfigures the current energy funding paradigm. Just as the DEG projects themselves are scalable and versatile, the ImpactPPA funding model provide governments, utility companies, municipalities, corporations, small businesses, villages and individuals with timely and direct access to the financing needed for clean renewable energy.

Additionally, ImpactPPA topples the colonial system by empowering those who require energy and connecting them directly with those who fund the projects. Decisions on funding are taken out of the hands of the few at the top and



instead distributed to the greater stake-holding community. For the first time, both the recipients of aid and the community that provides that aid will have a voice in the process.

ImpactPPA's purview extends well beyond the financing of projects. Once the Company's stakeholders approve a project, ImpactPPA identifies the appropriate DEG product, arranges for installation and maintenance, and, most importantly, establishes a payment vehicle that becomes a delivery site for e-commerce of all kinds. The next section will discuss how ImpactPPA applies the blockchain's efficiency to the whole process from proposal through installation, and from energy generation through payment.

The greatest immediate opportunity for ImpactPPA is in markets where consumers have little or no access to electricity, where electrical power is inconsistent, or where the cost of electricity is high. The population in these markets is vast and ImpactPPA's revolutionary decentralized energy platform has the potential to transform the lives of millions by providing inexpensive renewable energy generation. Data relating to the market size and need for energy is presented as Appendix 1 of this document.

The delivery of tested hybrid renewable generation products to identified markets is only the beginning of a much larger enterprise. ImpactPPA will serve as a decentralized bank, a crowd-funded financial hub that promotes social good. ImpactPPA represents a new way of doing business, a new financing and payment paradigm for e-commerce of all kinds. All this is made possible with the blockchain, which will be discussed below.

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<sup>4</sup>Source: : <http://helioscsp.com/climate-investment-funds-give-north-africa-and-middle-east-green-light-for-revised-regional-solar-plan/>; <http://helioscsp.com/north-african-and-middle-east-countries-poised-to-upgrade-concentrated-solar-power-use-with-afdb-world-bank-and-cif-support/>

<sup>5</sup>Source: <http://www.mriglobal.org/portfolio-item/lake-victoria-minigrid-project/>

<sup>6</sup>Source: <http://helioscsp.com/european-investment-bank-backs-south-africas-first-solar-tower-project/>



## 3. ImpactPPA's Innovation

### 3 ImpactPPA'S Innovation

The developing nations of the world have many things in common not the least of which are high rates of poverty with inadequate access to nutritious food, clean water, sanitization, education and healthcare. The key to ameliorating these problems is access to affordable electricity.

Traditional power-grid infrastructures and traditional financing infrastructures have failed billions of people, and not just those in the developing world. Energy inequality has pushed to the margins of the global economy the underclass of otherwise wealthy nations in Europe, Asia, the Middle East and the Americas.

ImpactPPA has developed a way to use the blockchain to empower the world, literally and figuratively. Our network, tokens and SmartPPAs revolutionize energy financing and dramatically accelerate the delivery of clean, renewable energy to the most remote regions of the globe at affordable prices. At the same time, we are establishing a payment platform on which other applications can be built, generating even more revenue for the Company and creating more value for Token holders.

#### 3.1 The Operating System for Social Good

ImpactPPA has reimagined the landscape of renewable energy financing and deployment and has created the first end-to-end solution for developing nations. If we agree that energy is the foundation of how societies grow and

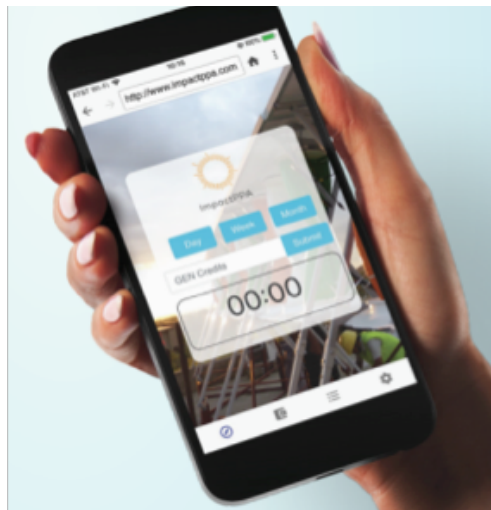


flourish then we need look at energy in a different way. ImpactPPA sees energy as the engine for social good and greater economic justice. All services—from healthcare to education to agriculture to ISP and data—thrive when energy is available for the simplest of needs.

Energy is the Operating System and all other services are the applications. ImpactPPA can be seen as the Windows™ of renewable energy while other applications might be seen as Word™ or Excel™.

This simple concept has the potential to accelerate the growth of societies and economies in the developing world. The “clean water” guy now can access a source of energy, reducing his cost and improving efficiency. The healthcare provider can now come into a village or community without hauling along energy generation devices to provide services. The list of opportunities is endless and self-replicating: the greater the access to affordable energy, the more applications for it people will find. Not incidentally, social good translates into economic good for the Token holders who invest in the future of the world.

### 3.2 Pay-As-You-Go—A Payment Rail into Every Community



GEN Credit Mobile Application

In order to realize its concept of being the operating system for social good, ImpactPPA needed to create a technological mechanism that would enable easy and trustworthy payment for the energy generated by renewable energy installations. And that system of payment, or “payment rail”, needed to be served from a mobile device.

Much of the developing world is unbanked and unconnected but they do have mobile phones. Mobile payments are now ubiquitous. Approximately 70% of the transactions in East Africa are being handled on the M-Pesa platform. But these payments only extend to current goods and services and not to electricity. ImpactPPA will deploy micro-grid renewable energy solutions and connect them to its pay-as-you-go technology, the GEN Credit. A known and familiar method of transacting will now be available to acquire basic electrical services to power lights, run fans for cooling, enable safer cooking . . . a dramatic improvement in the quality of life for billions of people. It will also allow easy charging of all those mobile phones being used.

Once deployed, this payment rail will be expanded upon to allow for growth. The World Bank has determined that the growth of electricity usage when first given to a rural community is exponential. This growth not only comes from adoption but from an increase in population and now, as suggested above, from new services that can come into a community to better serve its people.

As stated above (section 1.1), approximately 1.2 billion people today do not have access to electricity. Many economists predict that the greatest area of wealth creation in the coming years will be in enabling these people to ascend to the middle class. They can only do so with access to energy.

### 3.3 The SmartPPA

The ImpactPPA technology, built on the Ethereum platform, creates a decentralized energy platform through the use of Smart Contracts and its energy protocol, the SmartPPA.

The SmartPPA (Power Purchase Agreement or Personal Power Agreement) is the lynchpin of the system. It allows anyone, anywhere to create a proposal for a project of any size. The SmartPPA specifies the raw energy requirements of the applicant—whether it is an individual business owner who wants reliable energy to keep a factory running or a nation seeking to electrify whole communities.

Upon execution of the agreement, ImpactPPA connects that applicant with the necessary funding for the project. That funding comes from the purchase of MPQ Tokens by socially-conscious individuals who wish to make a difference in the world.

This MPQ Token-holding community defines the merit of each project and

facilitates the execution of the approved SmartPPA. The technology solutions required for a specific SmartPPA are outsourced to the most qualified provider, and the needed energy generation equipment is delivered and installed, either by the supplier or by a third-party engineering, procurement and construction (EPC) entity. The consumer of electricity pays for the power consumed on a simple “pay-as-you-go” model. Payment is made on a mobile device or in local fiat through a proxy via the project-specific GEN Credits minted when the PPA is approved.

ImpactPPA makes this transformational technology available to developing countries through the use of Smart Contracts and the blockchain community.

### 3.4 The System Architecture

ImpactPPA is a current source (energy) and a software company. A company, a community, a developer or any other source will present a project to the SmartPPA network. The project will then be evaluated for the best possible use of a renewable resource: wind, solar, hydro, geothermal or some combination of these. Once the project is approved and configured by the MPQ Token-

holding community, ImpactPPA will move forward with the project deployment using local labor and/or a high quality EPC (Engineering, Procurement, Construction) as the installer. All projects will employ a local partner to manage and maintain the system and make sure that the process from energy generation through to payment runs smoothly and responsibly.



A typical off-grid micro-grid will have an energy generation device, a current source, connected to batteries which then push power to a transmission and distribution system (T&D.) In many cases the T&D already exists and ImpactPPA is replacing a fossil fuel driven generator, usually in some sort of disrepair and invariably expensive to operate. In cases where T&D is required

the EPC will run the needed lines and the cost will be embedded in the price of the installation.

