

# Interim Results Presentation January 2019 | London

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- What we do?
- Markets
- Product Offering
- Cost Structure
- Production Capacity
- Financial Results
- Pipeline Analysis
- Tender Opportunity Pipeline



### Unique selling points:

- **Rapid response:** less than 1 second
- **Elevated Pressure:** 20 - 50 bar
- **High efficiency:** 70 - 86% (with heat recovery)
- **Small Footprint:** smaller than alkaline
- **Low cost:** approaching large scale alkaline
- **Reference plant:** at MW scale
- **Experience in the field:** in many applications



ITM Power manufactures integrated hydrogen energy systems



### Sector Coupling:

Sector:	Need:
■ Power:	Energy storage
■ Heat:	Renewable gas
■ Mobility:	Carbon reduction
■ Commodities:	Carbon reduction

#### Power-To-Gas



##### Power-To-Gas Storage:

- UK Electricity Grid 336TWhrs/yr throughput
- UK Gas Grid 897TWhrs/yr throughput
- Assuming 3% Hydrogen injection
- **UK addressable market of €1.1bn**



Thüga – Germany (2014)

#### Clean Fuel



##### Hydrogen Fuel:

- Current UK fuels market is 700TWh
- If hydrogen captures 1% of it (7TWh)
- Electrolysers operate c.10 hours per day
- Required capacity will be: 2.86 GW
- **UK addressable market is €2.8bn**



Cobham – UK (2017)

#### Renewable Chemistry



##### Renewable Chemistry and Refineries:

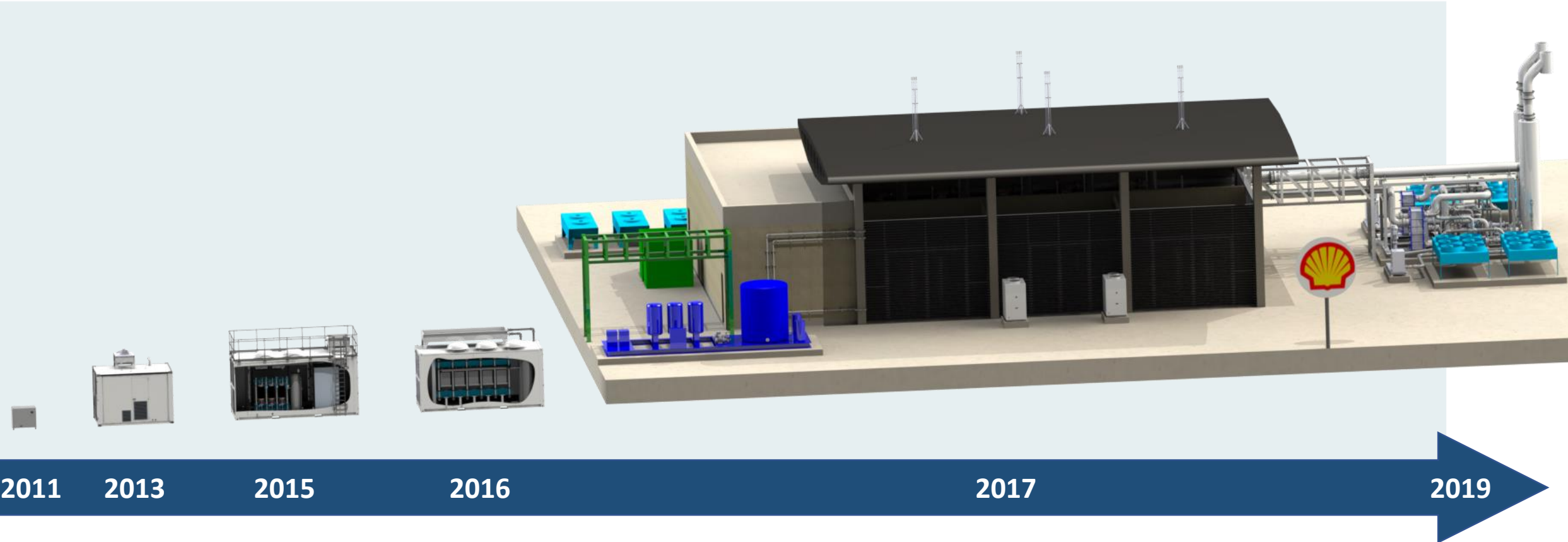
- Ammonia | €0.3bn in UK | €33bn global
- Methanol | €6bn in UK | €30bn global
- Steel production | €0.6bn in UK | €80bn global
- Refineries | €1.3bn in UK | €90bn global



