

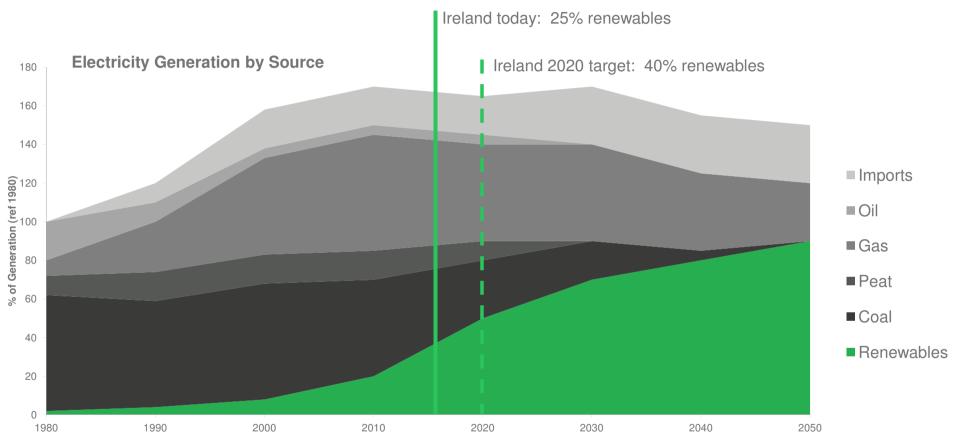
- Founded in Cork in 2015
- UK office in Edinburgh
- Company Motivations
  - Vision of a 100% renewable energy future
  - Complete decarbonisation of the energy system
- Company Inspirations
  - Proliferation of renewable technologies
  - Advancement of smart grid innovations and renewable energy 'enablers'





Click for Video

# **Energy System in Transition**

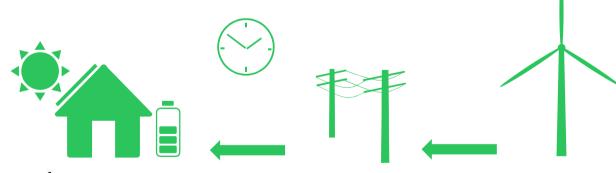


The key to unlocking the potential to deliver 100% renewables is **Energy**Storage.



## What we do

- Disruptive new energy supplier business
- Using energy storage to store low-cost renewable generation from the grid
- · We deploy advanced Lithium-ion battery systems in homes and businesses across the grid
- Cloud-connected network centrally controlled by Solo as a "Virtual Power Plant" to store energy from the grid
- Charge at times of max renewable generation onsite or from the grid
- **Discharge** to the host building or release back into the grid when renewable generation decreases
- Mass market potential any home or building can be a customer







#### **Home Batteries**



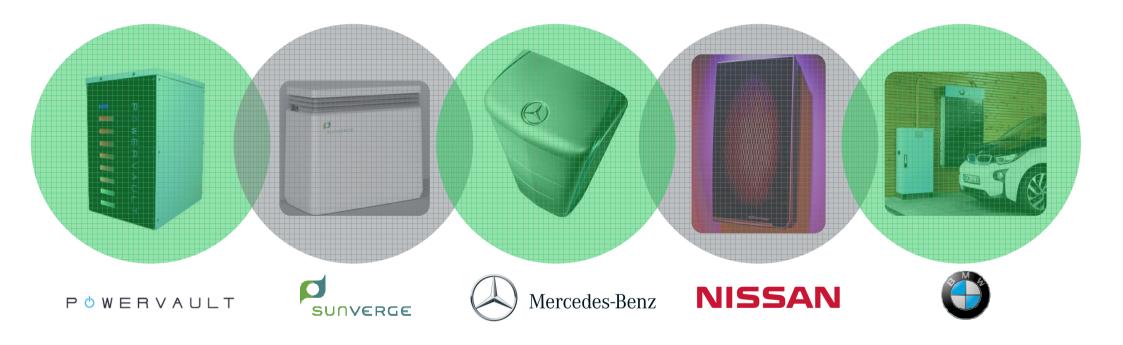




TESLA

Tesla Powerwall. Advanced Lithium-ion battery can store enough energy to power a home for a day.







