

# Warrington BC

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## APSE – Energy Summit Scotland 2019

1<sup>st</sup> October 2019

**Danny Mather**  
**Head of Corporate Finance**



# Overview

- WBC
- Approach
- York & Hull
- Climate Emergency Declaration
- Green Energy Policy
- Together Energy
- Public Sector Social Impact Fund
- Q&A



# WBC

- 205k population
- High economic growth
- 2018/19 Budget: £132.9m
- Low funding base
- £1.3bn Capital Programme

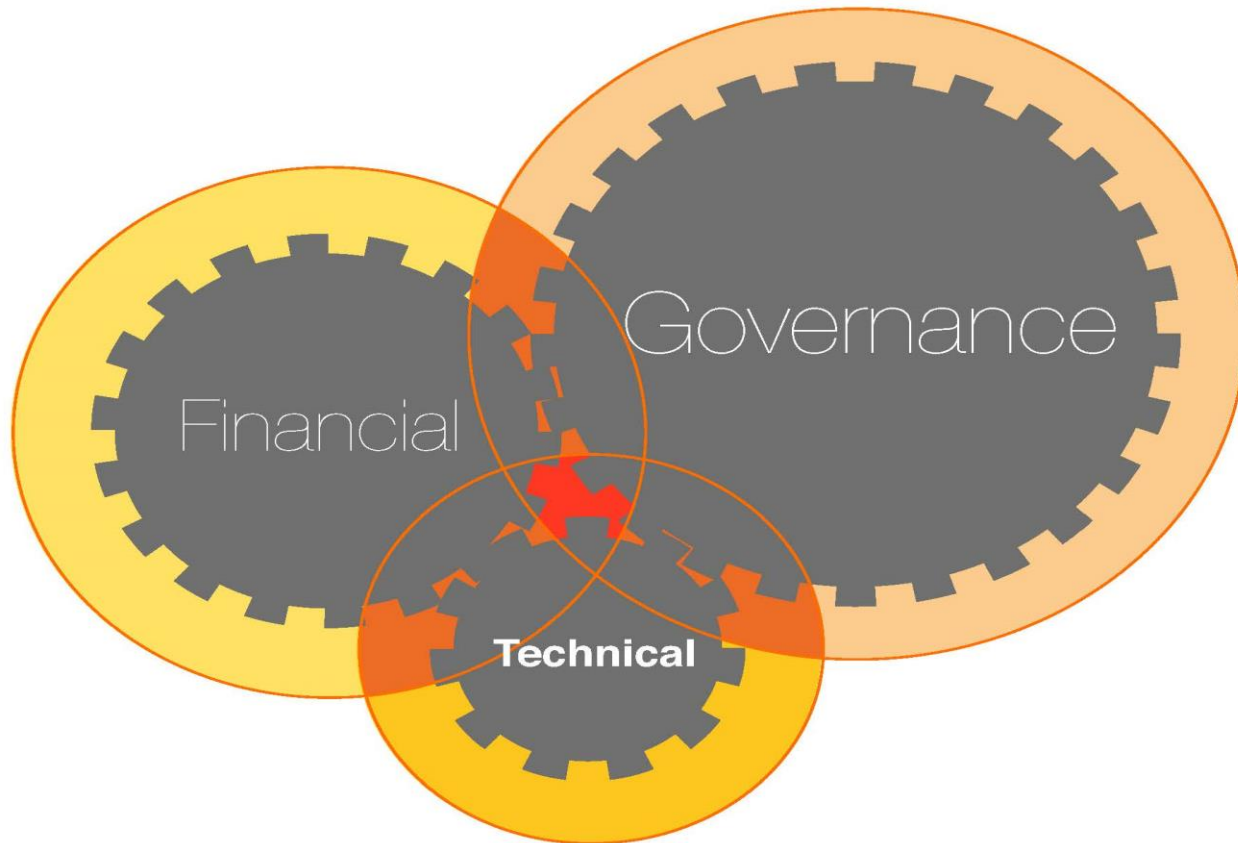


# Objectives

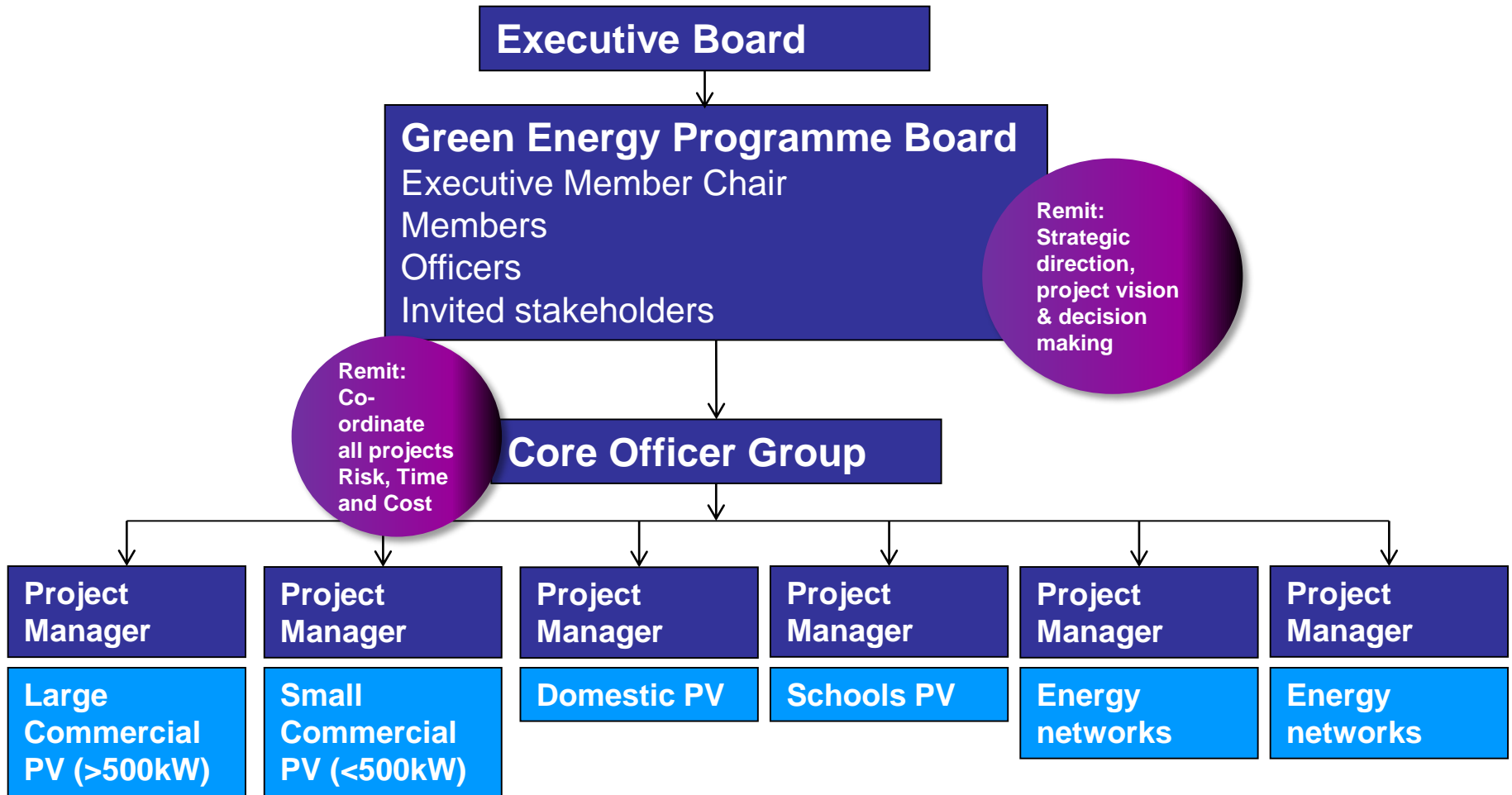
- Affordability – Fuel Poverty
- CO<sub>2</sub> emissions reduction
- Security of supply
- Regeneration
- Revenue generation
- Sustainability