**Power | Heat | Mobility | Commodities**

# WHAT WE DO?

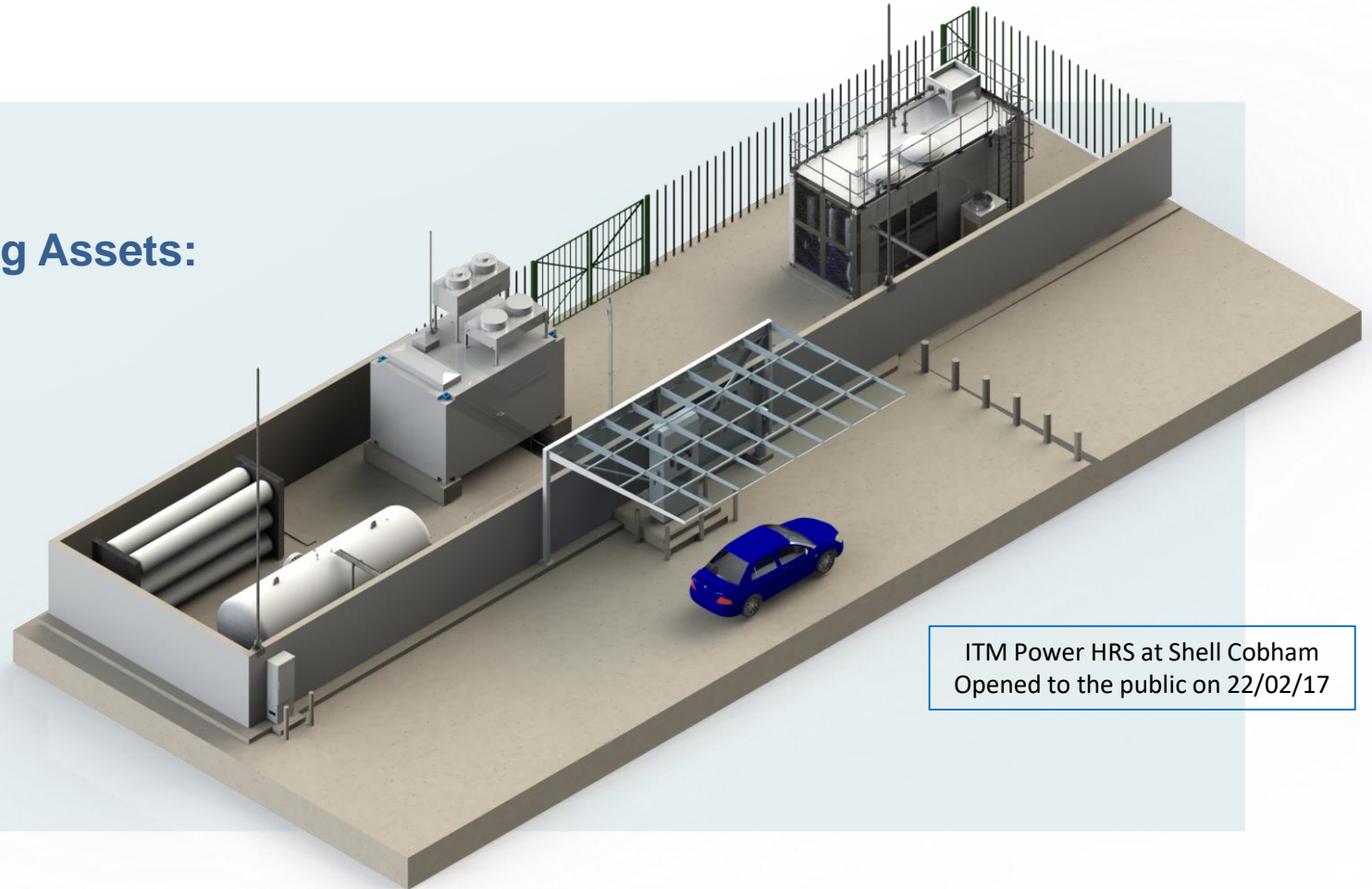
## HYDROGEN ENERGY SYSTEMS



**ITM Power manufactures integrated hydrogen energy systems**

### Expanding Fleet of Revenue Generating Assets:

- 7 UK HRS in operation
- 1 US HRS in operation
- 6 UK HRS in construction
- Current hydrogen sales capacity of £9m pa
- Currently dispensing 20 tonnes pa
- Load aggregation for Grid Balancing



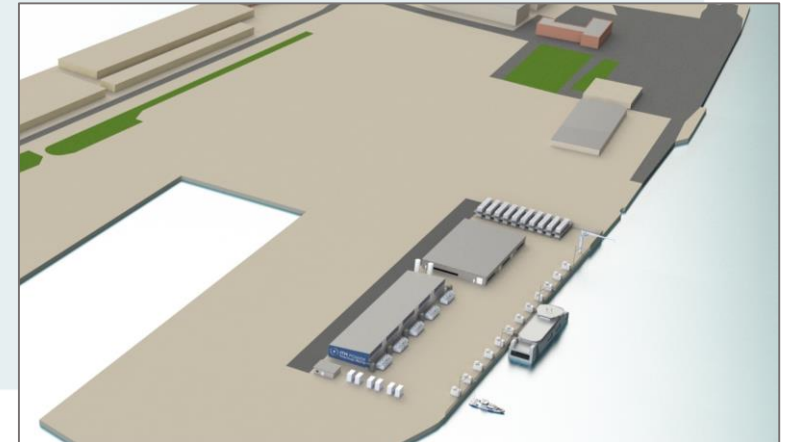
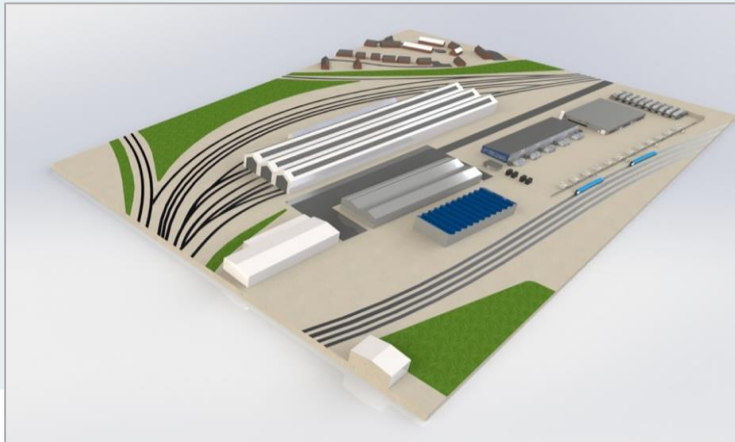
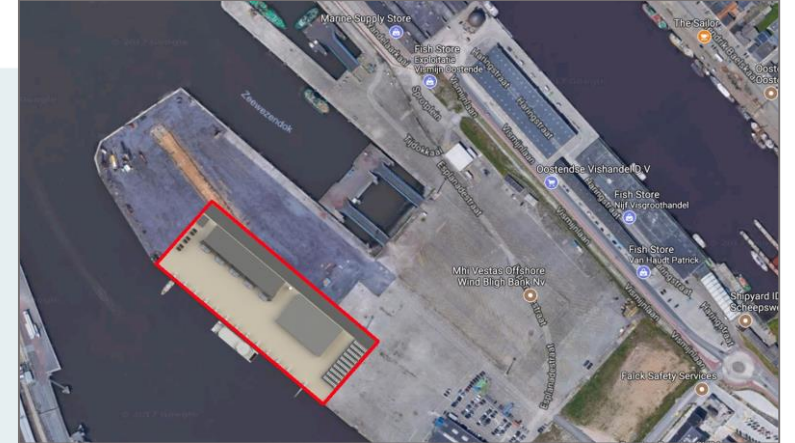
ITM Power HRS at Shell Cobham  
Opened to the public on 22/02/17

