ALIGN
RESEARCH

ITM Power

11th August 2016

Valuing an industry trail blazer using Private Equity metrics – initiation price target of 43.8p

ITM Power is a renewable energy specialist which manufactures hydrogen energy systems for use in energy storage and the production of clean fuel.

Inflection point to future cash flow positivity now reached

Having spent £84 million on developing its cutting edge hydrogen fuel cell technology, ITM is now on the cusp of sustained economic profit generation. The firm is applying its proprietary technology to a number of industries, including hydrogen cars and power to gas, in the latter case solving the very much needed grid re-balancing problem.

Current enterprise value a significant discount to invested capital

From being valued at almost £400 million ten years ago to an enterprise value of approximately £33.5 million currently, ITM is now being valued at less than 40% of the capital invested in growing and establishing its IP.

Shares trade at a large discount to UK peers on Price/Sales metrics

Providing further attractions, the shares also trade at a large discount to certain UK listed peers based on forecast 2017 and 2018 price to sales valuation multiples.

Private equity modeling results in valuation well ahead of current levels

In modeling realistic cash flows and a growth profile out to 2028, we arrive at a valuation band of 25.9p to 76.5p per share. **Using the mid-point valuation of a 20% discount rate and 10 times exit multiple we arrive at a price target of 43.8p – some 2.5 times the current stock price. Accordingly we initiate full coverage of ITM Power with a Conviction Buy recommendation.**

Table: Financial overview

Year to end April	2015A	2016A	2017E	2018E
Total income (£m)	5.06	8.19	10.87	15.11
PBT (£m)	(5.71)	(4.36)	(2.81)	(1.50)
EPS (p)	(3.39)	(2.17)	(1.25)	(0.65)

Source: Company accounts & Align Research

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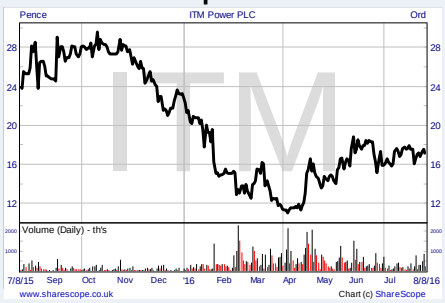
CONVICTION BUY

ITM POWER
Energy Storage | Clean Fuel

Key data

EPIC	ITM
Share price	17p
52 week high/low	28.66p/11p
Listing	AIM
Shares in issue	216.89m
Market Cap	£36.87m
Sector	Energy

12 month share price chart



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Executive Summary

In contrast to other notes which are in circulation on ITM and its industry peers, we believe that the best metric to value the company is one based upon a Private Equity model. Indeed, it is debatable whether the public markets have been an appropriate forum for ITM to play out its development, moving from a nascent cutting edge hydrogen fuel cell technology company to being on the cusp of sustained economic profit generation and a real trail blazer for the application of its proprietary tech to a number of industries including hydrogen vehicles (both fuel cell and generation of hydrogen) and the application of renewable hydrogen generation converting power to gas in solving Grid re-balancing issues. **That it has taken longer than early stage investors expected to reach this inflection point is not in question.** Sheltered from the public markets, many of the "growing pains" would have remained private and so the wide gyrations in valuation in such a public forum, and which can affect secondary sentiment, would not have been an issue.

As with any emergent industry and company pioneer within its respective arena, the best laid business plans are typically beset by unforeseen issues. From being valued at almost £400 million 10 years ago to circa market cap of £36.87 million now, this is illustrative of the extremes of sentiment that investors succumb to in valuing technology stocks. The company has spent £84 million on developing its industry leading hydrogen offerings to date and the market capitalisation is now just two-thirds of this. **And yet the forward sales profile has never been stronger.** With the marketplace for the company's products finally reaching the point of material adoption, we believe that the company is ripe for acquisition by either a peer or industrial company with the financial muscle power to really roll out the company's products should execution of the forward sales profile be successful over the next few years and cash flow positivity comes to reality.

With this in mind, we have anchored our valuation band based upon typical PE models but have applied a very heavy discount rate of 25% and more realistic ones of 20% and 15%. In applying a terminal value multiple to complete the model, we have graded between a very conservative 8 times to perhaps a more appropriate 12 times.

Total Price Per Share (pence)

Discount Rate (WACC)	Terminal EBITDA Multiple		
	8.0x	10.0x	12.0x
15.00%	60.5	68.5	76.5
20.00%	39	43.8	48.6
25.00%	25.9	28.8	31.8