# Approach



# Governance - Internal Delivery

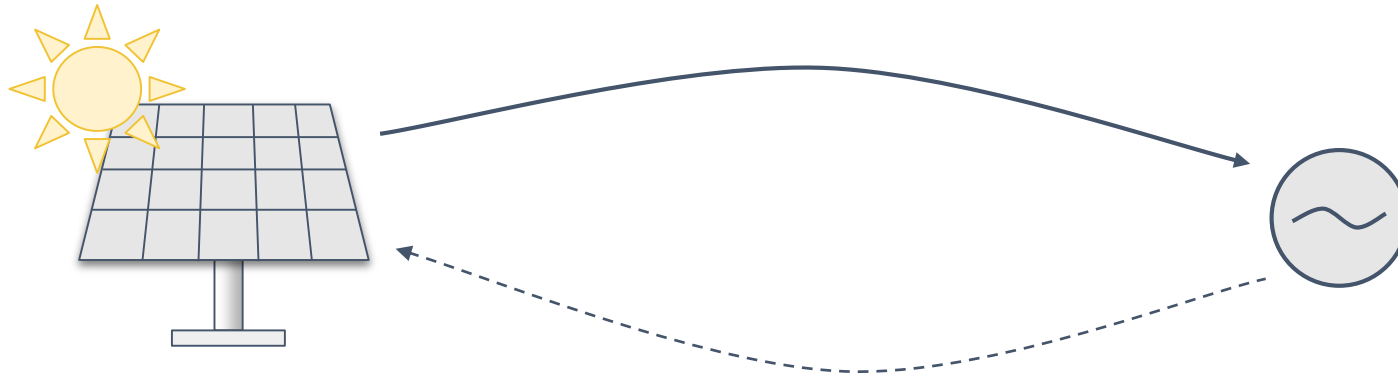


# Progress to Date

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- Solar on 2,500 Properties
- Community Energy
- Commercial Arrays
- Warrington Wolves Stadium
- Solar Investments
- York & Hull Solar Farms
- Climate Emergency Declaration
- Together Energy
- Public Sector Social Impact Fund

# Business as usual: PV only



## Advantages

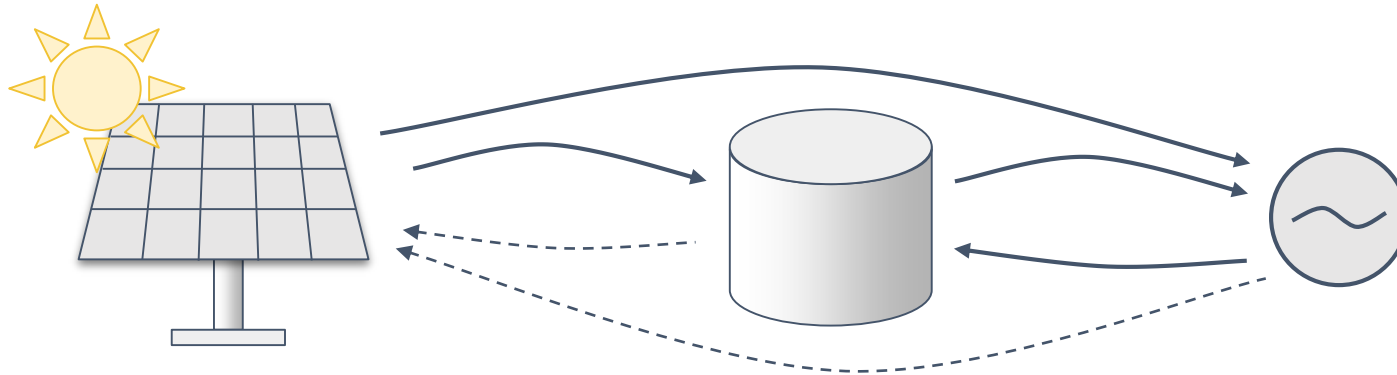
- Straightforward
- Lowest cost

## Challenges

- Dependant on real-time market prices (excluding sleeving)
- No ability to optimise revenue streams
- Lower ROI



