



Accelerating the adoption of solar energy

Halifax, January 2020

The problem

*Renewable energy is growing
but we are transitioning much
too slowly*

Wind turbines, solar panels and electric vehicles are spreading far more quickly around the world than many experts had predicted.

“But this rapid growth in clean energy isn’t yet fast enough to slash humanity’s greenhouse gas emissions and get global warming under control.”

That’s the conclusion of the *International Energy Agency*, which on Tuesday published its annual World Energy Outlook, an 810-page report that forecasts global energy trends to 2040.

Our vision

Drastically accelerate the adoption of solar energy by integrating it into everything we use

There are limitations to wide adoption of the current silicon based solar technology



Solar panels are **large**, **heavy** and **rigid**. This puts serious limits on its applications, separate from usage requirements



Even though the price for solar has come down considerably, it is **still too expensive** due to the large CAPEX required to set up solar manufacturing and complicated manufacturing processes



End of life **recycling** of silicon solar is a growing concern

Perovskite based solar can address the shortfalls of silicon solar technology

A **flexible, tuneable,** even **stretchable** material that therefore can be deposited on any shape or surface.

Perovskite can achieve a very **high efficiency**. The efficiency of silicon solar has been flat for the last 15 years.

It can be manufactured much **cheaper** using widely abundant materials and relatively simple manufacturing processes.

Our perovskite solar technology will disrupt existing solar industry and create massive new markets

It will become the new solar standard for the existing \$50B solar market

100%
integrated
solar

Perovskites' unique properties will enable entirely new markets to take shape



Rayleigh Solar Tech is capitalizing on the opportunity

We are a **perovskite solar manufacturing company** transitioning from lab to small scale industrial production

We are using a **roll-to-roll printing technology** which allows us to provide flexible rolls of solar cells at a fraction of traditional costs meaning it can be applied anywhere on any surface

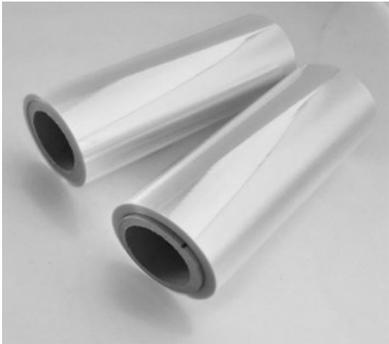
We are currently **raising a \$2M round** and will use the funds to establish a pilot production line over the next 18 months capable of 5 megawatts output making us ready to go to market

Our roll-to-roll manufacturing approach is *extremely scalable*

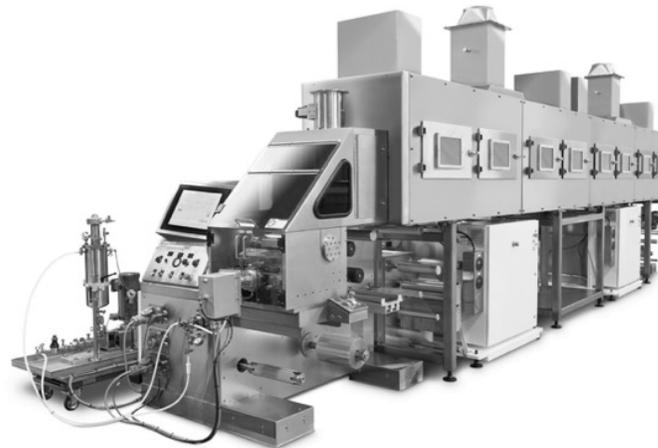
3-5x lower CAPEX, simple manufacturing

Produces flexible unlimited size

Cost per watt **66% lower**



Input:
slurry + substrate



Process:
printing roll-to-roll on slot die coater



Output:
roll of flexible perovskite solar cells

Our research is accelerating

- We have a world class recipe for making perovskite
- We are getting record efficiencies in our lab

Industrial trials

- We have unique access to a local contract manufacturing facility where we have started printing perovskite solar cells

Protecting unique IP

- Through execution of strong IP strategy supported by patents and trade secrets

Raised \$600k

- In mix of non-dilutive and equity funding



Lab sample solar cell

Company traction

*Strong cutting edge technology
approaching rapid commercialization*

Competitive landscape

- There are high entry barriers
- This is a \$50B market and we are one of a few companies globally able to compete
- We have a unique focus on *roll-to-roll slot die coating*



Main focus IoT and inkjet printing



High speed roll-to-roll focus (old Kodak factory)



Tandem applications *



Strong but research focused team



Tandem applications *



Large manufacturing partner, 20MW roll-to-roll pilot line

* making silicon solar panels more efficient

Funding ask \$2M to get to commercialization phase in 18 months

Technology development

- **Accelerate lab research** by expanding the research team, establishing a private lab and purchase the necessary equipment
- Further **extend industrial trials** to translate our lab research to a manufacturing environment
- Hire product engineer and manufacturing lead to **develop first product** that we will be taking to market

Commercial development

- **Deepen industry partnerships** with main solar manufacturers to establish:
 - Co-development opportunity
 - Launching customer
- **Continue scaling contract manufacturing** with our partner to deliver 5MW output
- Further execution and **strengthen IP strategy**

The team behind Rayleigh Solar Tech is diverse and experienced in both research and creating companies

We speak **7 languages** and hold **3 PHD's**, there are **6 nationalities** in our team and we installed **120MW** of '**big solar**'. We started a whiskey distillery, sailed around the world **twice**, founded **8 companies**, and hiked up to **Everest** basecamp. In total there is **50 years** of combined research experience in the team.



Why invest?

Attractive return prospects in a high growth market

- High growth potential and large (and growing) market opportunity.

Delivered by a proven founding team

- Experienced researchers recognized for cutting edge expertise, proven experience in building and commercializing successful companies, strong links to key players in the industry and an international network.



Create positive impact

- Far reaching benefits in terms of human health, energy access, environmental protection and response to climate change.



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