**Currently £9m per annum sales potential**



# 10MW | 30MW | 50MW HRS SYSTEM DESIGNS

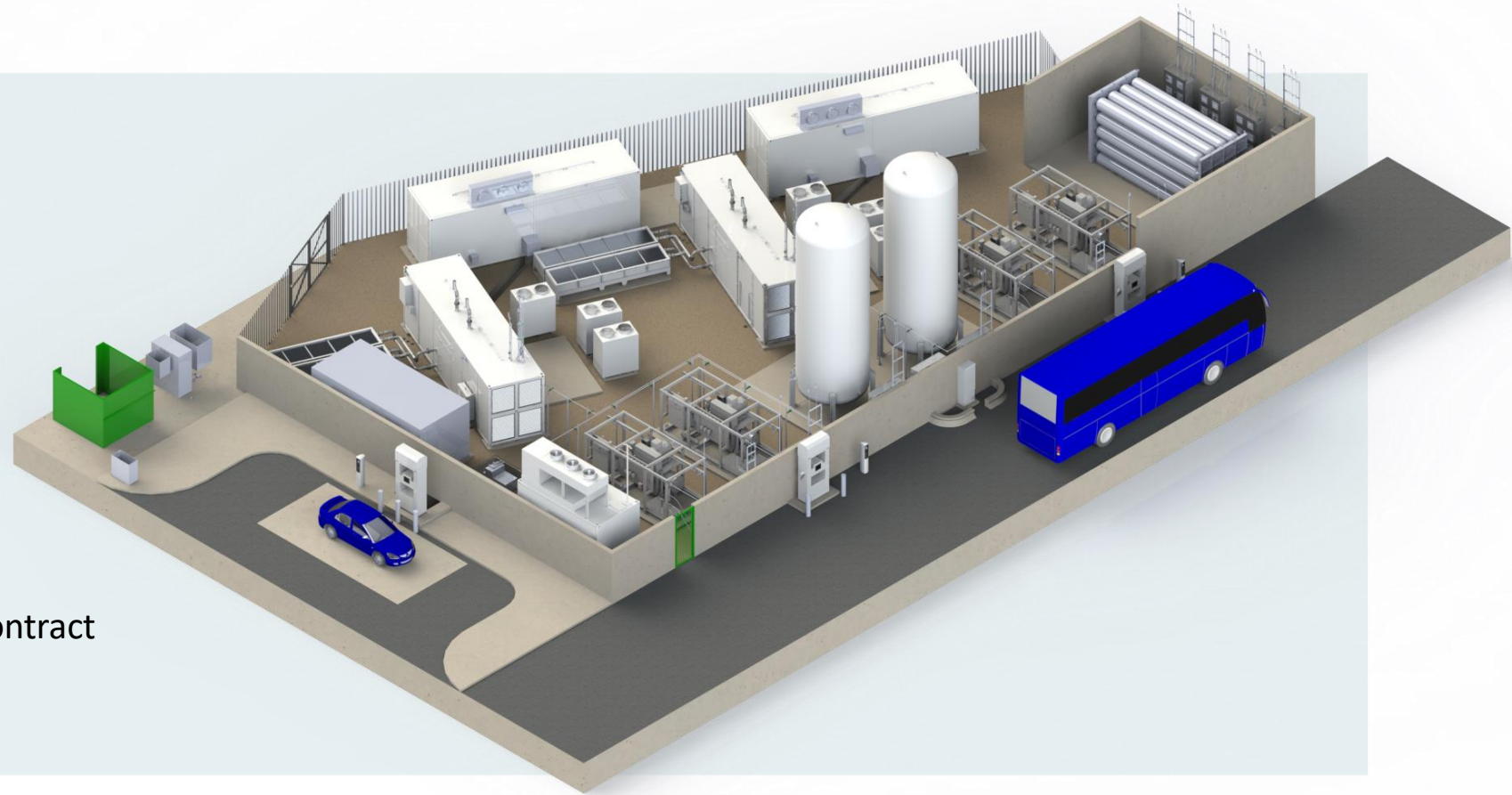
## HYDROGEN ENERGY SYSTEMS



**Buses | Trucks | Trains | Ferries**

## Birmingham Bus Project:

- 3MW of rapid response electrolysis
- 350bar bus refueller
- 1200 kg/day capacity
- 350 and 700 bar public refueller
- Opening Q2 2019 for cars and buses
- 3MW of FCDM combined with RE contract



**3MW Grid Balancing combined with Bus Refuelling**



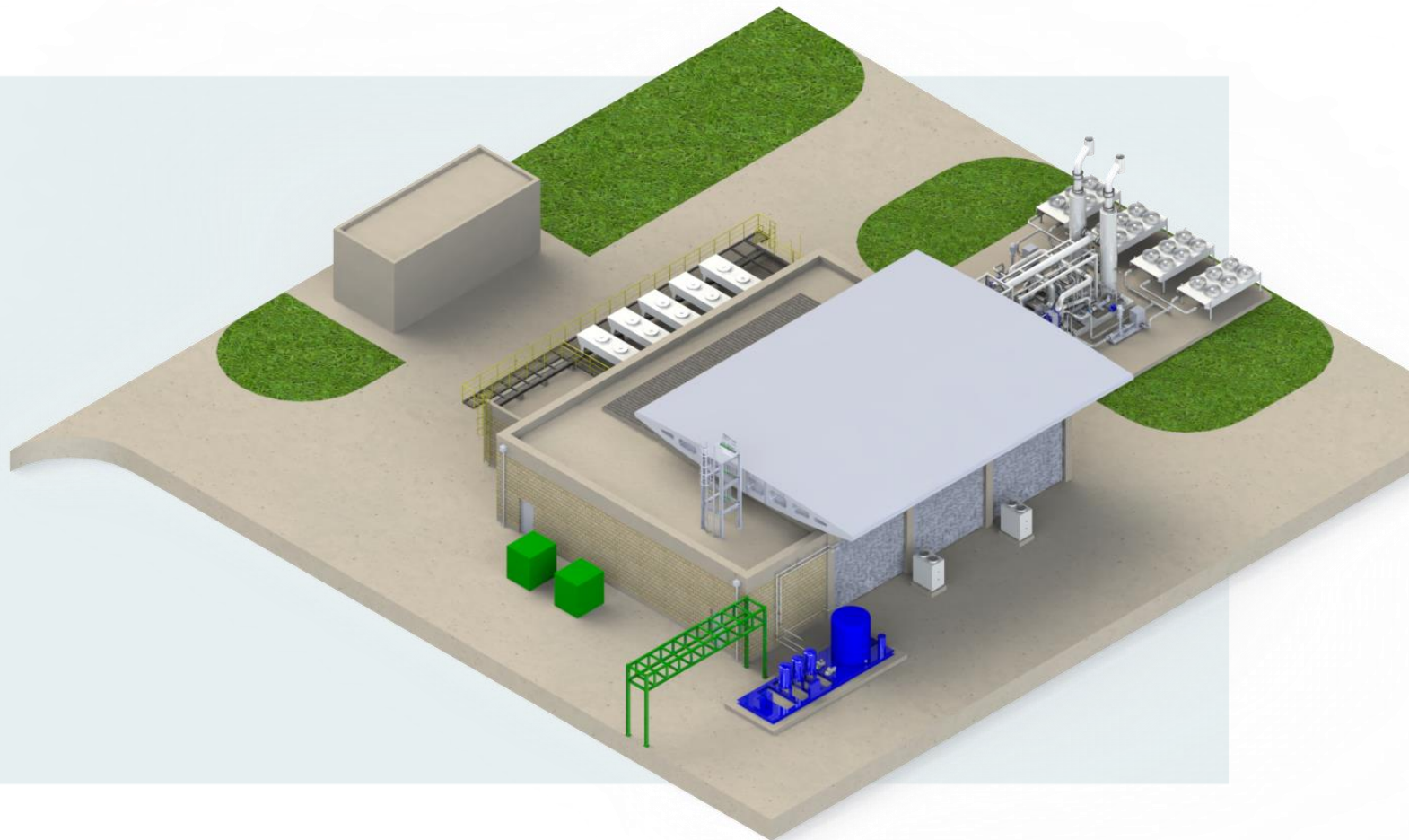
**Innovate UK**





## 10MW PEM electrolyser for Shell:

- Flagship 10MW project with Shell
- Largest PEM electrolyser in the world
- Largest refinery in Germany
- Primary Grid Balancing (1 and 4 sec.)
- Load Balancing
- Future direct RE coupling