Source: Align Research

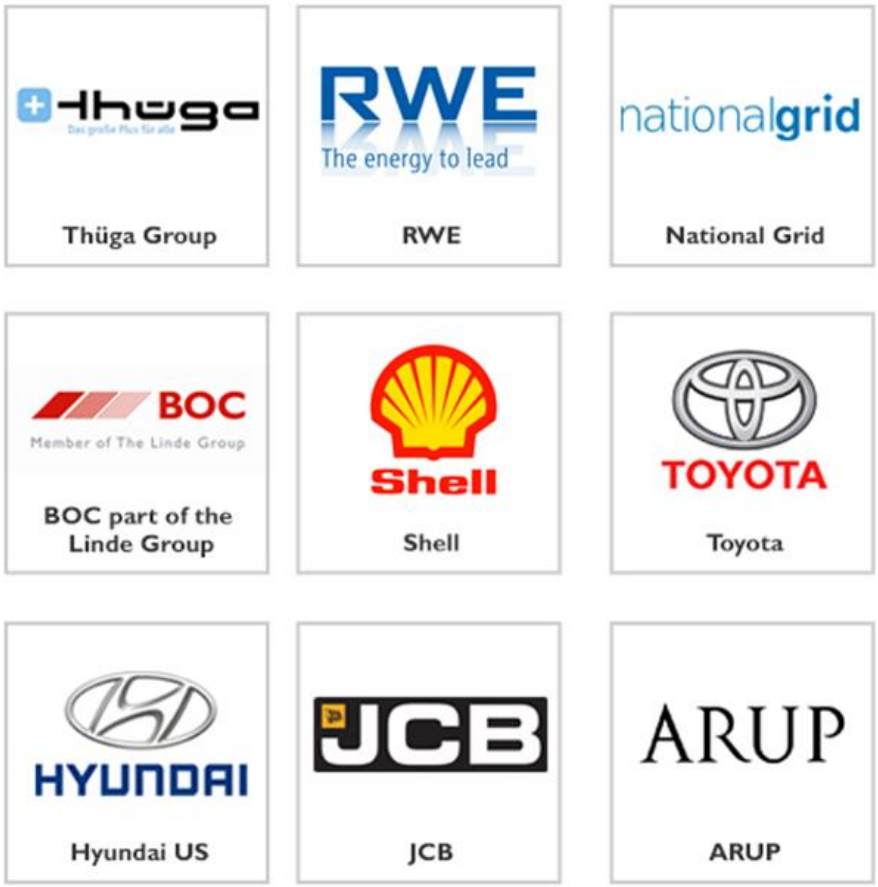
As we can see, working in conjunction with the company's CFO in modelling realistic cash flows and a tapering growth profile out to 2028, we arrive at a valuation band of 25.9p to 76.5p per share – see table above. **Using the mid-point valuation of a 20% discount rate and 10 times exit multiple we arrive at our price target of 43.8p – some 2.5 times the current stock price. Together with supportive near term Price/Sales metrics and a large discount to ITM's UK peers on this measure, accordingly we initiate full coverage of ITM Power with a Conviction Buy recommendation.**

Business Overview

Sheffield based ITM Power is a renewable energy specialist which manufactures hydrogen energy systems for use in both energy storage and the production of clean fuel. Its products are based on PEM (proton exchange membrane) electrolysis, a technology which enables excess electrical energy to be converted into "clean" hydrogen gas.

Electricity itself cannot be stored so must either be used as it is produced or converted into something else before storage is possible. PEM electrolysis facilitates this process by converting electrons generated from electricity production into hydrogen gas via the electrolysis of water. This can then either be stored or injected into the existing gas grid, providing a much more cost effective way of energy storage compared to other methods, such as batteries.

Over the years ITM has obtained a valuable suite of patents for its technology, as well as established knowhow, field data, and test data, and is widely considered to be a world leader in PEM technology. While competition exists in the industry, new entrants to the market face many barriers, not least the costs and challenges associated with developing the technology, compliance issues and the all important building of relationships with blue chip clients. **ITM has achieved all of these points and more and now seems to be at a key inflection point.**



Key clients and partners of ITM Power. Source: Company

Divisional structure

ITM Power operates two divisions which are focused on markets currently seeing rapid growth.

POWER-TO-GAS ENERGY STORAGE

The need for energy storage and grid balancing services (matching energy supply with demand) is becoming an ever more pressing issue in many countries around the world as power demand rises and supply challenges threaten national economies. In the UK alone the National Grid spent £1 billion on balancing services in 2013/14, up from £803 million in 2012/13.

This is where ITM's Power-to-Gas business comes in. It provides utility companies with electrolysis units for the large scale storage of hydrogen or methane. These can be integrated into current systems & infrastructure easily and relatively cheaply, providing clients with grid balancing services, whereby excess energy in the power network can be converted into hydrogen for injection into the gas network. Meeting a key industry requirement, ITM's electrolyser units are rapid response, meaning that they can be switched on and off within a second to meet grid balancing demands. The system is also able to self-pressurise and operate via remote control.

ITM Power-to-Gas PEM electrolyser system

Reference plant in Germany with the Thüga Group

The company's first flagship project in the Power-to-Gas market, aimed at testing the practicality of Power-to-Gas technology, is being done in collaboration with German utility grouping Thüga Group at a site in Frankfurt. **Germany is a key market for ITM as the country is setting the pace as an early adopter of hydrogen fuel and Power-to-Gas technology.** Energy storage requirements are growing quickly, with Thüga estimating a need for 17 terrawatt hours (TWh) by 2020, rising to 50 TWh by 2050. With the municipal gas distribution network being able to easily absorb these amounts, Power-to-Gas looks to have a big future in Germany.

