



### **Overview**

NovoMoto is a for-profit social enterprise that provides clean electricity for off-grid communities in sub-Saharan Africa. NovoMoto's solar-powered systems are less expensive, more efficient, and cleaner than the kerosene, diesel, and flashlights currently used in these communities. **NovoMoto has received around \$500k in convertible notes, debt financing, awards, and grants. NovoMoto is currently serving 300 customers in ten communities in the Democratic Republic of Congo (DRC).**

### **Founders**

**Mehrdad Arjmand** (Co-Founder, Ph.D.) completed his Ph.D. in Engineering Mechanics at the Materials Research Science and Engineering Center at the University of Wisconsin-Madison. Mehrdad worked in the oil and gas industry before starting his Ph.D. Mehrdad is passionate to work in the renewable energy sector and enjoys serving customers in emerging markets with huge potentials and opportunities.

**Aaron Olson** (Co-Founder, Ph.D.) completed his Ph.D. in Engineering Mechanics at the Fusion Technology Institute at the University of Wisconsin-Madison. Aaron is a NASA Space Technology Research Fellow and a Graduate Engineering Research Scholars Fellow. Aaron is originally from Kikwit, DRC and co-founded NovoMoto to help solve the extreme lack of electricity in his home country.

### **Market**

Our go-to-market strategy is to target rural homes and businesses without access to grid electricity in the five westernmost provinces of the DRC. In these five provinces, there are 3.5 million homes (~17.5 million people) that lack access to reliable electricity. By 2025, this number will rise to 4.5 million homes. Kerosene poses significant health and environmental risks and is expensive, taking an average of 10% of this annual income. The electrification market potential (lighting and phone charging) of these five provinces in the DRC is over \$700 million annually (~\$204/household per year). In sub-Saharan Africa, there are a total of 600 million people that live without access to grid electricity. This number is expected to increase to 700 million people by 2030. These individuals use Kerosene and diesel to meet their lighting needs with annual expenditures of over 17 billion dollars.

### **Product and Revenue Model**

NovoMoto offers rent-to-own solar-powered systems. Customers use a Pay-As-You-Go (PAYG) system to pre-pay for a month's worth of electricity, similar to how people currently purchase kerosene, diesel, and flashlights. After 3 years, customers own their systems. NovoMoto's systems consist of a battery pack connected to a solar panel and energy-efficient appliances. This battery pack both powers the appliances and enables mobile phone charging. The appliances included depend on the customer's needs:

Product	Items Included	Initial Fee (USD)	Customer's Monthly Payment (USD)	Payment Period (months)	Avg. 5-Yr Savings
H20 - PAYG	3 LED lights	\$25.00	\$10	18	\$816 or 80%
H100 - PAYG	3 LED lights, TV	\$80.00	\$24	18	\$512 or 50%

### **Social Impact**

NovoMoto empowers communities by serving as an economic and development partner. NovoMoto allows customers to establish their first line of credit as they pay off our systems. NovoMoto also provides power free-of-charge to clinics and schools in communities we serve.

### **Competitors**

Retailers of kerosene, candles, and disposable battery flashlights are NovoMoto's largest competitor in DRC. There are local companies that retail solar power equipment in DRC, but these companies charge high upfront costs that are

unsuitable for most off-grid families. One other PAYG company is active in the western part of DRC. Their solutions are more expensive and are offered on a perpetual lease, thus making them even more expensive than the rent-to-own NovoMoto solutions. A comparison of lighting & phone charging solutions in NovoMoto's target market is below:

Criteria	Kerosene Retailers	Solar Retailers	PAYG Companies	NovoMoto
Light & Phone Charging Experience				
Clean Energy Access				
Upgradeability				
Upfront Cost	\$	\$\$\$	\$\$	\$
Monthly Cost	\$\$\$	\$	\$\$	\$
5 Year Total Cost	\$\$\$	\$	\$\$	\$

- **PAYG Competitors in DRC:** BBOX, Orange Energie, Altech
- **Potential PAYG competitors, not active in DRC:** Standalone solar system providers such as Zola, Azuri, M-Kopa, Fenix International, and microgrid providers including Devery and Powerhive

### Comparables

Impact Energies has been acquired by Persistent Energy Partners in Q1 2014 for an undisclosed amount while it had 5000 customers. Fenix International has been acquired by Engie, a French utility, in Q4 2017 for an undisclosed amount (estimated to be ~\$100M) while it had 140,000 customers. The industry attracted over \$840 million in strategic investment by the end of 2018. The table below shows some investments into PAYG firms in other African markets:

Company Name	Operational Country	Total Amount Raised	Last Raise Date	Number of PAYG Customers (2018)
Zola Electric	Tanzania, Rwanda	\$271M	2018	200,000
M-KOPA	Tanzania, Kenya, Uganda	\$194M	2018	500,000
d.Light	Kenya, Uganda	\$188M	2018	250,000
BBOX	Kenya, Uganda, Rwanda	\$112M	2019	200,000
Greenlight Planet	Kenya, India	\$82M	2018	250,000
Fenix International	Uganda	\$17M	2017 (Acquired)	140,000

### Financing and Milestones

Round	Closing	Runway	Amount	Milestones for the round
Pre-seed	Q1 2019	Q4 2019	\$230K – equity \$120K – debt \$145K – grant	<ul style="list-style-type: none"> <li>● 300 total installations by Q4 2019</li> <li>● \$1K MRR</li> <li>● 10 total villages</li> </ul>
Seed	Q1 2020	Q4 2020	\$1.5M	<ul style="list-style-type: none"> <li>● 5,000 total installations by Q4 2020</li> <li>● \$60K MRR</li> <li>● Serving customers in 20 villages</li> </ul>
Series A	Q1 2021	Q4 2022	\$16M	<ul style="list-style-type: none"> <li>● 100,000 total customers by Q4 2022</li> <li>● \$1.1m MRR</li> <li>● Enter into 70 new villages/towns</li> </ul>