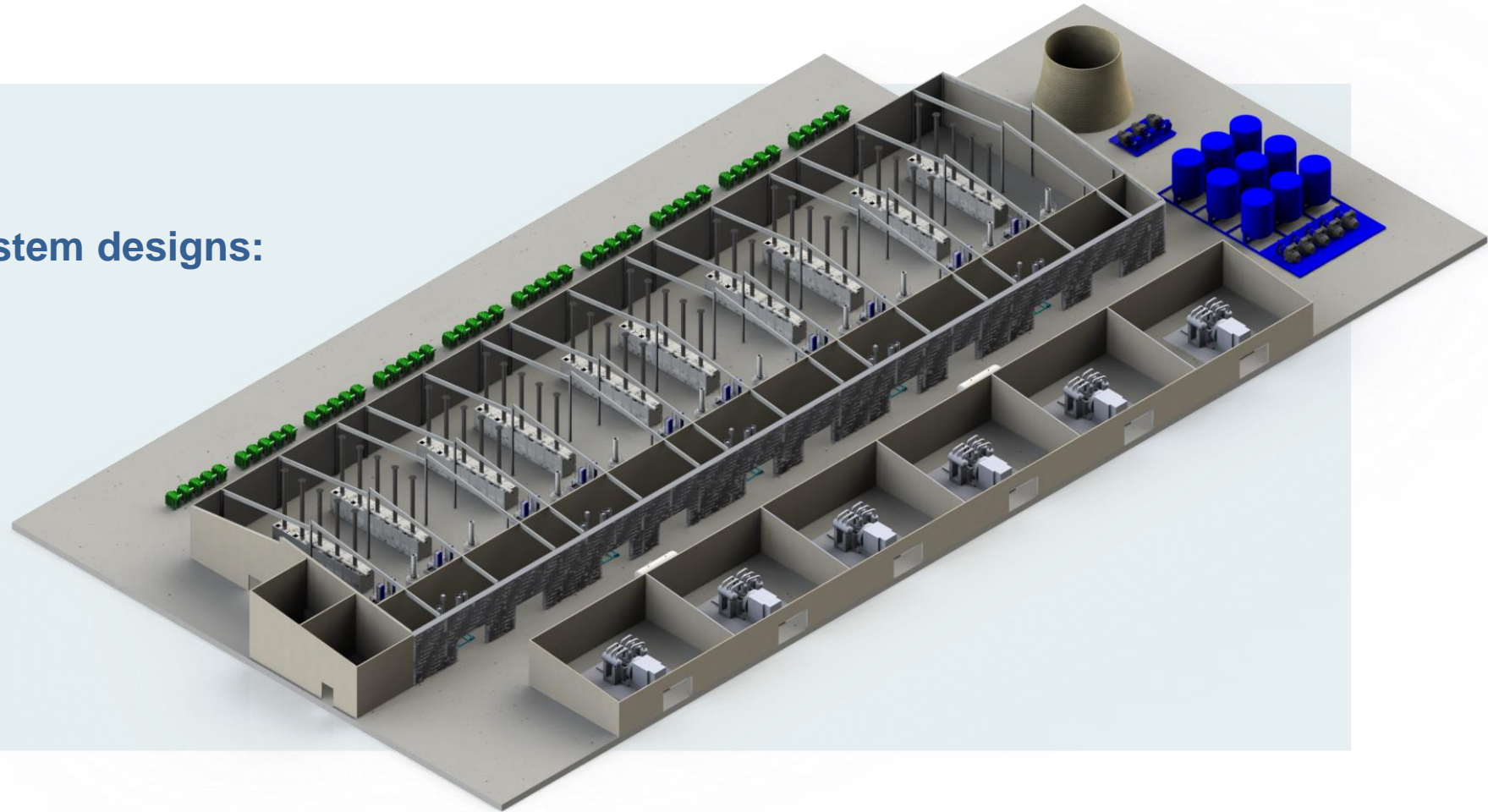


**Building the world's largest PEM electrolysis plant at Rhineland refinery, Germany**



### 100MW PEM electrolyser system designs:

- Based on 10MW standard skids
- Increasing industrial interest
- Rapid response
- Genuine industrial scale



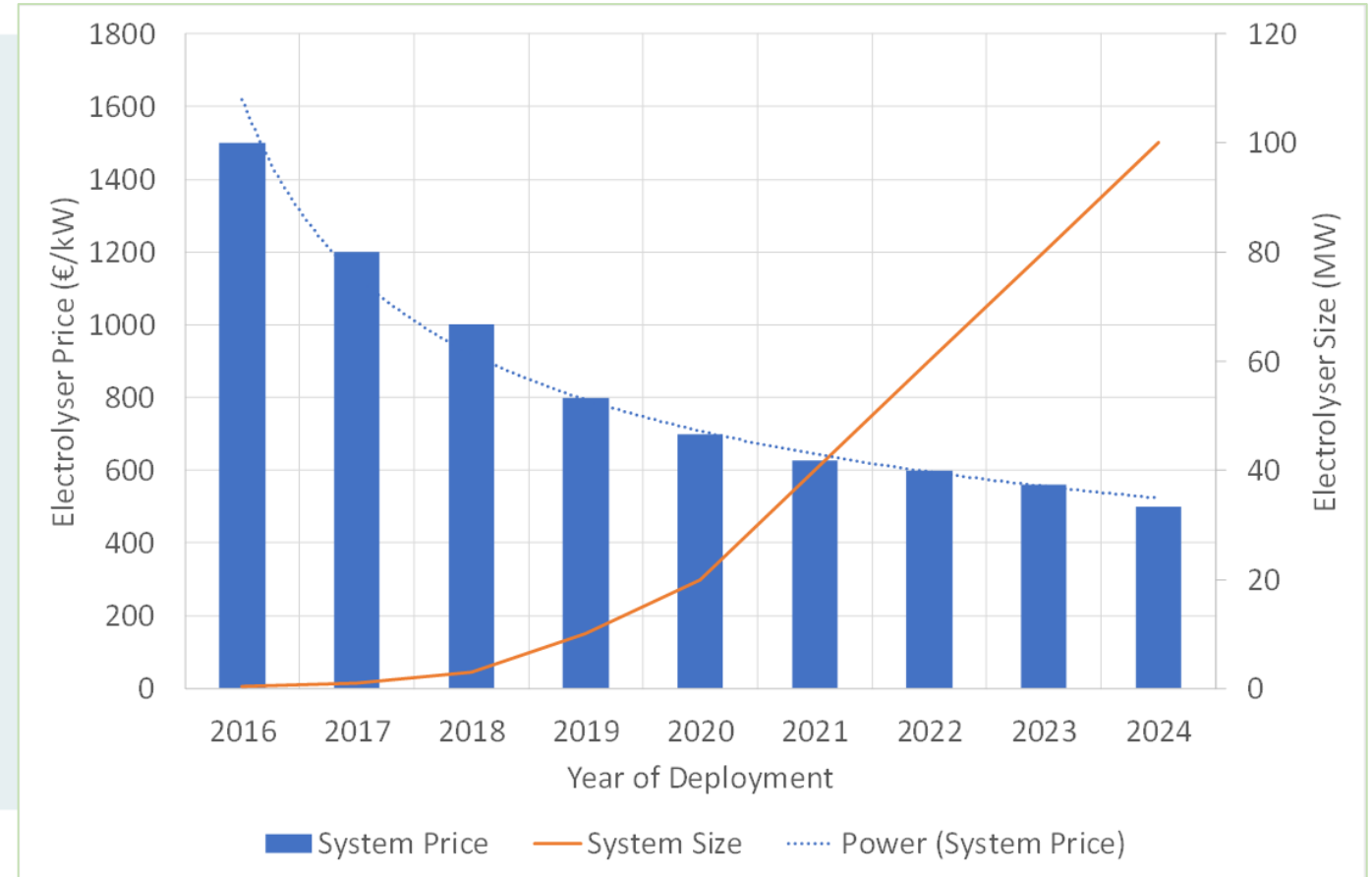
**Industrial Hydrogen | P2G | Refineries | Ammonia | Steel**

# ELECTROLYSER SYSTEM COST CONSIDERATIONS

## HYDROGEN ENERGY SYSTEMS

### ITM Electrolyser Cost Projections

- Expect system sizes to grow over time
- Larger scale enable cost reduction
- Larger volume enable efficiencies
- Continuous technology improvements
- Sensitive to scope of supply



