URBAN LOGISTICS HUBS

Renewable Energy: A Business Case?

17th June - Cold Chain Energy Week

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Introduction

- Urban Logistics Hub is the property development arm of the Magnavale Group.
- Currently in the planning stage of a new development in the Thames Gateway.
- Planning the re-development and expansion of our Easton site.
- Looking into the use and application of renewable energy on new and existing sites.

Thames Gateway Project

- 150,000 pallet site in the South of England.
- 650,000ft^2 of space across the site.
- Fully automated with value added services.

Easton Project

- Additional 90,000 pallet capacity.
- Construction of an additional 185,000ft^2 high bay building.
- Fully automated including pick floors.

Wind Turbines

Benefits	Risks
Proven technology with large number of established manufacturers.	Grid restrictions including the potential reinforcement costs.
Strong network of spares/maintenance.	Obtaining planning.
Potential support through the capacity market.	Tower height 50m-120m.
Payback circa 8-10 years.	Disruptive air flow alongside tall buildings.

Rural Wind Farm

Industrial Wind Turbines

Photo Voltaic

Benefits	Risks
Proven technology with large number of established manufacturers.	Grid restrictions including the potential reinforcement costs
Payback typically 5-9 years.	Issues with fixing the equipment to clad racked structures.
Relatively low operational costs.	Obtaining planning.
Life span improvements to 25 years.	No current government support.

Floor Mounted

Roof Mounted

Battery Storage

Benefits	Risks
Combines with and enhances other renewable technologies.	Grid restrictions including the potential reinforcement costs
Payback typically 6-9 years.	Ongoing risk relating to warranties.
Potential external revenue streams e.g. balancing mechanism.	Obtaining planning.
Displaced imported energy costs.	No current Government support

Storage Render

Storage Unit

Heat Pumps

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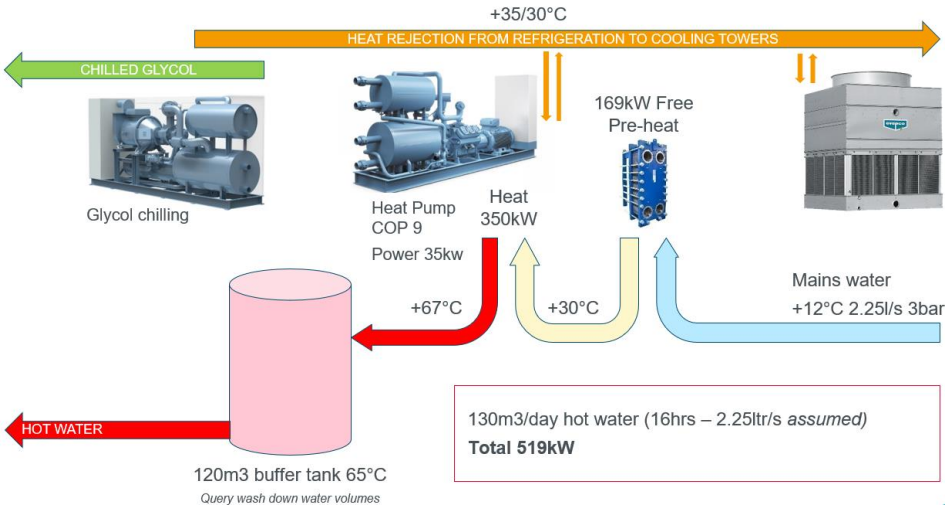
Benefits	Risks
Lower energy costs.	High capital costs.
Industry symbiosis.	Lack of infrastructure.
Potential revenue.	Expensive to retrofit on existing sites.