Power will flow from the current source to homes, businesses, government services, etc., which are all connected to Smart Meters. The Smart Meter measures the usage of energy and stores the data in local memory. The data is then uploaded to the blockchain and a "history" of the users' consumption is recorded. The Smart Meter has the ability to alert users when they are about to exceed their GEN Credit balance and a need to replenish the account. If the account is depleted, the Smart Meter will defeat the flow of electricity until the users' GED Credit balance is sufficient. The consumer of the power accesses the Smart Meter and data on the blockchain to make a payment from his or her mobile device.

The Smart Meter connects to the internet through whatever means are available—GSM, WiFi or a mesh network creating a local ISP. The cost of the Smart Meter is approximately \$100 USD and will be amortized in the per kWh price paid by the user.

### 3.5 A Foundation of Trust

Together the blockchain and the Smart Contract, by their very nature, ensure an open, fair system that inspires trust and confidence.

Distributed ledger technology (DLT), more commonly known as blockchain, not only makes the financial infrastructure more automated, it also makes the system more fair and open. Blockchain has three central features that make it indispensable for digitized financial transactions—immutability, transparency, and trust.

#### Immutability

The blockchain structure replicates and distributes time-stamped data about transactions to many nodes in real time. This means that data cannot be modified after it is recorded, reducing both fraud and inconsistencies in record-keeping between partners.

#### Transparency

The blockchain system acts like an open-sourced database in that it can

be viewed, but not modified, by all parties. This eliminates the privileged access to information that has allowed some market participants greater access to financial data than others. Blockchain technology democratizes this aspect of the market. It also ensures that digital currency cannot be copied and used in a double spend.

### Trust

Blockchain technology uses Smart Contracts, through which all parties agree to a set of conditions on a shared platform. The underlying code itself provides for trust in the system, as parties can transact business knowing that each party is both willing and able to fulfill its obligations.

Blockchain-enabled energy finance and distribution provides:

- A disruptive funding model utilizing the crowd
- A decentralized mechanism for quickly supplying renewable energy products
- Automated processes for project identification and delivery
- A secure platform for transactions
- A trusted resource that is open and transparent
- Economic development and access to services such as energy, food, water, sanitization, education, healthcare and economic development

Smart Contracts precisely define the parameters of any given enterprise and are executed and enforced on the Ethereum platform. These opt-in agreements are transparent and subject to the scrutiny of the community.

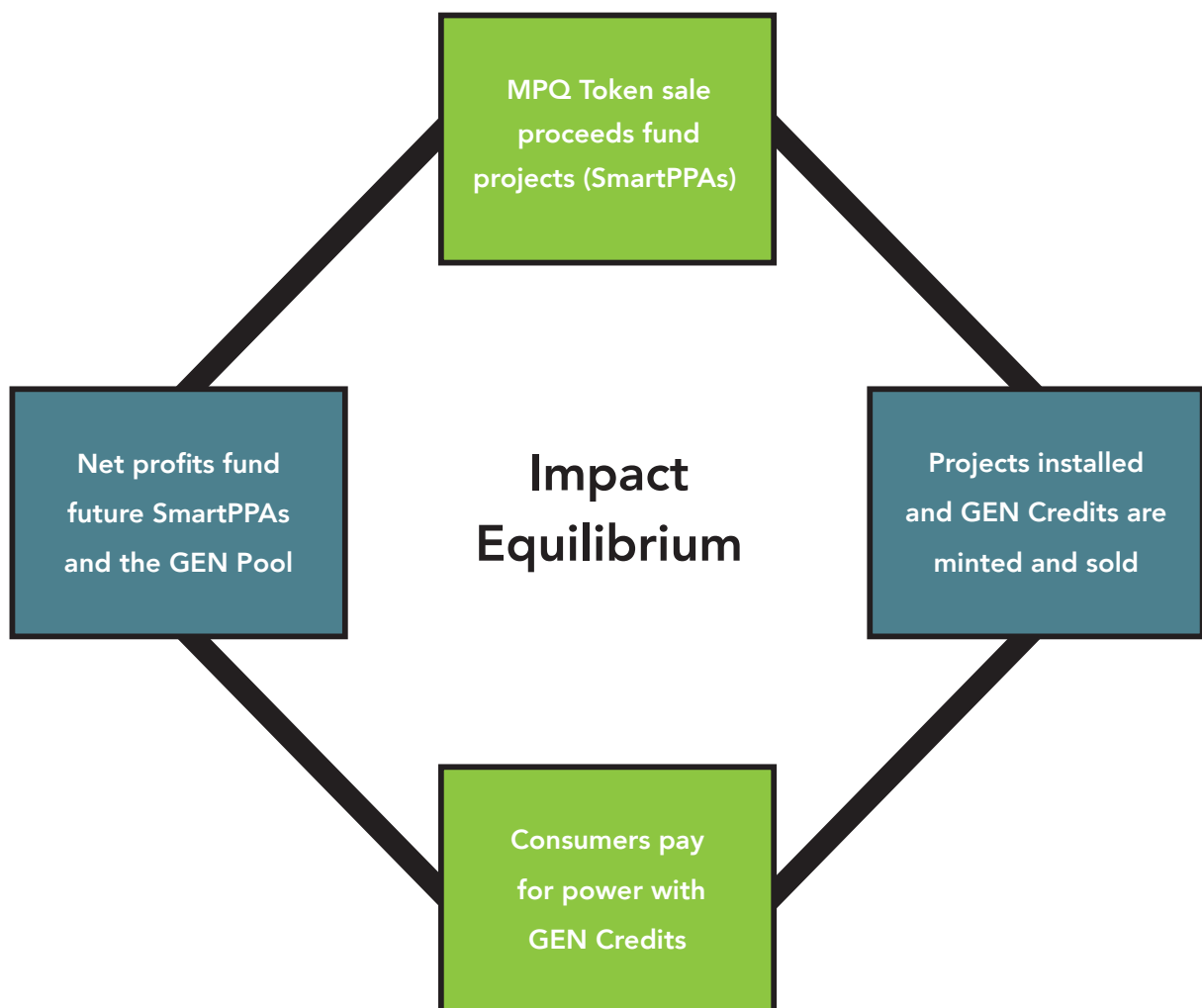
ImpactPPA's Smart Contract defines an energy financing structure that allows stakeholders to monitor the deployments of the Company's products worldwide and share in the knowledge and the revenue that comes from clean renewable energy improving the lives of those whom the ImpactPPA technology is serving.

### 3.6 Impact Equilibrium

ImpactPPA's core value token, the MPQ Token, is sold to purchasers and will be used to fund the enterprises and SmartPPAs that the Company and the MPQ Token holders together have determined to be valid projects that meet the requirements for a green light. The GEN Credit acts as the digital currency for purchase and sale of energy generated from renewable sources by consumers.

This model has been designed to establish what we call "Impact Equilibrium." Revenues generated from the established projects are reinvested into ImpactPPA to fund subsequent SmartPPAs, which the MPQ Token holders continue to vet and approve.

Impact Equilibrium creates an ecosystem for social good with an evergreen pool of funding from which to expand and continue to install products that meet the needs of the developing nations of the world.





### 3.7 Technological Change Leads to Cultural Change

The scalable SmartPPA allows access to renewable systems of any size for the generation of electrical energy at the site of consumption. This primary focus on energy systems to improve the quality of life forms the core of ImpactPPA's present business model.

Access to electricity transforms lives. Clean, reliable electricity generation can enable communication and mobile banking by recharging cell phones, improve



health by allowing vaccines and perishable foods to be refrigerated, enhance safety by lighting the darkness, and stimulate young minds by giving them something as simple as a light by which to read at night or as sophisticated as internet-enabled devices to access the world of information that those in wealthier nations take for granted.

Electrical power also stimulates commerce and pulls people out of poverty. Consider the case of Olumide Ajayi, a villager in Ibadan, Nigeria. Hoping to start a poultry business, he began to raise chickens in his yard. When predators killed the chickens outside, he built a facility to protect them by raising them indoors. The heat of the Nigerian climate, however, proved too much for the animals, and they, too,

perished. Olumide installed a single 3-turbine hybrid solar and wind unit (shown at right) to run a fan in his chicken coop. Now he supplies fresh poultry to his neighbors, his village, and his region.

