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
**MARKETS**
HYDROGEN ENERGY SYSTEMS

**Sector Coupling:**

**Sector:**
- Power: Energy storage
- Heat: Renewable gas
- Mobility: Carbon reduction
- Commodities: Carbon reduction

**Need:**
- Power: Energy storage
- Heat: Renewable gas
- Mobility: Carbon reduction
- Commodities: Carbon reduction

**Power-To-Gas**
- Power-To-Gas Storage:
  - UK Electricity Grid 336TWh/yr throughput
  - UK Gas Grid 857TWh/yr throughput
  - Assuming 3% Hydrogen injection
  - UK addressable market of €1.1bn

**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

**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
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

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
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
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 based on standard 10MW stack skids and 2MW standard modules
Finances
- Revenue and Targets
- Pipeline
- Partnerships

£33.6M Under Contract or in Negotiation
**Revenue | Losses | Balance Sheet**

**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.
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
Transition from grants to sales

- Grants result in revenue generating assets
- Crossover for the Backlog was 2018
- Sales are the company’s focus
Total Under Contract or in Negotiation: £33.6M
<table>
<thead>
<tr>
<th>Sector</th>
<th>Negotiation/Contract</th>
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<tr>
<td>Industrial</td>
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<tr>
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<td>Maintenance</td>
<td>£0.4M</td>
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<tr>
<td>Other</td>
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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
Strong upward trend:

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

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

**Reporting to the Executive Team**