# Hybrid Solution: PV + Battery Storage



## Advantages

- PV base case remains straightforward, and in place
- Optimisation of PV income streams now possible
- Additional income streams available with short, medium, and long-term contracts (Energy Trading, Capacity Market, FFR, STOR, BM, Reactive Power, EV charging, Black Start... and future proofed for others over time)
- Higher ROI

## Challenges

- Batteries are less well known
- Requires active management for revenue optimisation
- Requires replacement of battery cells during project lifetime

# York Solar Farm



Courtesy of NEXTracker

## Key Facts

198 acres of poor quality farmland

35m/w

91,392 Bifacial solar panels

Produce enough energy to power 10,000 Homes

Saves 15k tones of carbon

c30,000kWh of Energy Storage – equivalent to 750 Electric Cars

Phase 2: Electric Forecourt®

# Hull Solar Farm



Courtesy of NEXTracker

## Key Facts

131 acres of poor quality farmland

26 m/w

67,890 Bifacial solar panels

Produce enough energy to power 8,000 Homes

10j tones of carbon

Phase 2:

Battery Storage  
\_Electric Forecourt®

# NEXT GENERATION SOLAR PANELS

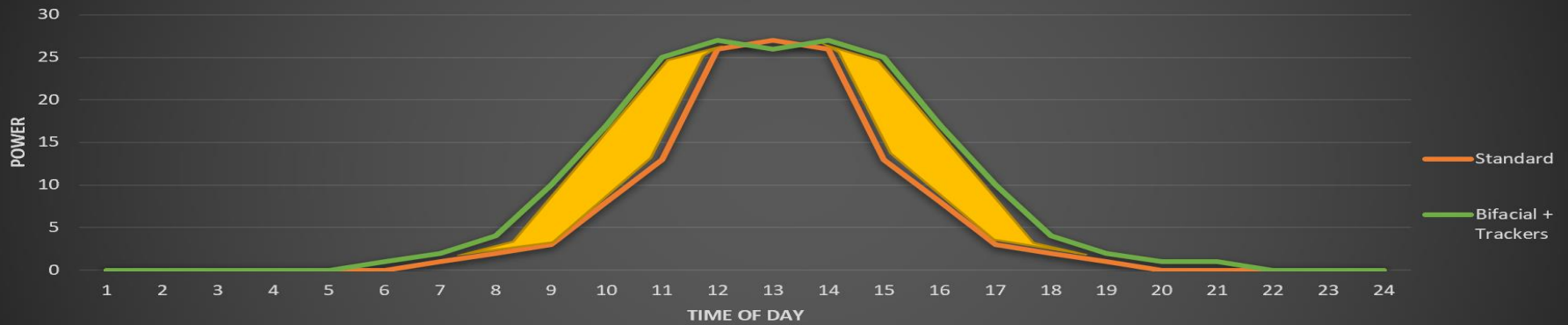
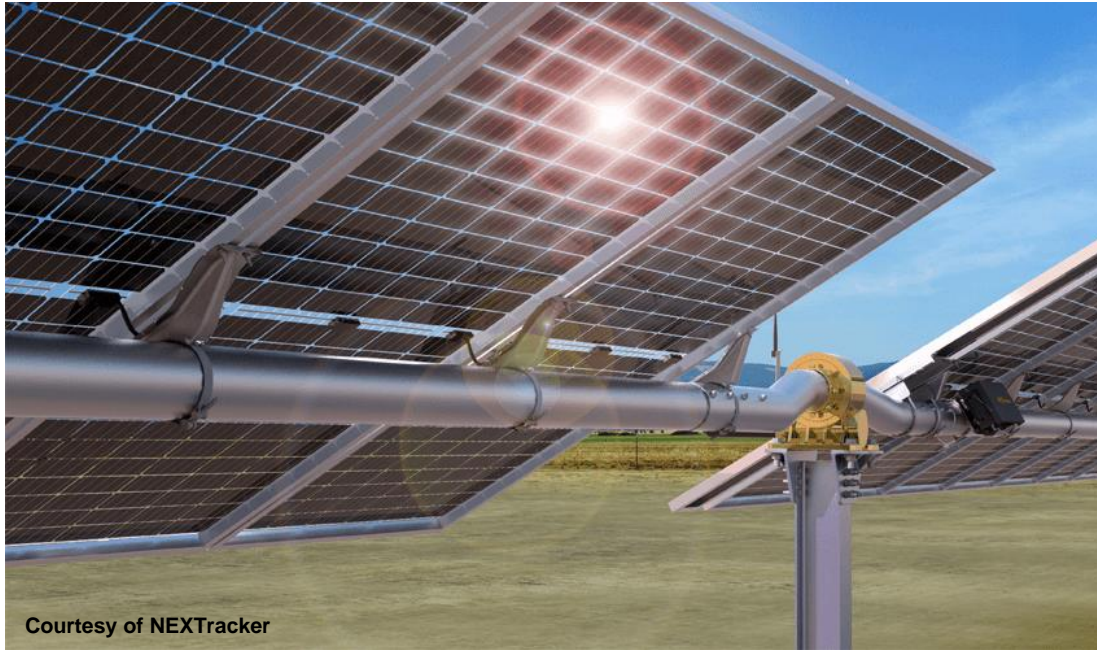
Courtesy of NEXTracker