Renewables improve both the financial and physical health of communities. A 2015 report produced by the United Nations Environment Programme (UNEP) offers a concise and dramatic statement of the cost in money, lives, and environmental degradation of the developing world's dependence on kerosene for cooking and lighting:

Poor households are buying lighting at the equivalent of USD 100 per kilowatt-hour, more than a hundred times the amount people in rich countries pay. Kerosene is not just expensive; it is also dangerous: stoves and lamps can catch fire. Indoor fumes cause 600,000 preventable deaths

a year in Africa alone. Moreover, traditional means of lighting are harmful for the environment and contribute to climate change. UNEP estimates that the burning of fossil fuels for the purposes of lighting currently accounts for 90 million tons of CO<sub>2</sub> annually. Additionally it is estimated that 270,000 tonnes of black carbon are emitted annually from kerosene lamps.

—Developing Effective Off-Grid Lighting Policy

### 3.8 Future Position in the Market

Currently, SmartPPAs for distributed renewable energy projects are initiated by end-users or entities, submitted to ImpactPPA, and then approved and administered by the MPQ Token-holding community. In time, both the types of SmartPPAs and their management will broaden and become ever more autonomous.

### 3.9 Types of projects

While access to electricity will remain a fundamental part of the quality of life improvements envisioned by ImpactPPA, additional initiatives for social good can be easily accommodated by the same platform.

ImpactPPA's easy-to-access scalable global funding platform for social empowerment can, in the future, be used to fund any project of any size that the Token-holding community deems worthwhile. Such projects might include:

- Local water purification and sanitation systems
- Water pumping stations for consumption or irrigation
- Facilities for maternal, neonatal, and pediatric medicine
- Food drops or food storage
- Health clinics to offer vaccines for malaria, polio, HIV
- Interventions to address malnutrition

Renewable energy is only the beginning. ImpactPPA aims to be a major player in impact investing to fund global initiatives of all sorts that will aid underserved communities.

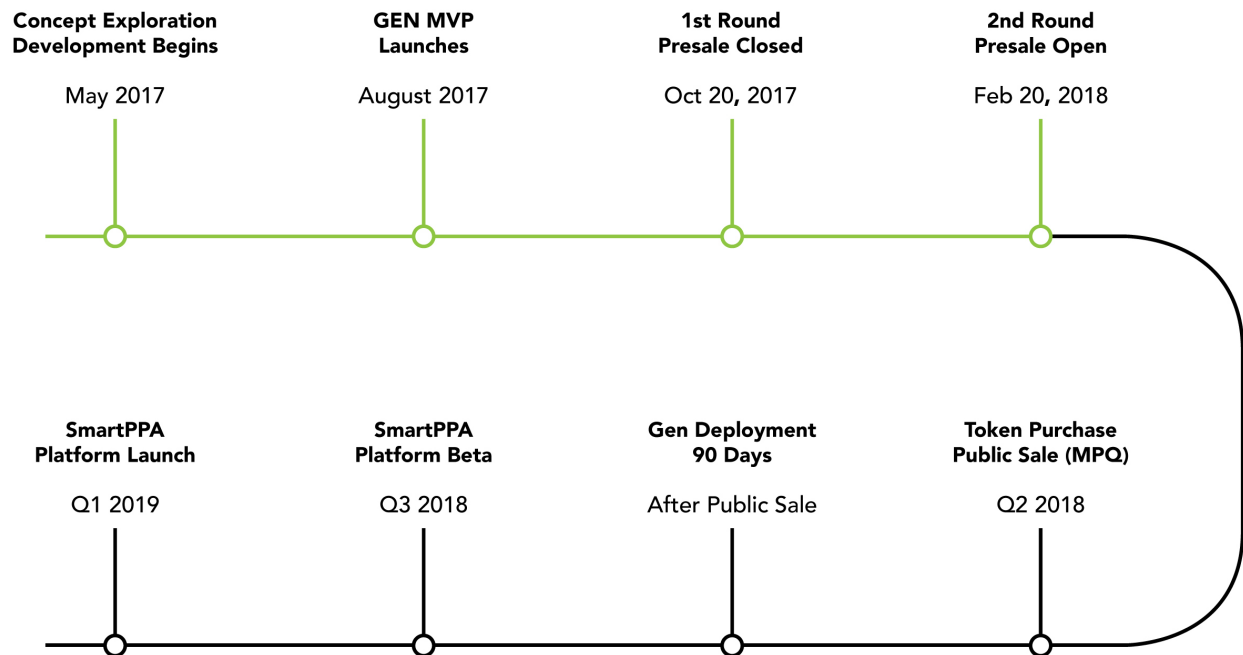
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<sup>7</sup> Source: <http://www.enlighten-initiative.org/portals/0/documents/Resources/publications/OFG-publication-may-BDef.pdf>

### 3.9.1 Evolution of the Platform

In its initial iteration, ImpactPPA acts as a facilitator and project manager, evaluating SmartPPAs and identifying providers. As ImpactPPA goes forward, the platform is designed to become more autonomous and decentralized

## Roadmap





## 4. Token Design and Mechanics

### 4 TOKEN DESIGN AND MECHANICS

ImpactPPAs Smart Contract governs a model of funding and cyclical revenue-generation that subverts the unwieldy and inexpedient funding structures of the past.

Built on the Ethereum platform, ImpactPPA will sell its MPQ Token that will allow MPQ Token holders to review and vote on proposed projects for funding by the Company, giving the token-holding community a voice in the conversation about which projects should be funded. 100% of all net revenues from implemented PPAs will be credited towards our "GEN Pool." On a quarterly basis and as long as the Gen Pool has a value of at least US\$100,000, ImpactPPA will use 30% of the accumulated GEN Pool to repurchase MPQ Tokens on a randomized basis throughout a given quarter. After "freezing" any Repurchased MPQ Tokens for at least 3 months, ImpactPPA may resell Repurchase MPQ Tokens. ImpactPPA will use all remaining 70% of net revenues primarily as a pool of capital to fund future projects. The result is an ecosystem for social good, created by mindful individuals and responsive to the needs of energy consumers worldwide.

The GEN Credit, will be sold to consumers of electricity to purchase the generated power or services, thereby creating a transparent transaction on the blockchain from which we can collect valuable data about consumers' habits in order to optimize their interactions with the network.

### 4.1 Impact Token (MPQ)

Built on the Ethereum platform, ImpactPPA will sell its MPQ Token to allow MPQ Token holders to review and vote on proposed projects for funding by the Company, giving the token-holding community a voice in the conversation about which projects should be funded. The MPQ Token provides the purchaser with certain rights and attributes governed by the Smart Contract. These rights include the ability to approve SmartPPAs as they are submitted to the platform for consideration and funding based upon the plurality vote of outstanding MPQ Tokens.

The platform utilizes blockchain, internet and mobile technologies to create greater efficiency in the development, engineering, procurement, construction and financing of clean tech projects that have a positive impact on the world.

The platform will provide the following:

- An interactive submission form and document repository with automated compliance and error checking to make it easy for project developers to effectively submit projects for review, rating and financing by the community
- An efficient real time status engine that provides for the updating of project status including such milestones as
  - Site control
  - Site design
  - Permitting
  - PPA
  - Credit of power purchaser
  - Interconnect studies
  - Interconnect permits
  - Interconnect completion
  - Shovel ready
  - Financing
  - Engineering, procurement, construction
- An algorithmic engine to match impact investors to clean tech investments that meet their impact and financial goals and criteria, including such things as:
  - Size of project

- Type of project
- Power purchaser creditworthiness
- Risk assessment
- Investment size
- IRR
- Security and collateral
- Geographic location
- Social Impact

## 4.2 GEN Credit (GEN)

The GEN Credit is the digital currency that is exchanged by end users, buyers, or proxies for the energy created by the renewable energy systems delivered to fulfill the SmartPPAs. It is used to insure delivery of energy, manage storage devices, create interconnected data networks, and enable new economic models for the millions upon millions of people who will be positively impacted by the access to power. Each SmartPPA has its own GEN Credits, minted to correspond to the specific energy need outlined in the agreement.

With the GEN Credits, end users purchase power or other services tied to the SmartPPA in a pay-as-you-go model. The GEN Credit runs on a variety of devices—mobile phones, swipe cards, fobs and more. Payment in local fiat is converted into the appropriate amount of GEN Credits on a Smart Card or by proxies.