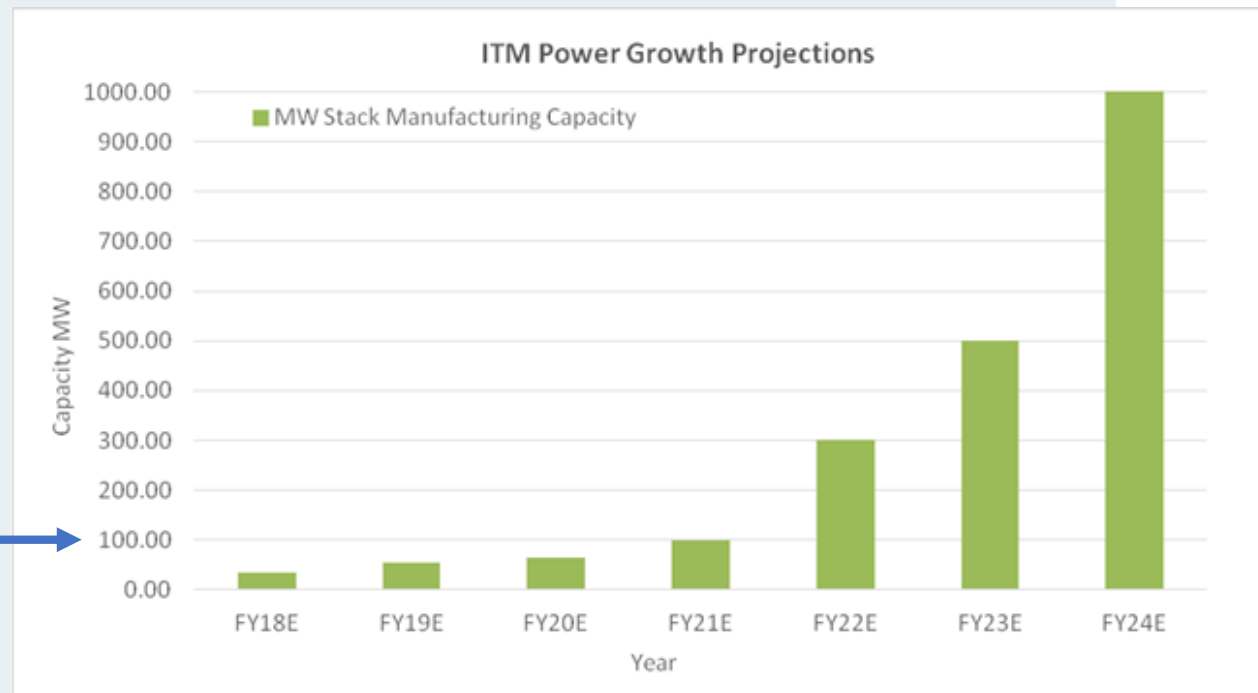
**<€1,000/kW today @ MW scale | <€800/kW @ 10MW | <€500/kW by mid 2020's**



### Production Capacity

- Colocation into new production facility
- Manufacturing space increased by 5x
- Adoption of semi-automated stack component preparation
- Increase of power on-site to allow testing of larger systems
- Heads of terms agreed
- Costs in-line with expectations

Production capacity in  
the current S2 facility



Production capacity based on standard 10MW stack skids and 2MW standard modules

## Finances

- Revenue and Targets
- Pipeline
- Partnerships



**£33.6M Under Contract or in Negotiation**

### Total income: £5.0m (£4.4m), comprising:

- Revenue: £1.2m (£1.7m)
- Grant income plus grants receivable for capital projects: £3.8m (£2.7m)
- As in previous years, revenue is expected to be weighted towards the second half

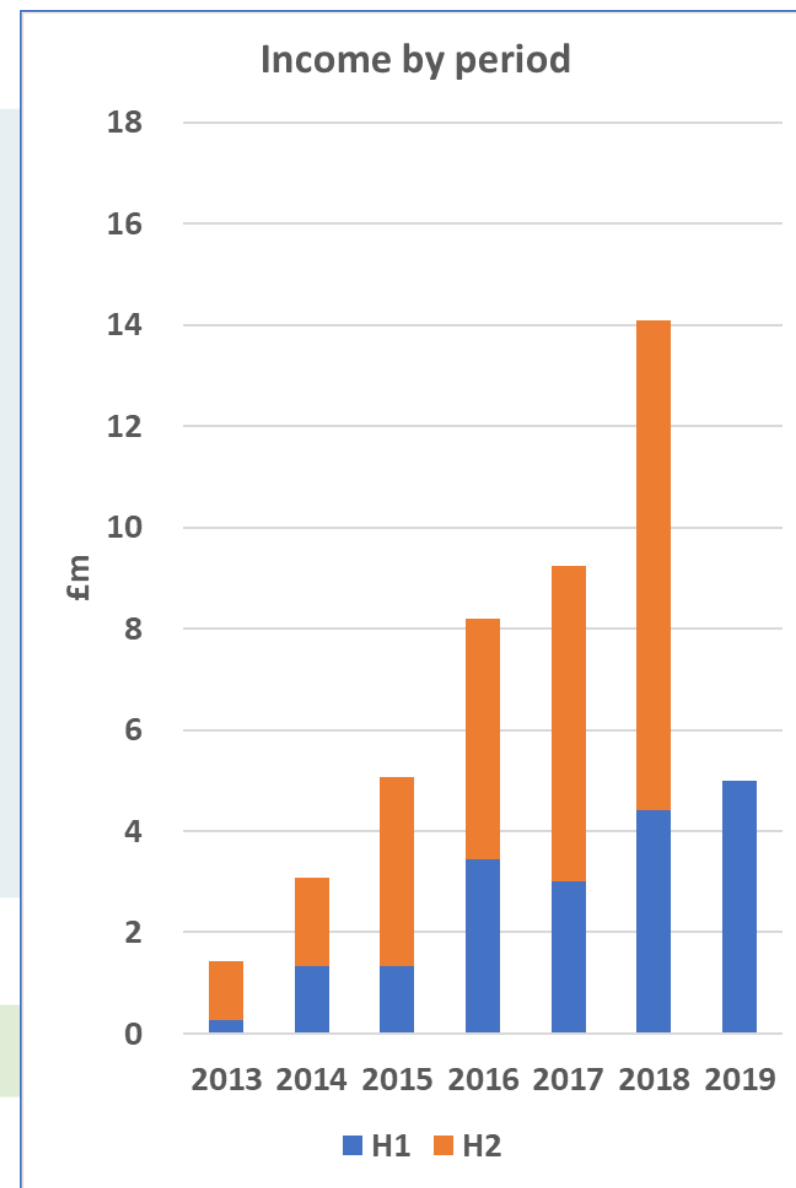
### Loss from operations: £5.3m (£2.9m)

- Greater than originally anticipated, due to cost overruns on four 'first-of-a-kind' projects (£0.9m) as well as significant investments made in people (£0.8m), resources and capacity during the period (£0.6m).

### Strong balance sheet:

- Total financial assets constitute £24.9m with £15.6m of cash, £1.7m of cash on guarantee and deployed working capital (debtors less creditors) of £7.6m.