**Bifacial Solar Panels**

**... up to 20% Extra Energy Generation**

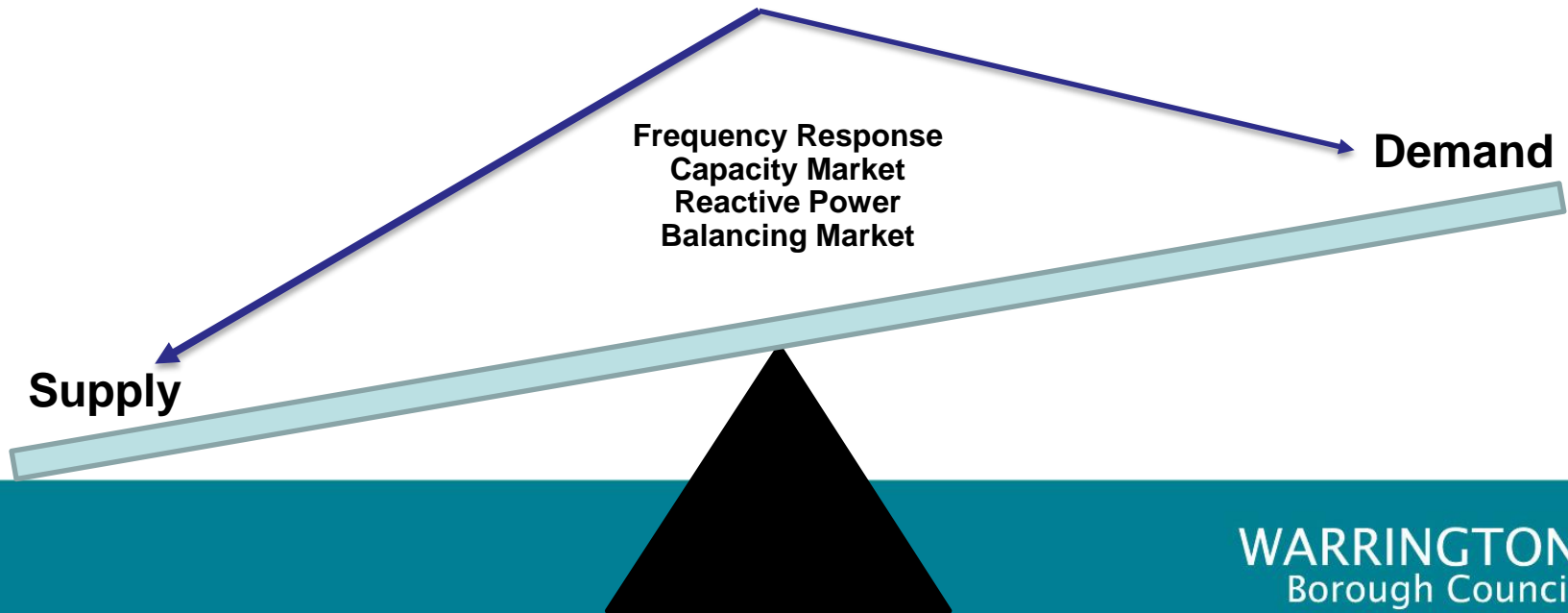
# MOUNTING STRUCTURE: TRACKERS



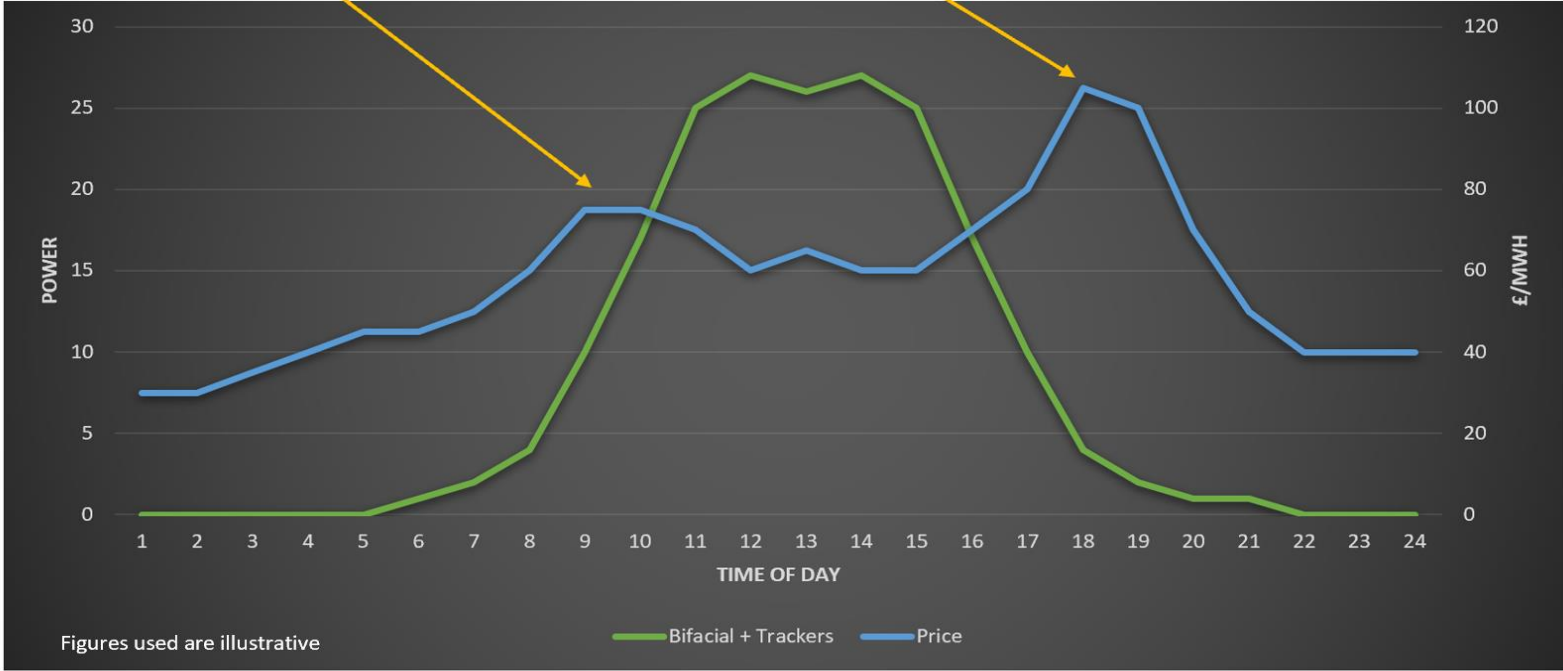
# BATTERIES – SERVING THE GRID



**SAMSUNG SDI**



# BATTERIES – MAXIMISING VALUE OF SOLAR ENERGY



# FROM YORK AND