In the case of the purchase of power, the end user may be connected to a Smart Meter that can monitor energy used and payments made. This Smart Meter allows power to be delivered or suspended in accordance with the payment in GEN Credits. The end user simply pays for his or her needed amount of power on a per kWh basis or by day, week, or month. If they do not pay, the system will cease running. This type of arrangement has been used elsewhere, and the default rate is less than 2%.

ImpactPPA has the GEN Credit running on a mobile device on the Ethereum Test Net, which can be seen below. This mobile application allows users to



purchase power on a “pay-as-you-go” basis.

### 4.3 Participation Opportunities

Those who want to make an impact on the world with their resources will be able to participate in ImpactPPA in a variety of ways as the Company evolves.

#### 4.3.1 Purchase MPQ Tokens

The primary means of participation is the purchase of the MPQ Tokens. These value tokens are the foundation of the ImpactPPA model. MPQ Token purchasers are the core community that has input on projects submitted to ImpactPPA through SmartPPAs from around the globe. A set quantity of MPQ Tokens will be available through pre-sales at a discount, followed by a public launch Token Sale. Details of the Token sale may be found in section 7 below.

#### 4.3.2 Sponsorship and Mentorship

In the future, there will be a program of Mentorship and Sponsorship that the MPQ Token holder may take advantage of at his or her option. Sponsors identify a new project and bring a SmartPPA into the system, while Mentors see a project already in the system and promote it to others within the community. The Mentorship and Sponsorship details are targeted to be available on the Company’s website at the time of the Token Sale launch.

#### 4.3.3 Bounty

Every company needs ancillary services and products, and bounties paid in MPQ Tokens are a mechanism by which the Company can pay those who fulfill these tasks. Bounties might include, for example, the identification of new projects, the servicing of equipment or interfacing with local authorities on issues specific to a project.

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<sup>8</sup>Source: Source: Bill McKibben, “The Race to Solar Power Africa,” *The New Yorker*, 26 June 2017.



## 5. Partners

### 5 PARTNERS

The Token-holding community of ImpactPPA not only approves SmartPPAs that are submitted to the Company, they also participate in identifying suppliers and installers of the equipment needed for a given project. ImpactPPA has an existing partnership with a renewable energy provider, WindStream Technologies, Inc., that has several projects already in the pipeline and ready to deploy. Additional partnerships will be sought and implemented in the future. ImpactPPA anticipates that it will look for additional strategic partners like WindStream as well as other opportunities that are synergistic with its vision. For example, ImpactPPA has entered into a non-binding memorandum of understanding for a potential investment into a company that runs a social media platform related to environmental social impact businesses.

#### 5.1 Launch Products and Solutions

ImpactPPA has developed a relationship with WindStream Technologies, Inc., an innovative leader in creating low-cost, highly efficient renewable energy solutions for urban and rural environments, both on- and off-grid. Partnership with this forward-looking company is designed to bring an immediate stream of revenue.

ImpactPPA and WindStream recently agreed to an MOU that grants ImpactPPA the right to sell and promote the WindStream products globally where pre-

existing agreements will not cause conflict or confusion in the marketplace. These rights include the sharing of long term revenue streams secured under PPA agreements with governments, utility companies, or project developers for greater than 183MW's of clean energy. The parties currently working on the finalization of the definitive strategic partnership agreement.

These projects include:

Site Name	Size (kW)	T&D Power Type	Projected Average Annual kWh	Projected Lifetime kWh	PPA Rate (30Y Ave)	Annual Revenue kWh	by	Projected Life Time Revenue
Somaliland 22_Hybrid	22000	Grid Tied	31,563,518	946,905,540	\$0.290	\$9,153,420.22		\$283,756,026.82
Les Irois 150 kW Hybrid	150	Off Grid	245,153	7,354,590	\$0.192	\$47,069.38		\$1,459,150.66
Anse-d'Ainault 150 kW solar only	150	Off Grid	238,023	7,140,690	\$0.192	\$45,700.42		\$1,416,712.90
Dame-Marie 300 kW solar only	300	Off Grid	476,046	14,281,380	\$0.192	\$91,400.83		\$2,833,425.79
Corail 150 kW solar only	150	Off Grid	238,023	7,140,690	\$0.192	\$45,700.42		\$1,416,712.90
Jermie 450 kW Hybrid	450	Off Grid	745,332	22,359,960	\$0.192	\$143,103.74		\$4,436,216.06
Pestel 150 kW Hybrid	150	Off Grid	244,111	7,323,330	\$0.192	\$46,869.31		\$1,452,948.67
PAP (tire au but) 100 MW hybrid	100,000	Hybrid	158,634,772	4,759,043,149	\$0.165	\$26,174,737.32		\$811,416,856.98
Saints Louis du nord ( Borneau)	25,000	Hybrid	39,658,693	1,189,760,787	\$0.165	\$6,543,684.33		\$202,854,214.25
Khartoum, 12MW	12,000	Offgrid/Grid Tie	19,848,676	595,460,267	\$0.179	\$3,549,340.16		\$110,029,545.09
Sudan City Plan	25,000	Offgrid/Grid Tie	44,417,736	1,332,532,082	\$0.233	\$10,349,332.50		\$320,829,307.57
Myers Fletcher and Gordon	770	Offgrid/Grid Tie	81,368	29,292,381	\$0.191	\$253,100.55		\$7,593,016.54
	186,120			8,918,594,847		\$56,443,459.19		\$1,749,494,134.23

## 5.2 Earth Day Network (EDN)

For 48 years EDN has been the leading advocate in the environmental movement worldwide and has been an effective vehicle for promoting a healthy, sustainable environment. EDN's mission is to educate and activate individuals and groups on environmental issues and challenges, to advance the green economy, and to participate in Earth Day. ImpactPPA shares the EDN vision and is enhancing it by incorporating blockchain technology into EDN's renewable energy campaign.

ImpactPPA and EDN have joined together under this agreement to help promote the use of clean energy and cutting edge technologies. Fostering their adoption and installation can better the planet and the lives of millions of people in need. This agreement provides EDN and ImpactPPA the framework for projects all over the world that are mutually beneficial to the companies' respective goals.

For its first project, ImpactPPA and EDN will be providing a renewable energy system to the Edna Adan Hospital in Hargeisa, Somaliland. The hospital has been the life's work of Edna Adan and has provided maternity care and treatment to over 21,000 women throughout Africa.

As part of the agreement and their mutual commitment to work together, EDN and ImpactPPA are embarking on a project to commemorate the 50th

anniversary of Earth Day Network in 2020. The “50 by 50” initiative will work to identify and install 50 projects similar to the Edna Adan Hospital anywhere in the world where clean energy and blockchain technology can be put to use to positively affect lives and the environment.

#### Future Partnerships

Future partnerships will be created with companies that the MPQ Token-holding community believes offer reliable and superior products for renewable energy.





## 6. Leadership

### 6 LEADERSHIP

#### 6.1 6.1 Management Team

ImpactPPA's management team is comprised of seasoned entrepreneurs with extensive experience in building and operating businesses. Collectively, management has the vision as well as the experience in technology, science, engineering, the sustainability sector, financial management, and sales and marketing to execute on its business plan. The breadth of our management team assures ImpactPPA's ability to develop, promote, market, and sell the products.

#### **Dan Bates – President and Chief Executive Officer**

Dan Bates has spent the last 10 years as President, CEO and Founder of WindStream Technologies, a recognized leader in hybrid renewable energy systems. Under Bates' guidance the company has deployed projects of all sizes in over 35 countries and established manufacturing facilities in the United States and in India. The company has won international awards for product design, efficiency and sustainability and has developed strong relationships in the international renewable energy community.

Prior to starting WindStream Mr. Bates spent 15 years in the technology

sector and has launched successful technology ventures in both hardware and software. Mr. Bates' first technology venture, Extreme Audio Reality (EAR) was the first provider of multi-channel, interactive audio, designed for the PC and set-top box gaming arena. EAR successfully licensed its products to all major game publishers including Electronic Arts, Activision, Id Software, Ubisoft and many others. After EAR, Mr. Bates started Avant Interactive, which was the first provider of an interactive or clickable video solution for content owners, publishers and advertisers. Avant was the market leader in this emerging sector, holding licenses and/or contracts with many of the Fortune 100 companies.