Power Purchase Agreements

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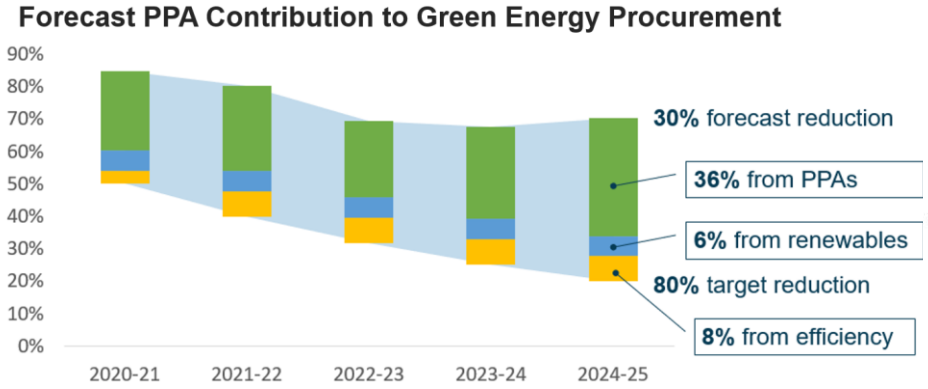
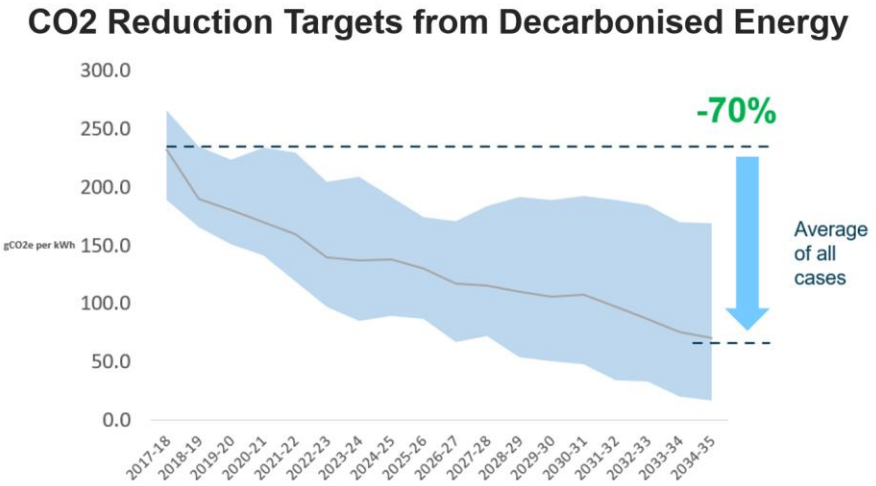
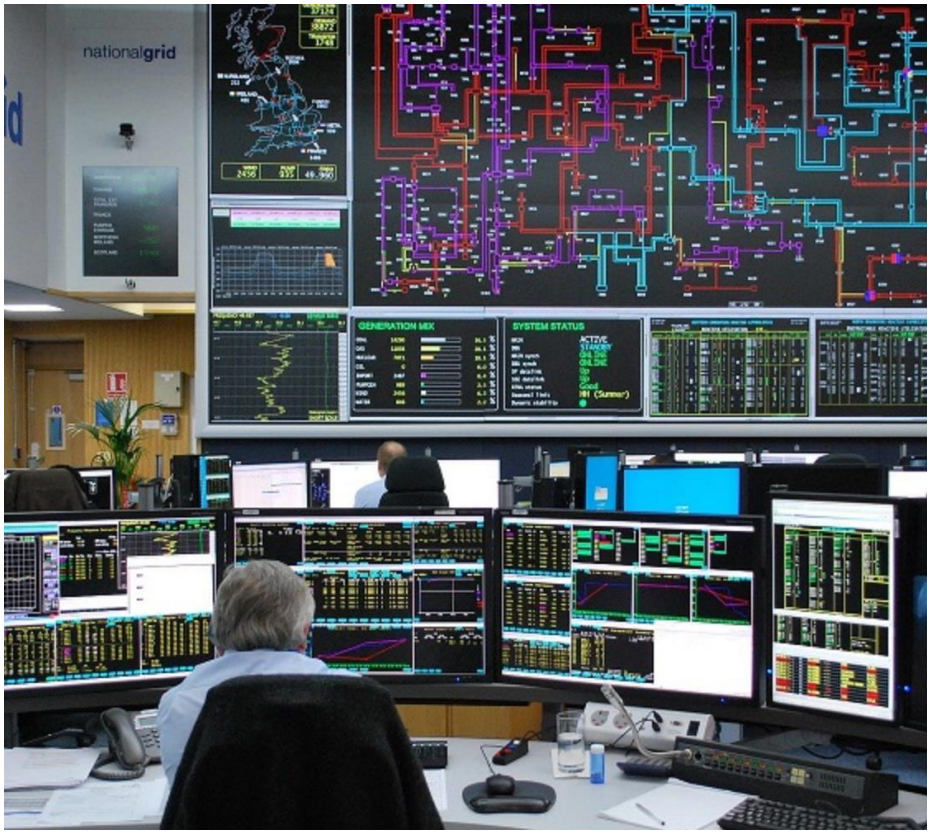
Benefits	Risks
A way of bringing remote renewables onto a site with restrictions.	Increased costs.
Long term pricing stability.	Distribution costs not avoided.
Incorporates clean energy, sustainability and zero carbon reporting.	Potential changes in legislation.
Addresses carbon reduction pressure from investors, customers & government policy.	Inflation and indexation mechanics.





Balancing Act

- National Grid uses the Balancing Mechanism to match supply and demand in real-time.
- Traditional sources (thermal generators) closing.
- Growth of renewable energy brings challenges of intermittency and growing requiring for flexibility.
- Flexible consumers, like cold stores, can now participate, without affecting supply contracts
- Both increasing and dropping demand is valuable
- Capacity and operating constraints are the start point
- 1MW tranches; aggregation possible



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