Revenue | Losses | Balance Sheet

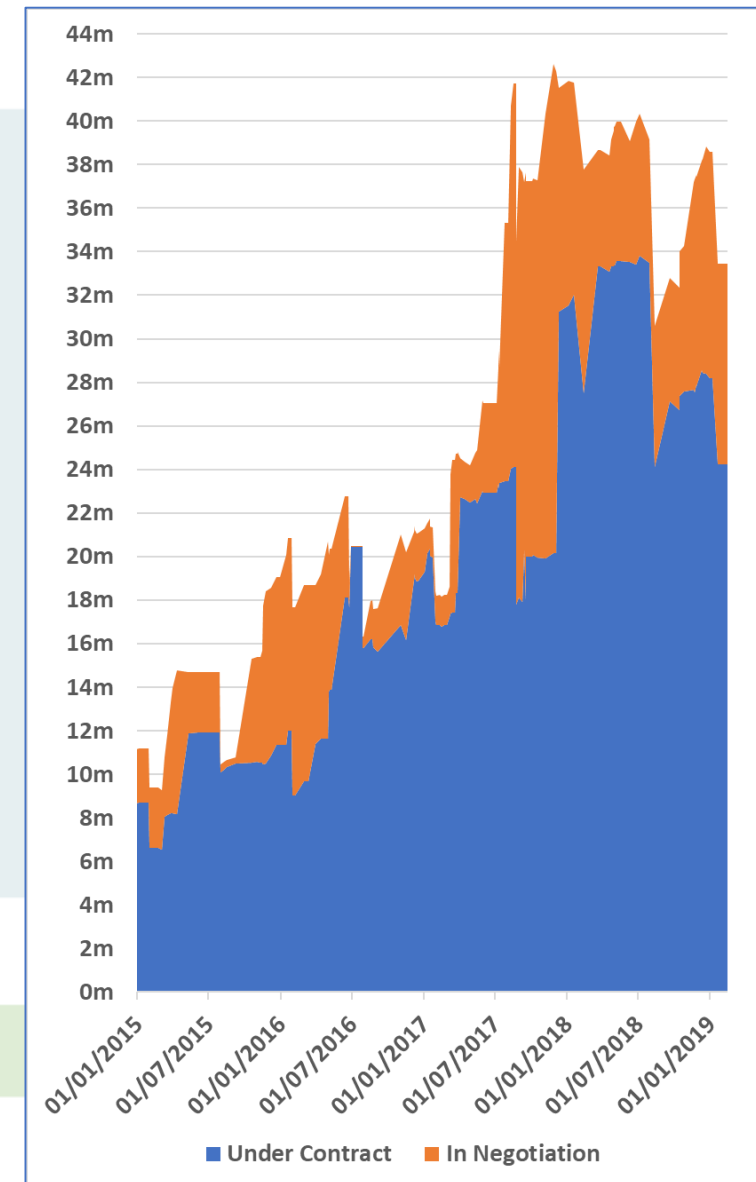




### Total Under Contract or in Negotiation: £33.6M

- Reporting the number 4 times per year
- Stopped putting it in all RNSs (advice from Investec | Tavistock)
- As of today, total backlog of £33.6m (£37.4m)
- £23.2m (£27.0m) of projects are under contract
- A further £10.4m (£10.4m) are in the final stages of negotiation

**Total Under Contract or in Negotiation: £33.6M**

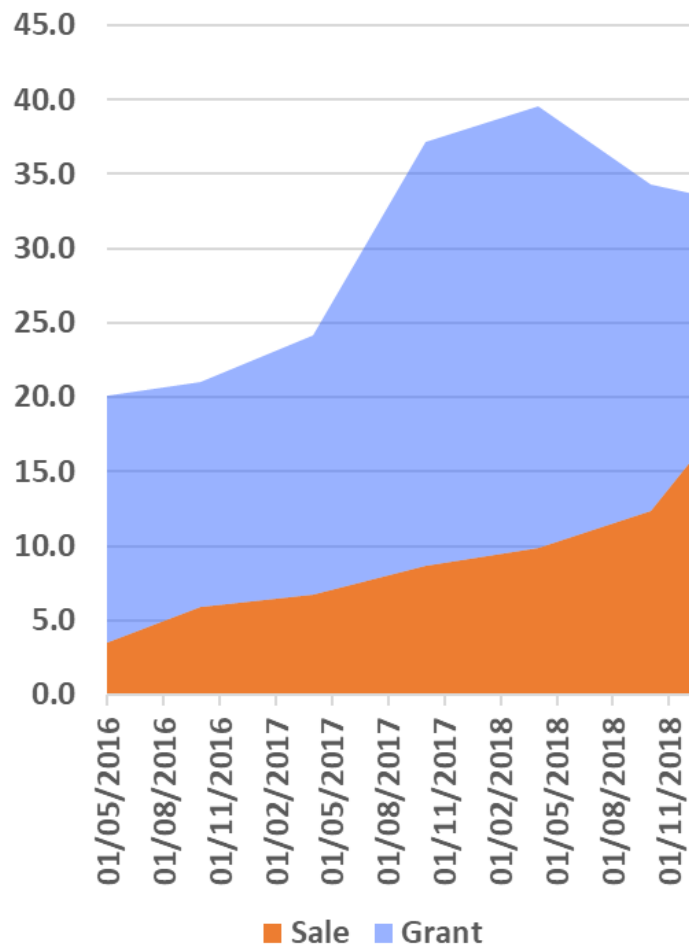


### Transition from grants to sales

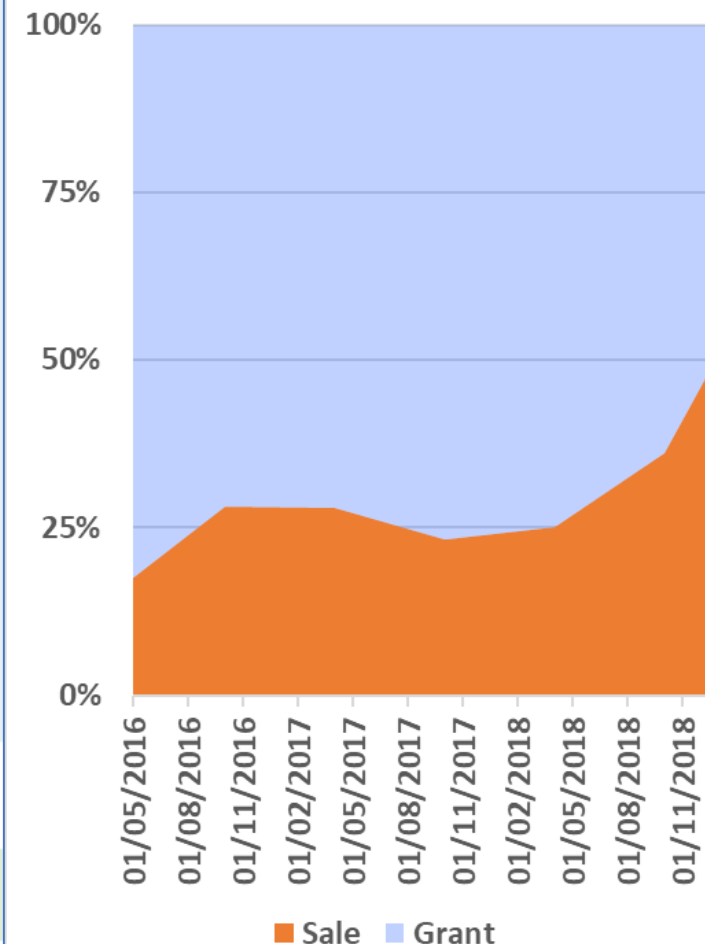
- Grants result in revenue generating assets
- Crossover for the Backlog was 2018
- Sales are the company's focus