### **John C. Dong – Chief Financial Officer**

John Dong is a Senior Executive Finance Professional with expertise in high growth business conversions and maximization of assets, including IPOs, acquisitions, divestitures, restructures, manufacturing, and raising capital. He has established a reputation as a superior team builder who is able to adapt quickly to new environments and systems. Mr. Dong graduated from the University of California at Berkeley (Haas School of Business) with a BA in Accounting/Finance. He also holds an MBA and earned his CPA credentials with Coopers & Lybrand, Int'l.

### **James Young – Chief Technical Officer**

James Young has more than 20 years of software development experience specializing in stream video network design, social game development, and online advertising. He has been a part of three successful startup acquisitions but also has large enterprise experience working at Cisco. He is familiar with the token launch process and wishes he could go back to school and get a degree in "blockchain".

### **Venkat Kumar Tangirala – Int'l Business Development Lead**

Venkat Kumar Tangirala is a graduate in Electronics & Communications Engineering from Vellore Institute of Technology in India. He has more than 19 years of experience in the renewable energy and IT sectors and has held management roles in various industries, including information technology,



defense, manufacturing, and alternative energy. Mr. Tangirala is currently President of WindStream Energy Technologies India Pvt. Ltd., managing the company's operations in Asia, the Middle East, and Africa. He is also a Director for Syaton Global Services Inc., a software company with offices in India and the U.S. ([www.siyaton.com](http://www.siyaton.com)). He has held positions as Head for Green Products Division and Defense Electronics at HBL Power Systems Ltd. in Hyderabad, India ([www.hbl.in](http://www.hbl.in)) and President for Sensorgrid, Inc., heading up Indian Operations.

### **David Miller – Project Development Lead**

David Miller is a technology lover who has always been intrigued by the relationships between technology, security and economics. He has decades of experience implementing technology solutions in public and private organizations including Cisco and Microsoft. He is a practicing CISSP, enjoys automating crypto/ FX trading, and has been focused in the crypto startup space since 2014.

## **6.2 Board of Advisors**

### **Vinay Gupta**

Vinay Gupta is a technologist and policy analyst with a particular interest in how specific technologies can close or create new avenues for decision makers. This interest has taken him through cryptography, energy policy, defense, security, resilience and disaster management arenas. He is the founder of Co-Founder of Mattereum, which is creating the Internet of Agreements™. He is known for his work on the hexayurt, a public domain disaster relief shelter designed to be build from commonly-available materials, and with Ethereum, a distributed network designed to handle smart contracts.

### **Dr. Michael K. Dorsey**

Dr. Michael K. Dorsey is a recognized expert on global energy, environment, finance and sustainability matters. In 1997, in Glasgow, Scotland, Dorsey was bestowed Rotary International's highest honor, The Paul Harris Medal for

Distinguished Service to Humanity. Dr. Dorsey is a “Full member” of the Club of Rome and in 2013 the National Journal named him one of 200 US “energy and environment expert insiders”. A graduate of the University of Michigan, Yale and the Johns Hopkins University, presently Dr. Dorsey is also a co-founder, limited partner and the sole arbitrating board member of the Hyderabad, India based Univergy/ThinkGreen. In the scholarly world, for the first decade of the 21st century Dr. Dorsey was a professor in the environmental studies program at Dartmouth College. He has also been guest faculty at Wesleyan University (USA), the University KwaZuluNatal and the University of Witwatersrand (South Africa); Kungl Tekniska Högskolan (Sweden); and Erasmus University’s Erasmus Research Institute of Management (ERIM) Sustainability & Climate Change Research Unit (The Netherlands). Dr. Dorsey’s significant government engagement began in 1992 as a member of the U.S. State Department Delegation to the United Nations Conference on Environment and Development, “The Earth Summit.” From 1994-96 Dorsey was a task force member of President William Jefferson Clinton’s Council on Sustainable Development. From April 2007 until November 2008 Dorsey was a member of Senator Barack Obama’s energy and environment Presidential campaign team. In 2010 Lisa Jackson, the US Environmental Protection Agency (US-EPA) Administrator, appointed Dr. Dorsey to the EPA’s National Advisory Committee (NAC) and was reappointed in 2012 and 2014.

### **Michael Terpin**

Michael Terpin is founder and CEO of Transform Group, whose divisions include Transform PR, a global public relations firm that has served more than 100 clients in the blockchain field; Coinovate, a cryptocurrency consulting and development company; CoinAgenda, an event series for cryptocurrency investors, and SocialRadius, one of the nation’s first social media marketing firms twice named to the Inc. 5000. Transform Group is headquartered in Las Vegas, with offices in Santa Monica, Silicon Valley, NYC, and San Juan.

Mr. Terpin also co-founded BitAngels ([www.bitangels.co](http://www.bitangels.co)), the world’s first angel network for digital currency startups, in May, 2013, and he is managing partner of bCommerce Labs ([www.bcommercelabs.com](http://www.bcommercelabs.com)), the first blockchain incubator fund, and a partner in Flight, VC’s Bitcoin Syndicate on AngelList. Previously, Terpin founded Marketwired, one of the world’s largest company newswires, which was acquired in 2006 and later sold to NASDAQ for \$200 million. He also co-founded Direct IPO, one of the earliest equity crowdfunding companies, and

founded and sold his first PR firm, The Terpin Group.

### **Matt McKibbin**

Matt McKibbin has been a blockchain evangelist since 2013. From 2013 to 2017, he coordinated the DC Blockchain Meetup and was heavily involved in the BitAngels investment group. While the blockchain space was still young, he worked with companies such as BitPay and Factom by leveraging his network to educate the community about the potentials of decentralized applications.

He later went on to co-found Ubitquity, the world's first blockchain-based title transfer company, and D10e the first and leading conference on decentralization. He serves as an advisor to Network Society Labs, Humaniq, Securrency, and Social Evolution and has been involved in several early-stage blockchain startups, including Ubiquity, Trive.news, and Propy. In 2017, he founded DecentraNet, a consulting and advisory firm, in order to provide real world business experience for the nascent blockchain entrepreneurial world.

Matt has spoken as an expert on decentralization at premier conferences worldwide. He has been featured in dozens of media publications, including Bloomberg, Nasdaq, TechCrunch, CoinDesk, CoinTelegraph, Bitcoin Magazine, and more. Matt received his Bachelor's of Arts in physics from West Virginia University and currently lives in Washington DC.

### **Enrique Martinez**

Enrique started his career as an Aerospace Engineer working in Drone Research and Development for the United States Pentagon. After several years as a top engineer for the US Army, Enrique was given the offer to be a part of the Dept. of Intelligence. In the year 2009, while looking for ways to provide a decentralized platform for a fleet of Artificial Intelligence drones to communicate while flying, he was given the now famous bitcoin paper of Satoshi Nakamoto. Soon after, he decided to leave the government and find ways to expand his knowledge of bitcoin and cryptocurrencies.

Since 2009 Enrique has been working with some of the top crypto players, influencers, developers, and speakers of this technology. In 2016 he created his first crypto and Token Sale consulting company called WebCapitalists Corp.

and then in 2017 he founded Blocksis, a blockchain development company. Enrique now helps heavily with new Token Sales as well as helping to establish the first ever solar blockchain microgrid in the United States and the Puerto Rico. Enrique is the author of two books in cryptocurrency trading, holds a Bachelors in Aerospace Engineering from the University of Michigan, a Master in Mechanical Engineering from the University of Puerto Rico, and an MBA from Emory University with specialty in neural networks.

### **Kwasi Asare**

Kwasi began his career as an Investment Banker at Citigroup's' Solomon Smith Barney Investment Bank after graduating from The University of Pennsylvania with a degree in International Politics. He eventually earned Series 7, 55, 63, and Series 3 licenses with a concentration on International Equity Sales and High Grade US Bond Sales.

He served as New Media Director for Sean "Diddy" Combs' burgeoning empire, simultaneously overseeing the development & marketing for Diddy's brands, including: Ciroc, Sean John Fragrance, Sean John Clothing and Bad Boy Entertainment. Throughout his storied career he has executed successful global marketing campaigns for various artists and brands.

