


 FAMILY OFFICE INSIGHTS
facilitated by The Bavelas Group

Peer Insights

R E P O R T

Q&A with Joanna Hubbard COO & Co-Founder of Electron.

Principle Series:

Please join Family Office Insights for this luncheon on Friday, May 18th 2018 at 12PM. If you care to join us, please email admin@familyofficeinsights.com.

Family Office Insights sits down with Joanna Hubbard of Electron to discuss an exciting and unusual energy blockchain company that is already working with existing utilities and grid operators to deliver new marketplaces required to unlock billions of dollars of value from distributed energy resources. Electron is now seeking funding to extend its platform into other jurisdictions in US, Europe, Asia, and Australia within similar consortia arrangements.



Family Office Insights is a voluntary, “opt-in” collaborative peer-to-peer community of single family offices, qualified investors and institutional investors. If you care to learn more, and perhaps join the community, you are welcome to visit us here at FamilyOfficeInsights.com.

Q: Tell us about your background and your company, Electron.

A: I have been working in clean- or “new” energy for almost 10 years, now. I started on the renewable asset financing side and then moved into a family office VC fund focusing on cleantech. That was around the boom and bust of the smart grid 1.0 roll-out, smart meters, sensors, controllable loads were all being rolled out- but somehow none of the business cases quite worked. They were all waiting for this unified set of price signals that just never came.

I became fixed on creating that missing digital infrastructure that these businesses needed to scale, so I joined McKinsey & Co, focusing on digital transformation. It was there that I came across blockchain as a coordination technology for the first time, around about the launch of Ethereum. I thought, “this is it”; a way to coordinate all these millions of energy assets within one system, and enable competitive business models to emerge around them. I looked around to see if anyone else was tackling this; met my co-founder Paul Ellis; and created Electron- a marketplace infrastructure for those distributed energy and grid balancing services.

My co-founder, Paul Ellis, was coming from fintech, having successfully built and run two global electronic trading platforms. I also met Paul Massara, the former CEO of npower (one of the UK’s largest energy retailers), who invested in Electron and then joined us full-time as CEO earlier this year.

Electron integrates with current flexibility and balancing market structures, while opening the market up to new trading and service models such as peer-to-peer and micro grids. Blockchain technology allows us to deliver the shared supply and demand platforms required to create necessary incentives and assurances for market cooperation. Our platform opens up energy markets to renewable energy participation to provide market-based efficiencies in a rule-based, auditable manner.

Q: Who is your target audience?

A: This is a collaboration game: it has to be. We have been working with everyone from grid operators, energy traders, regulators asset operators (both suppliers and aggregators)- and every stakeholder. This is a win-win for the industry; everyone deals more efficiently and makes better use of their assets in the system. And in the end of, the consumer reaps the benefits of these efficiencies- saving money on electric bills and experiencing more resilient, carbon efficient grid systems.

Q: What are some of the challenges you face in this market?

A: Two and a half years ago no one knew what blockchain was. We had to explain the tech in every meeting and the full 60 minutes was taken up with the utility working out whether they could game it. About six months ago, that changed drastically. Now the biggest challenge is that everyone thinks they know about blockchain; it is about bitcoin; it uses loads of energy and makes plenty of models. Back to the drawing board! In every conversation, we are unpicking preconceptions and trying to land the full transformational potential of the electricity systems that we are proposing. At the end of the day, it isn’t even about blockchain; that is just a mechanism for enabling appropriate sharing of data and incentive mechanisms. It

is about creating the right infrastructure, markets, and data access that we need to transition to the next stage of dynamic, renewable grids.

Q: How are you different from your key competitors? Who are your key competitors?

A: We have taken a very different approach to every energy blockchain token issuance to date! Others business models are focused on one of two things; the first is a peer-to-peer, or consumer-led models. The second is in recognizing and trading digital representations of desired behavior. We are engaging with the industry directly to figure out a more efficient way to use existing assets and structuring markets. That is why we have been able to bring in household names such as National Grid, EDF, Shell & Siemens.

In the future we will be able to partner with business models such as peer-to-peer and vehicle to grid, and enable them to interact with the wider flexibility markets at scale- thus realizing the benefits these models are seeking to capture to change the way that markets think about smaller consumers and asset engagement.

Q: How are you changing the landscape of your industry?

A: Today, no electricity grid systems have real time grid import or export price signals- these are only accessible to wholesale market traders and, even then, it only values kwh and ignores the value potential of distributed energy assets. For example- a battery can sell its energy, but also its capacity- or its potential to provide energy; its location (if it can relieve a grid congestion issue); and its response time.

The absence of this nuances market is a real blocker for the adoption of batteries and EVs, as well as for new business models around aggregation and consumer engagement. Almost every government and set of regulators in the world agree that this price-signaled market place is the end goal but we are building on top of many entrenched interests, data silos and out of date regulators codes. Blockchain holds a lot of answers here for unifying those record sets and creating the incentive and assurance mechanisms that underpin coordination at this scale.

Q: How much are you looking to raise and who is your ideal investor?

A: To date, Electron has raised just under \$3m from high net worth investors, angel investors, as well as Tokyo Electric Power Company and SYSTEMIQ. We have stretched that out with a further \$2M in government grants.