#### Commercial & Industrial













stem



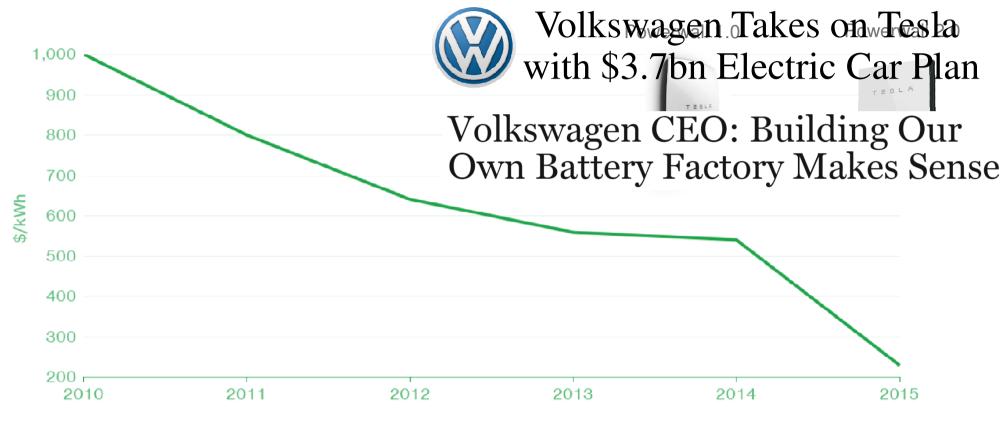
**GILDEMEISTER** 

energy solutions



### Lithium-Ion Battery Prices





Source: Bloomberg New Energy Finance

NOTE: Battery prices are an average of BEV and PHEV battery packs





# **Energy Storage Market**

#### Europe

- · Market expanding rapidly
- Storage 'following' solar in UK & Germany
- Innovative storage business models
- Highly lucrative grid services contracts



#### Australia

- Investment by utilities
- 'Solar + storage' boom
- Increasing electricity prices
- Grid issues



Global energy storage market expected to be worth €32 billion by 2023 with an installed capacity of 40GW.



US energy storage market grew by 243% in 2015.



Li-lon battery prices dropping rapidly. 40% reduction every 2 years is the current trend.



Energy price volatility and increased renewable penetration generating demand for storage.

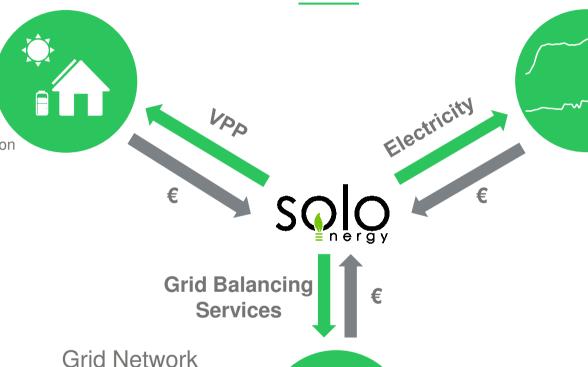


Grid issues

#### Revenue Model

#### Customer

- Residential
- · Commercial & Industrial
- Arbitrage
- · Renewables Self Consumption
- · Smart Metering
- · Time of Use Tariffs



#### Wholesale Electricity Market

- · Wholesale Market Trading
- Electricity Price Arbitrage
- Peer-to-Peer Trading (future)

- Delivering Grid Services
- DS3 System Services
- · Demand Response
- · Asset Upgrade Deferral
- Smart Grid Integration







Electricity prices are volatile, often varying by a factor of 10x or more within a day. No other traded commodity has this level of volatility. **Energy storage presents a huge opportunity to trade energy in way that's not been possible to date.** 



#### Pilot Virtual Power Plants

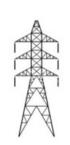
Collaborative research projects

Residential & commercial storage



Storing intermittent renewables

Shifting demand and price peaks



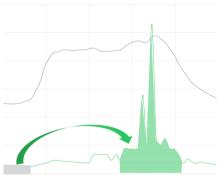






30 new-build low-energy homes

1-2 commercial premises



Helping the grid & reducing carbon

Galway, Ireland Orkney, Scotland



#### **Future Network**

- Network of regional Virtual Power Plants approximately 5MW / 14MWh per VPP
- Membership model empowering consumers to take ownership of renewable generation and consumption
- Encouraging corporate social responsibility for C&I customers
- Maximising the potential of renewables









setting freezing temperatures throughout the country and beyond. Global warming is

an expensive hoax!

23 🚟 🧭 🐸 🎉 🚮 🎉

1:27 AM - 29 Jan 2014

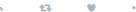




The concept of global warming was created by and for the Chinese in order to make U.S. manufacturing non-competitive.

RETWEETS LIKES 24,831 14,654 💶 🔌 🕃 📆 🎥 💹 😂 🕍 💷

2:15 PM - 6 Nov 2012







"We are going to exit the fossil fuel era.

It is inevitable."



"Our goal is to fundamentally change the way the world uses energy....we want to change the entire energy infrastructure of the world to zero carbon."







#### Our new home

PHOENIX HOUSE, MONAHAN ROAD, CORK



# Get in touch

killian@solo-energy.com

www.solo-energy.com