Kwasi is also the founder and CEO of Innovation Live. Innovation Live is the premiere platform aligning the worlds of media, technology, innovation, and public policy. It seeks to create long lasting and actionable relationships to optimize the world laws and public policy regarding innovation across multiple disciplines. Kwasi also sits on numerous boards including the advisory boards of Nooka, Skrapps, and Cinematique. Kwasi was also appointed to the Leadership Council for The United Nations Media Summit and as Lead Ambassador for Ghana for The Nexus Global Youth Community.

### **Scott Holmes**

Investor, incubator, and seasoned marketing executive, Scott Holmes is a visionary with deep expertise in technology, entertainment, and mobile commerce initiatives with Fortune 100 brands and startups alike. An accomplished leader for over 20 years, he founded United Future 2005, a digital media agency, and led initiatives for Microsoft, Autodesk, Western Digital, and T-Mobile before

exiting in 2014. Mr. Holmes has incubated several startups, including Liberated Intelligence (LIAAPP), Realm Blazer (Rally Health), and most recently IMMORDL. He has been recognized in the Wall Street Journal, Wired magazine, and Los Angeles Business Journal, and was named Mobile Ambassador by the Mobile Excellence Awards Association in 2012/13.

### **Ben Mendelson**

For over 25 years Ben Mendelson has been a leader in new media technology and an innovator in interactive sponsor-based programming, multi-platform distribution and Interactive Television. For the past 15 years, he has been president of the Interactive Television Alliance (ITA), a non-profit trade association representing the broad interests of the ITV industry. He is also Senior Partner at 2degree Partners, a boutique consulting firm specializing in Interactive Television, Virtual Reality (VR/AR/MR), blockchain based platforms, and cryptocurrency. Previously, Mr. Mendelson was the founding executive of various early on-line companies (Interactive Center, Internet Imaging, Internet Outfitters), head of the Internet division of a magazine publishing company (Curtco Freedom), VP of Internet Development for the Electronic Retailing Assoc. (ERA) and SVP of Interactive Strategies at an investment bank (Winterberry Group). As Mr. Mendelson is married to a senior Brazilian diplomat, he has an international footprint and will be based in Asia for the next three years. He'll be focusing on sustainable energy and environmental projects, along with initiatives supporting underserved communities in Asia, South America and around the world.

### **Carmine Farnan**

Carmine Farnan is a proven and experienced energy professional with diverse global experience in the energy sector in new project development, asset acquisition, asset management operations and maintenance, and construction management. Mr. Farnan has experience in over 60 countries in various energy technologies such as gas-fired generation, thermal generation, solar (CSP, PV and Power Tower) power, geothermal generation, biomass, and waste to energy projects. He has been responsible for the overall asset management and the operations and maintenance of a global portfolio of 5,000 MW consisting of various generation resources across six countries. Mr. Farnan has a BA in Business Management from Strayer University and is currently pursuing an MA

in Renewable Energy and Sustainable Policies at Pennsylvania State University.

**Rage Adan**

Rage Adan is a highly motivated individual, experienced consultant, and has worked in a variety of positions for the past 15 years. He advises on several products and services from Main Frame Servers to managed services, for vendors from IBM to Microsoft. He finds business ventures that are stimulating and rewarding at the same time as he is capable of understanding the significance of the combination between business and technology. He makes original contributions to the IT world, has developed problem solving strategies, made helpful and astute contributions to group discussions, and is able to apply business concepts in a variety of contexts. Working with 'Start-Ups' has given him a rich experience in understanding the 'big picture'. Planning both for strategic and tactical objectives, following a realistic and practical approach, delivering the right value proposition and negotiating win-win situations, Rage will be an asset to the ImpactPPA team in the future.





## 7. MPQ Token Sale

### 7 MPQ TOKEN SALE

The ImpactPPA MPQ Token Sale is expected to begin Q2 2018. At the time of the launch of the Token Sale the exact price and number of MPQ Tokens will be definitively determined and announced to the public. Anticipated pricing and allocations are described below. The MPQ Token presale began in October 2017 and in February 2018 ImpactPPA targets launched the second round of its presale.

Each Token will be an ERC20 token on the Ethereum blockchain — ImpactPPA will use a Smart Contract and return MPQ Tokens to the buyer's ether address. In the case of not meeting our minimum, we will return ether instead.

#### 7.1 Token Allocation

ImpactPPA's fundraising goal is up to U.S.\$100 million. A total of 1 billion MPQ Tokens have been authorized by MPQ (the "Authorized MPQ Tokens"). ImpactPPA will make available 30% of the Authorized MPQ Tokens, or 300,000,000, for sale in the Token Sale. The price per MPQ Token currently is targeted to be a value of U.S.\$0.35 (or 35 cents), subject to the pricing of the final Token Sale.

The allocation of all of the MPQ Tokens is illustrated below:

ImpactPPA Token Allocation	Category	Tokens
	Authorized MPQ Tokens	1,000,000,000
30%	Public Token Sale and Presales	300,000,000
20%	Founder Fund	200,000,000
10%	Developer Fund	100,000,000
7%	Advisors/Bounty	70,000,000
33%	MPQ Tokens Reserved for Future Sales	330,000,000
	Total	1,000,000,000

The details of the table above are as follows:

#### Presale of Future Rights to MPQ Tokens

The Company is conducting a presale of future rights to MPQ Tokens (the "Rights") with a soft cap of \$7 million using a Purchase Agreement. The first presale round has been closed and \$1 million in Rights were purchased. The second presale round is now open and ImpactPPA is targeting to sell \$6 million in additional Rights. The second presale round is a tiered approach for Bonus MPQ Tokens as follows:

- Tier 1: for any Purchaser who buys a Right before the first aggregate purchase amount of \$2 million is received by ImpactPPA in the second presale round, 50%.
- Tier 2: for any Purchaser who buys a Right before the second aggregate purchase amount of \$2 million is received by ImpactPPA in the second presale round, 40%.
- Tier 2: for any Purchaser who buys a Right before the third aggregate purchase amount of \$2 million is received by ImpactPPA in the second presale round, 30%.

The Rights in the 2nd presale round will be subject to a holdback process for the Bonus MPQ Tokens: 50% of the Bonus MPQ Tokens shall be retained by the Company and delivered to Purchaser three (3) months after the Delivery Date; and (B) the remaining 50% of the Bonus MPQ Tokens shall be retained by the

Company and delivered to the Purchaser six (6) months after the Delivery Date. The Company retains the right to vary the terms of the second presale round at any time.

#### *Public Launch of Sale of MPQ Tokens*

Any MPQ Tokens that remain available for sale after the presales described above are concluded will then be sold in a public launch targeted for April 2018 at the targeted Token price of \$0.35 per token with no bonus offered. These MPQ Tokens will be sold using a Smart Contract until all 300,000,000 million MPQ Tokens have been sold. ImpactPPA at its sole discretion may elect to increase or decrease the number of Tokens sold in the presale and public sale rounds, the bonus levels and the targeted MPQ Token price, provided that no more than 30% of the Authorized MPQ Tokens will be made available for sale. Buyers will receive ERC20 tokens at the conclusion of the Token Sale.

#### *Founder and Development Fund and Advisers/Bounty Programs*

ImpactPPA will reserve 300 million MPQ Tokens for a Founder (20%) and Developer (10%) Funds, and 70 million (7%) for advisers/bounty programs. These reserves will be issued to the appropriate entities or individuals at the discretion of the company. At no time shall the Founder and Developer Funds equal more than 30% of the issued tokens. All founder and developer token distributions will be subject to a lock-up period per the following schedule: 50% of the tokens shall be locked up for a 9 month period during which they cannot be exchanged or bought back by the company through the GEN pool. The remaining 50% shall be subject to an additional 9 months.

#### *MPQ Tokens Reserved for Future Sale*

330 million of the Authorized MPQ Tokens will be reserved for future sales by ImpactPPA. At this time, ImpactPPA does not anticipate selling any additional MPQ Tokens until after the second anniversary of the close of the Token Sale.

#### *Eligibility Requirements/Whitelist*

In order to participate in our presale or Token Sale, a potential purchaser must

be qualified by us as an eligible purchaser. On our website ImpactPPA.com, please choose the “Join the Presale” or “Whitelist for Token Sale” button, which will take you through the steps to determine whether you are qualified as an eligible purchaser. The whitelist period commenced on February 26, 2018 and continue through the targeted public launch of the Token Sale in Q2 2018. We will continue to conduct purchaser eligibility reviews throughout the Token Sale period, but potential purchasers who are whitelisted before the public launch of the Token Sale will receive priority in the allocation of MPQ Tokens.