The UK flexibility platform is currently under investment from key industry stakeholders in that market, but we are reviewing options for a much broader capital raise to fund our expansion into several new markets, with whom discussions have already been started, and to develop new services (think data sales, optimization algorithms etc) with which to engage those markets.

In anticipation for this event, we are approaching the market for a seed investment of up to \$1.5m, likely in the format of a convertible note.

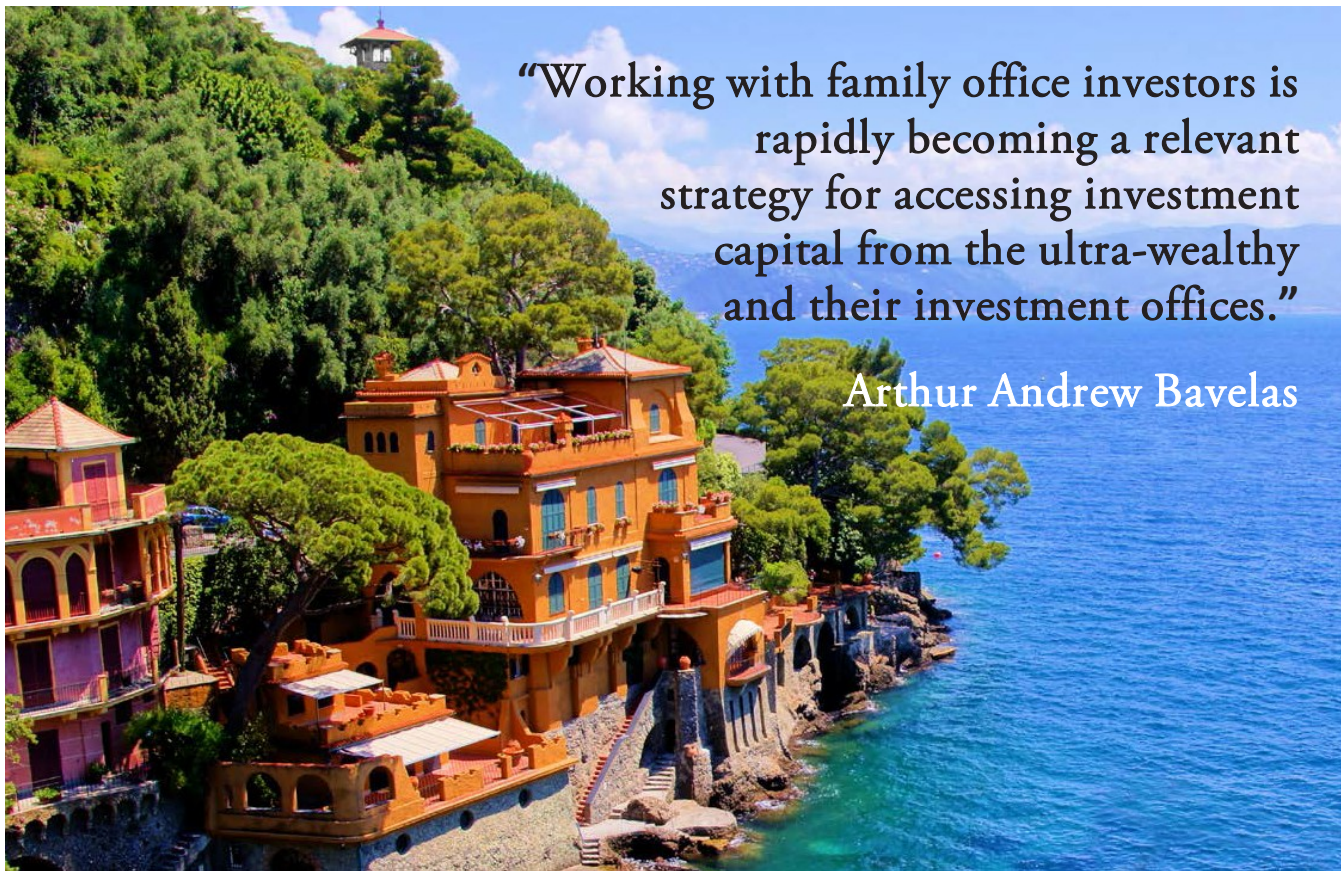
Q: What's next for you?

A: The UK platform commercialization is an 18-month build process. During these 18 months, we will also be trialing new grid response products, many through government-funded projects. We are now in conversation with several utilities and system operators to form similar partnerships in US, Europe, and Asia. Hopefully we will be announcing another consortium or two in the next 6 months. We will be building out our team, centrally and internationally and have already found some amazing people to build these new systems. It is going to be a busy but exciting period, and this is a market that I have wanted to build since I can remember. It has to happen. So we are doing it!



Electron's COO and co-founder, has a background in renewable and cleantech investment as well as digital strategy consulting. Her energy career began in renewable asset financing, from which she transitioned to venture capital, before joining McKinsey & Co, specializing in digital transformation. She also sits on expert advisory boards for several UK utilities.

If you have any questions, please contact Jo-Jo at jojo.hubbard@electron.org.uk.



“Working with family office investors is rapidly becoming a relevant strategy for accessing investment capital from the ultra-wealthy and their investment offices.”

Arthur Andrew Bavelas