Revenue | Grants | Sales

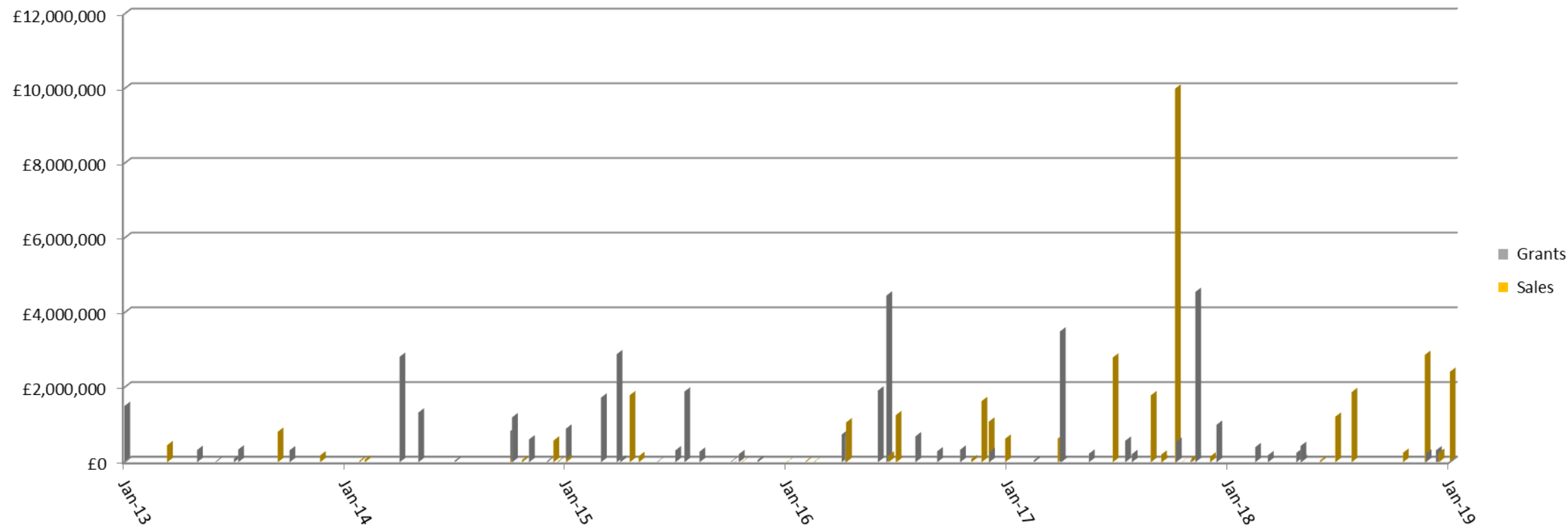
Analysis of Items under contract and in negotiation (£m)



Analysis of items under contract and in negotiation %



### Contracts Secured timeline



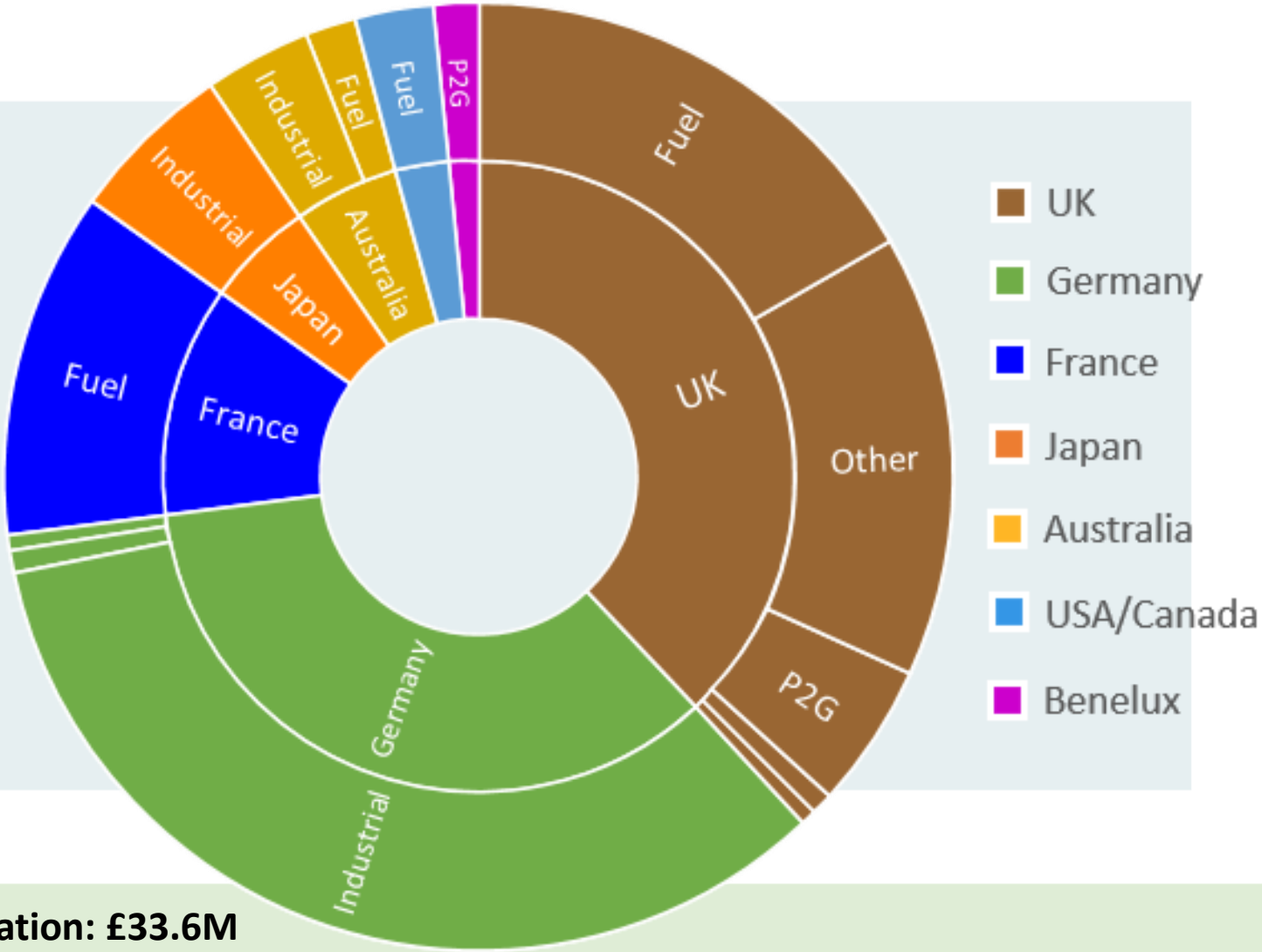
**Total Under Contract or in Negotiation: £33.6M**



# CONTRACTS PIPELINE | BY SECTOR

HYDROGEN ENERGY SYSTEMS

Sector	Negotiation/Contract
Industrial	£14.6M
Fuel	£11.2M
P2G	£2.2M
Maintenance	£0.4M
Other	£5.1M