## 7.2

Please visit: ImpactPPA.com and follow us on Twitter: #impactppa.

### **Token Sale**

Tokens will be priced immediately before the public sale in ether. The sale will take place at that fixed price over a period of time to be determined by ImpactPPA (measured in blocks on the Ethereum blockchain) or until all 300,000,000 million are sold.



## 8. Legal Implications

### 8 DISCLAIMER

PLEASE READ THIS DISCLAIMER SECTION CAREFULLY. IF YOU ARE IN ANY DOUBT AS TO THE ACTION YOU SHOULD TAKE, YOU SHOULD CONSULT YOUR LEGAL, FINANCIAL, TAX, OR OTHER PROFESSIONAL ADVISOR(S).

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## 9. Appendix

### **APPENDIX:**

#### **Opportunities to Improve Energy Access**

Modern energy services are crucial to human well-being and to a country's economic development; and yet globally 1.2 billion people are without access to electricity and more than 2.7 billion people are without clean cooking facilities. More than 95% of these people are either in sub-Saharan Africa or developing Asia, and around 80% are in rural areas.

—*International Energy Agency, 2016*<sup>1</sup>

The greatest opportunity for ImpactPPA is in markets where consumers have little or no access to electricity, where electrical power is inconsistent, or where the cost of electricity is high. The population in these markets is vast and ImpactPPA's revolutionary decentralized energy platform has the potential to transform the lives of millions by providing inexpensive renewable energy generation.

How important is access to clean and reliable electrical power?

According to the United Nations Foundation,

The lack of modern energy services stifles income-generating

activities and hampers the provision of basic services such as health care and education. In addition, smoke from polluting and inefficient cooking, lighting, and heating devices kills nearly two million people a year and causes a range of chronic illnesses and other health impacts. These emissions are important drivers of climate change and local environmental degradation. They also consume time that women and girls could spend in more productive activities and pose security risks for them as they forage for fuel.<sup>2</sup>

To respond to this pressing problem, the UN has called for reaching 100% electrification rate by 2030 as part of its very ambitious “Sustainable Energy for All” (SE4ALL) initiative.

To put this in perspective it helps to look specifically at educational and medical facilities. The scale of the problem can be gauged from the IEA’s charts below showing that in some countries almost all primary schools and a large proportion of health clinics have no electricity whatsoever:

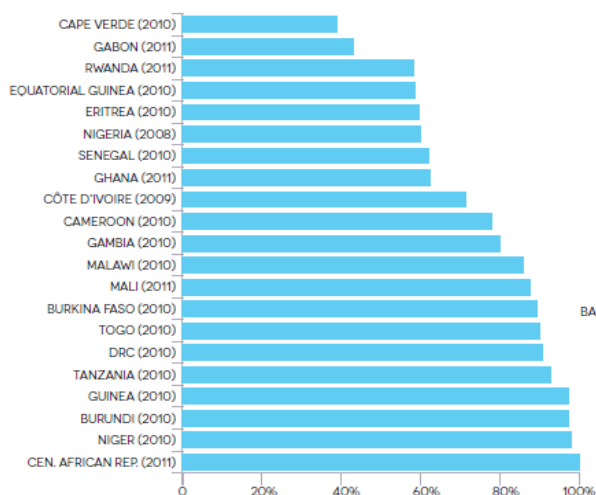


FIGURE 2.2A PUBLIC PRIMARY SCHOOLS WITHOUT ELECTRICITY

SOURCE: : UNESCO INSTITUTE OF STATISTICS (UIS) DATABASE.

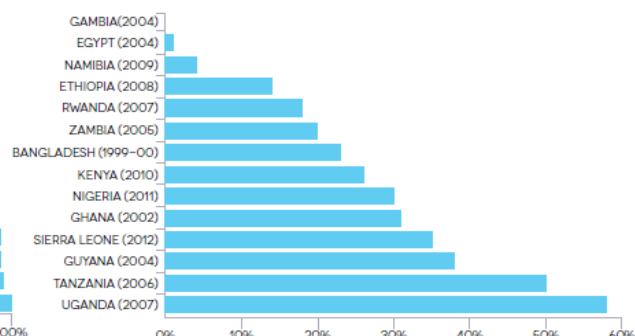


FIGURE 2.2B HEALTH CLINICS WITHOUT ELECTRICITY

SOURCE: : SOURCE: WHO ENERGY IN HEALTH CARE FACILITIES DATABASE

<sup>9</sup> Source: [http://www.iea.org/publications/freepublications/publication/Global\\_Tracking\\_Framework.pdf](http://www.iea.org/publications/freepublications/publication/Global_Tracking_Framework.pdf).

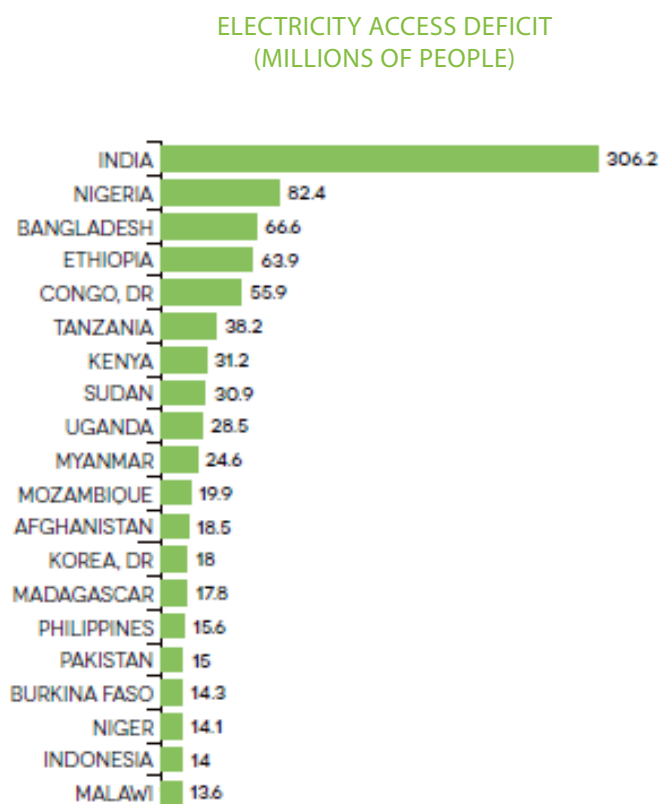
Places where the supply of electricity either does not exist or is unreliable or sporadic represent a huge opportunity for ImpactPPA. Electrification rates vary widely around the world, from Singapore, which has universal access to electricity, to South Sudan, where only 2% of the population has access. The difference between urban and rural electrification rates, shown in the table below, highlights the problem of bringing electricity to remote areas.

Region	Population without electricity (in millions)	Electrification rate	Urban electrification rate	Rural electrification rate
Africa	587	41.8%	68.8%	25.0%
North Africa	2	99.0%	99.6%	98.4%
Sub-Saharan Africa	585	30.5%	59.9%	14.2%
Developing Asia	675	81.0%	94.0%	73.2%
China & East Asia	182	90.8%	96.4%	86.4%
South Asia	493	68.5%	89.5%	59.9%
Latin America	31	93.2%	98.8%	73.6%
Middle East	21	89.0%	98.5%	71.8%
<b>Developing countries</b>	<b>1,314</b>	<b>74.7%</b>	<b>90.6%</b>	<b>63.2%</b>
<b>World*</b>	<b>1,317</b>	<b>80.5%</b>	<b>93.7%</b>	<b>68.0%</b>

\*World total includes OECD and Eastern Europe/Eurasia

<sup>10</sup> Source: <http://www.worldenergyoutlook.org/resources/energydevelopment/accesstoelectricity/>

Global electrification rates alone tell only part of the story. The true human cost of the problem becomes apparent when we look at electricity access in terms of population numbers. The countries with the greatest number of people without access to electricity are shown below; these twenty countries are home to almost 890 million people who lack electricity, representing about three-quarters of the global total.