HULL >> WARRINGTON



## **“SLEEVING” CONTRACT**

1. POWER PURCHASE FROM SOLAR
2. SUPPLY TO COUNCIL



**WARRINGTON**  
Borough Council



**Schools**

**Street Lights**

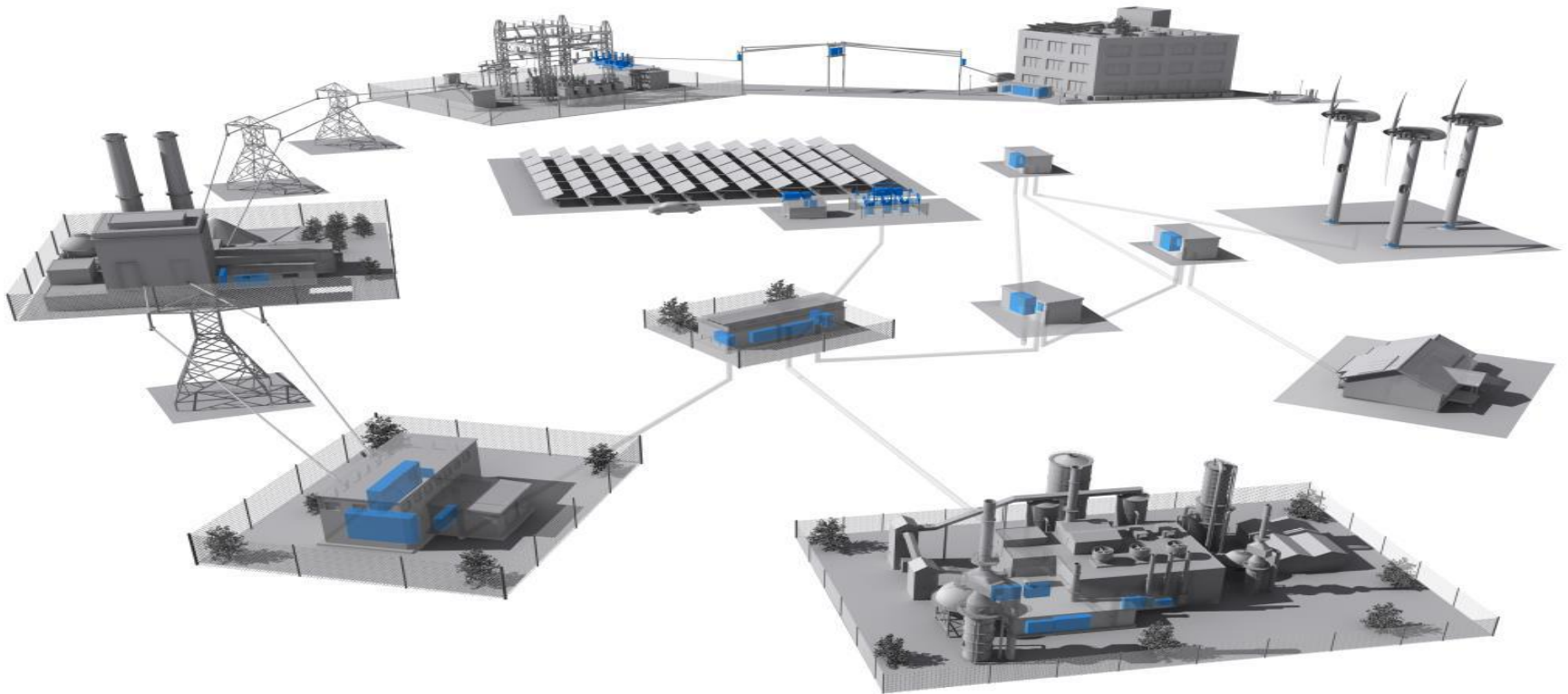
**Offices**





# Energy Supply Company

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# Public Sector Social Impact Fund



A Public  
Sector & City  
Partnership

## In conclusion

Why now?



**“The time value of impact...  
inaction costs, not just in money  
but in people’s lives.  
Time matters.”**

*Amit Bouri, GIIN CEO*



# Q&A

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