**Total Under Contract or in Negotiation: £33.6M**

## TENDER OPPORTUNITY PIPELINE

- Criteria
- Pipeline Movements
- Pipeline Analysis

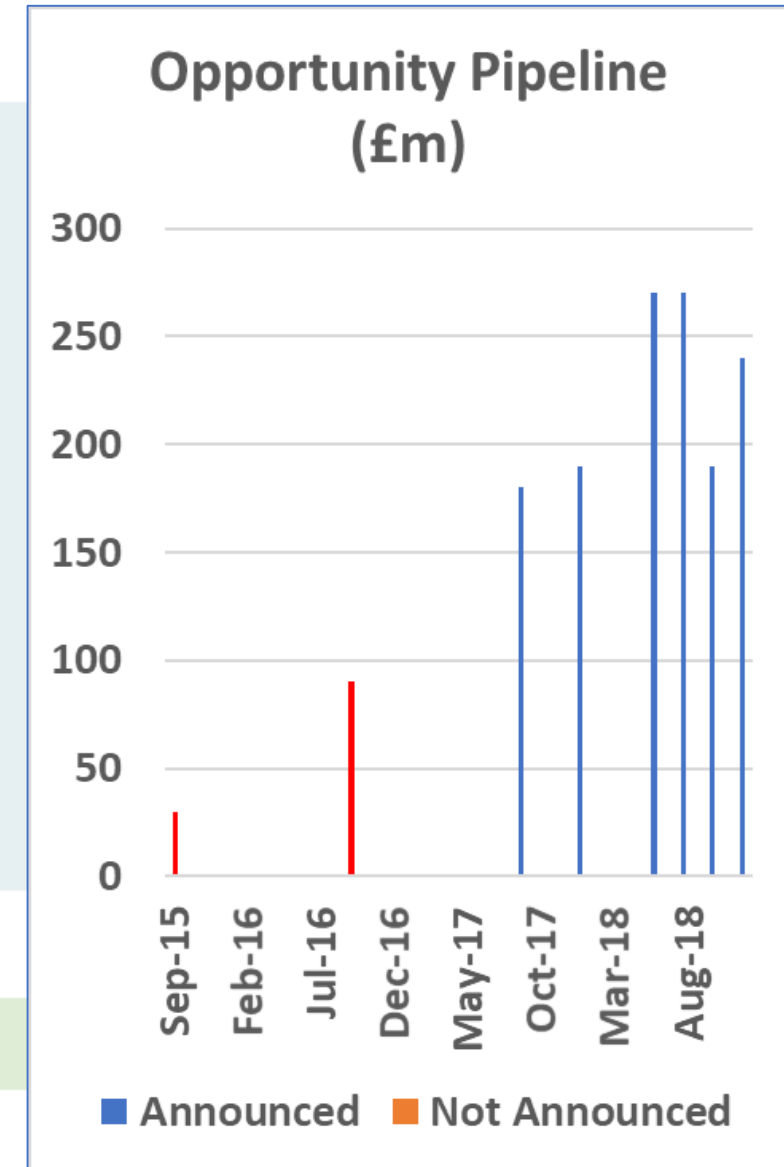


**Total Opportunity Pipeline: £240M+ | 280MW+**

### Assessment and qualification process:

- Must have been tendered in the last 12 months
- Project ready to go with finance in place
- Currently £240m, representing 36 commercial tender responses
- Average project size of £6m (£3.5m)
- Reflects strong industrial demand for larger systems

**Tender Opportunity Pipeline reported four times pa**



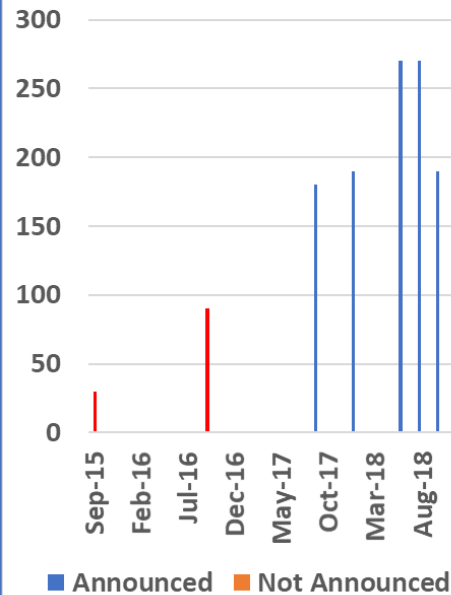


### Tenders

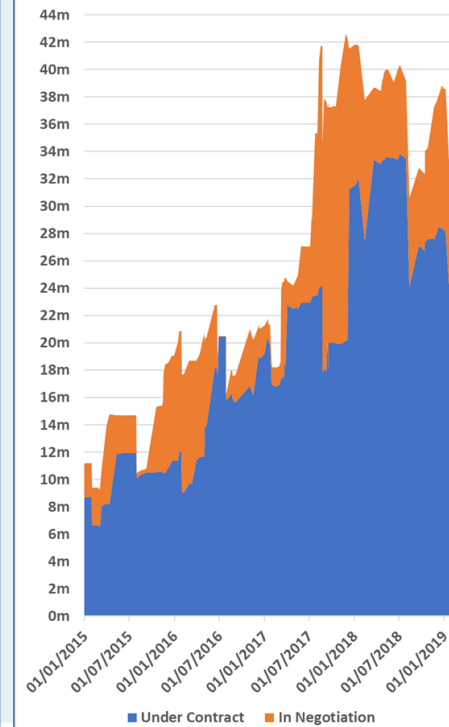
#### Strong upward trend:

- Tender pipeline £240m+
- Backlog: £33.6m
- 2018 Revenue: £14m up 53%

Opportunity Pipeline (£m)

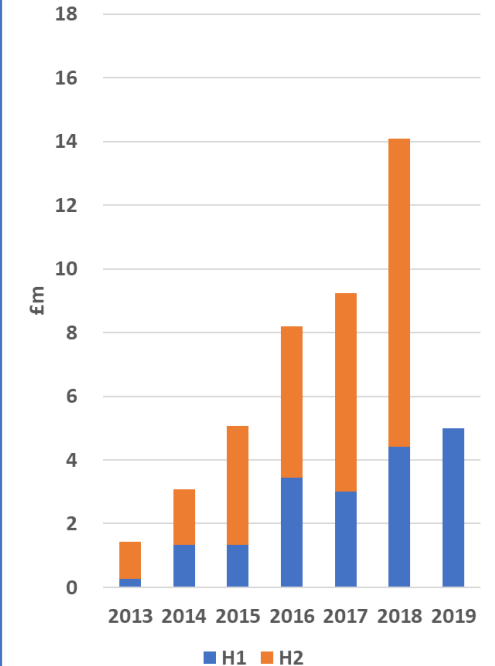


### Backlog



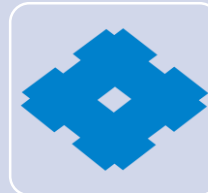
### Income

Income by period



Revenue | Backlog | Tender Pipeline | All showing strong growth!

ITM Power represented in seven territories



Process  
Andy Ellis

UK  
Charles  
Purkess

Germany  
Calum  
McConnell

France  
Lucas  
Bertrand

US & Canada  
Steve Jones

Nordics  
Kris Olsen

Australia  
Neil  
Thompson

Japan  
Sumitomo  
Corporation

Policy  
Marcus  
Newborough

Marcomms  
Rebecca  
Markillie

salesforce



Mar  
Comms

salesforce

Reporting to the Executive Team

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