Electrification Rates in Sub-Saharan Africa

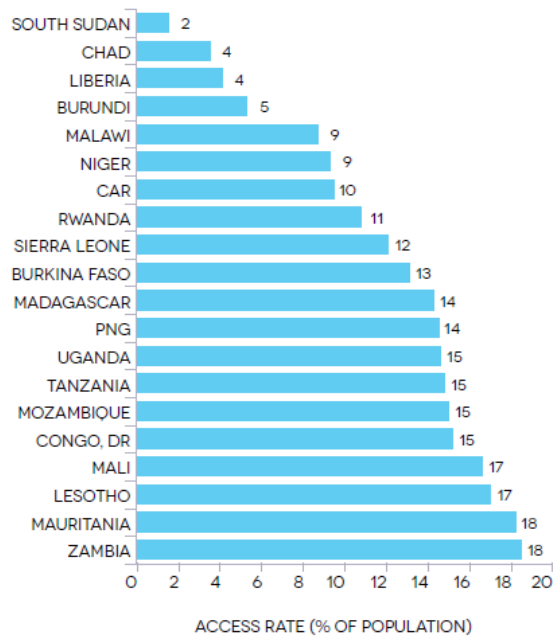
<sup>11</sup> Source: [http://www.iea.org/publications/freepublications/publication/Global\\_Tracking\\_Framework.pdf](http://www.iea.org/publications/freepublications/publication/Global_Tracking_Framework.pdf).

Just as access to electricity is inequitably distributed between urban and rural populations, access varies among regions of the globe as well. Even countries where overall electrification rates are high have pockets where huge portions of the population lack access. Often these people live in remote or sparsely populated areas where the grid cannot reach and where small-scale on-site electrification projects would transform lives. ImpactPPA provides an ideal opportunity for such projects with its decentralized scalable energy platform that brings energy consumers together with funding for rapid approval and implementation of renewable energy systems.



## Sub-Saharan Africa

Of the twenty countries with the lowest electrification rates, 19 are located in sub-Saharan Africa. In these countries alone almost 300 million people lack access to electricity.



(CAR – Central African Republic, PNG – Papua New Guinea)

<sup>12</sup> Source: [http://www.iea.org/publications/freepublications/publication/Global\\_Tracking\\_Framework.pdf](http://www.iea.org/publications/freepublications/publication/Global_Tracking_Framework.pdf).

Despite the problems with energy access, many sub-Saharan countries have relatively high mobile phone penetration, with mobile banking being more popular than conventional banking. Thus, being able to keep one's mobile phone charged is critical for many people, as it not only means having a communication channel, but also being able to do business and make purchases. ImpactPPA's platform can provide access to funding for projects to charge the phones of a single home, a local business, or an entire village.

### 2.2.2 Developing Asia

While developing Asia as a whole can boast a relatively high rate of electrification (81%), rates in some countries are closer to the levels of sub-Saharan Africa—e.g. Cambodia (24%), East Timor (22%), Myanmar (13%), and Laos (59%). Indonesia and Mongolia have electrification rates below 70%, as the former is a collection

of jungle-covered islands and the latter has its population spread over vast barren terrain. In both cases, building conventional infrastructure would be both very expensive and time-consuming.

The table below shows detail for Asia by country, with those where the electrification rate is below 80% (highlighted) representing more than 650 million people without access.

Country	Electrification rate	Population without electricity (in millions)
China	99.4%	8.0
Brunei	99.7%	0.0
Cambodia	24.0%	11.3
Chinese Taipei	99.0%	0.2
DPR Korea	26.0%	17.7
East Timor	22.0%	0.9
Indonesia	64.5%	81.6
Malaysia	99.4%	0.2
Mongolia	67.0%	0.9
Myanmar	13.0%	43.5
PDR Laos	55.0%	2.6
Philippines	89.7%	9.5
Singapore	100.0%	0.0
Thailand	99.3%	0.5
Vietnam	97.6%	2.1
Other Asia	83.4%	3.1
<b>China &amp; East Asia</b>	<b>90.8%</b>	<b>182.0</b>
Afghanistan	15.5%	23.8
Bangladesh	41.0%	95.7
India	75.0%	288.8
Nepal	43.6%	16.5
Pakistan	62.4%	63.8
Sri Lanka	76.6%	4.8
<b>South Asia</b>	<b>68.5%</b>	<b>493.4</b>
<b>Developing Asia</b>	<b>81.0%</b>	<b>675.4</b>

<sup>13</sup> Source: <http://www.worldenergyoutlook.org/resources/energydevelopment/accesstoelectricity/>

## Latin America

Overall, Latin America has better access to electricity than Asia and Africa, with rates above 90% in many countries. Nevertheless, more than 30 million people in this region still live without access to electricity. Harsh jungle or mountainous terrain in many areas makes building infrastructure either infeasible or prohibitively expensive and time-consuming. The table below shows electrification rates in Latin American countries, with those with rates below 90% highlighted.

Country	Electrification rate	Population without electricity (in millions)
Argentina	97.2%	1.1
Bolivia	77.5%	2.2
Brazil	98.3%	3.3
Chile	98.5%	0.0
Colombia	93.6%	2.9
Costa Rica	99.3%	0.0
Cuba	97.0%	0.3
Dominican Republic	95.9%	0.4
Ecuador	92.2%	1.1
El Salvador	86.4%	0.8
Guatemala	80.5%	2.7
Haiti	38.5%	6.2
Honduras	70.3%	2.2
Jamaica	92.0%	0.2
Netherlands Antilles	99.9%	0.0
Nicaragua	72.1%	1.6
Panama	88.1%	0.4
Paraguay	96.7%	0.2
Peru	85.7%	4.2
Trinidad and Tobago	99.0%	0.0
Uruguay	98.3%	0.1
Venezuela	99.0%	0.3
Other Latin America	91.2%	0.3
<b>Latin America</b>	<b>93.2%</b>	<b>30.7</b>

<sup>14</sup> Source: <http://www.worldenergyoutlook.org/resources/energydevelopment/accesstoelectricity/>

## Inconsistent supply and growing demand

In addition to those who lack any access to electricity, the United Nations Foundation reports that about 1 billion people have only intermittent access to electricity, an aspect of the problem that the tables shown above do not include.<sup>3</sup> In India, according to the World Bank, “grid-based power shortages during peak hours averaged 17 percent in the first half of 2009.” Moreover, the World Bank also notes that, “To cope with widespread outages in Sub-Saharan Africa, a number of countries have had to contract short term leases for emergency generation in the form of containerized mobile diesel units costing as much as \$0.35 per kilowatt-hour, with lease payment absorbing more than 1 percent of GDP in many cases.”<sup>4</sup>

Inconsistent access to electricity keeps millions of people in poverty as the expense of fossil fuels used to bridge electrical blackouts puts a brake on the economic engine of developing countries. It also runs counter to efforts to address climate change, since the stop-gap diesel generators are heavy polluters that add to world’s carbon emissions.

Global population is currently growing at a faster pace than the rate of electrification, according to the *Washington Post*, quoting the IEA and World Bank.<sup>5</sup> This growth makes it less likely that the UN’s goal of attaining a 100% global electrification rate can be achieved by 2030, with some analysts estimating that 12% (or about a billion people) will remain without access to electricity at that time.<sup>6</sup> As the effort to ensure electricity access becomes more pressing, the opportunities for ImpactPPA increase. Moreover, as the UN tries to reduce the impact on climate at the same time, there will be increased concern for energy efficiency and reliance on renewables.

In financial terms, according to the SE4ALL Global Tracking Framework report from the IEA, “The investments required to achieve the three objectives [of the SE4ALL initiative] are tentatively estimated to be at least \$600–\$800 billion per year over and above existing levels, entailing a doubling or tripling of financial flows over current levels.”<sup>7</sup>

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<sup>15</sup> Source: <http://www.unfoundation.org/what-we-do/issues/energy-and-climate/clean-energy-development.html>

<sup>16</sup> Source: <http://siteresources.worldbank.org/EXTESC/Resources/Approach-paper.pdf>

<sup>17</sup> Source: <http://www.washingtonpost.com/blogs/wonkblog/wp/2013/05/29/heres-why-1-2-billion-people-still-dont-have-access-to-electricity/>

<sup>18</sup> Source: [http://www.iea.org/publications/freepublications/publication/Global\\_Tracking\\_Framework.pdf](http://www.iea.org/publications/freepublications/publication/Global_Tracking_Framework.pdf)

<sup>19</sup> Source: [http://www.iea.org/publications/freepublications/publication/Global\\_Tracking\\_Framework.pdf](http://www.iea.org/publications/freepublications/publication/Global_Tracking_Framework.pdf)