In September 2013 ITM delivered its 315 kW HGas electrolyser to the Thüga site on schedule and in December it became the first plant to inject electrolytic hydrogen into the German gas distribution network. Following full commissioning in May 2014 the project has exceeded expectations over two years of rigorous testing, with Thüga announcing electricity conversion efficiency as high as 77%. The project will run into this year and is providing valuable field data which the company is using to help attract potential partners and customers.

In addition to rigorous technology testing, the electrolyser system has been qualified for both primary and secondary grid balancing services in Germany.

Further sales in Germany

Elsewhere in Germany, in December 2014, following a competitive tender, energy company RWE Deutschland ordered a 150 kW PEM Power-to-Gas electrolyser system from ITM for its site in Ibbenbüren. The unit was delivered within 10 weeks of order, officially launched in August and RWE has reported energy efficiency of 86% reported by RWE (including waste heat recovery). **The collaborations with Thüga and RWE are the only Power-to-Gas projects currently using rapid response PEM electrolysis in the world.**

In mid-April ITM announced the sale of a 1MW electrolyser system and additional equipment to another German utility company, ZEAG Energie. Delivery is planned for the first quarter of 2017 and comes with a two year warranty and a five year maintenance contract.

Other significant deals

Elsewhere, in April last year ITM won a £1.79 million deal to provide a 0.5MW electrolyser with integrated compression and up to 500 kg of storage to the European Marine Energy Centre's (EMEC) tidal test site on Orkney, Scotland. The system is currently undergoing factory acceptance testing prior to shipping. It will be used to absorb excess power generated by the tidal turbines, with some being used in a hydrogen fuel cell to provide back-up power.

CLEAN FUEL

In this division ITM is providing infrastructure, such as hydrogen generation and fueling equipment in order to support the growth of hydrogen as a fuel for vehicles such as cars and buses. Significant progress has already been made in this area, and with several major manufacturers such as Hyundai, Renault and Toyota currently rolling out their range of fuel cell electric vehicles (FCEV), we see good growth opportunities in the near term. **Notably, Toyota sees significant growth in this area, having in 2014 ended a venture with Tesla for electric vehicles in order to focus on hydrogen fuel cell cars**.

While there are only a handful of such vehicles currently on the road in the UK there are significantly more in Germany, California and Japan. **Production estimates vary considerably but industry data suggests that production post 2020 is expected to be in the tens of thousands annually.**

Hydrogen powered vehicles have a number of advantages over traditional petrol fueled vehicles, producing no carbon emissions or air pollution and having a range of several hundred miles. They can be refuelled in just three minutes, much less than the several hours it takes to recharge an electric plug-in vehicle. Recognising this, the UK Government has committed to the findings of report by UKH2 Mobility (UKH2M), a joint-industry government project of which ITM Power is a founder member and which examined the potential for hydrogen as a transport fuel. The body is looking for a network of 65 hydrogen refuelling stations to be operational in the UK by 2020, followed by a larger phase (1,000) to align with greater adoption rates.

Government agency the Office for Low Emission Vehicles (OLEV) has announced that it will provide £600 million to support the uptake of ultra-low emission vehicles between 2015 and 2020, with £100 million of this being allocated to hydrogen infrastructure.

Progress

In September 2015 the company's first public access hydrogen refueling station (HRS) was opened near to the M1 in Rotherham, South Yorkshire. Funded by government agency InnovateUK, the site uses the company's hydrogen generation equipment and is used to provide retail hydrogen fuel services. It consists of a 225kW wind turbine coupled directly to an ITM built electrolyser, 220kg of hydrogen storage, a hydrogen dispensing unit and a 30kW fuel cell system capable of providing backup power generation for nearby buildings. To date the company has been awarded planning permission for 13 HRS sites in the UK. In the US, operational status for its Riverside, California hydrogen fuelling station was achieved in November 2015. Since this time, ITM has opened a second public access refueling station in Teddington, London.

Siting agreement with Shell

ITM has signed a siting agreement with **Shell** to deliver HRSs on three of the petrol giant's retail forecourts in the UK - the first to be fully integrated on fuel forecourts. At least one of these stations will be built under a scheme with the Office for Low Emmision Vehicles, which in March 2015 awarded ITM £1.89 million to invest in stations in London.

Fuel contract with Toyota

In October 2015 ITM signed its first fuel deal with **Toyota**, covering green hydrogen fuel dispensed from three HyFive refuelling stations (built under an EU funded project) located in London. Under the deal Toyota will buy the fuel, as all of its Mirai fuel cell electric vehicles are being offered to consumers with free fuel for the first three years. The first of three HyFive stations was opened to the public in May 2016. Together all three stations will have a total capacity of 240 kg/day and are the first in a planned expansion of the UK's green hydrogen infrastructure, which will initially be focused on the capital.

At £10/kg, ITM is supplying hydrogen fuel at the lowest price in the UK. Revenue from hydrogen sales from the company's growing portfolio of refueling stations will grow with continued station and vehicle deployment.

Siting and business development agreement with Arup

In December 2015 a deal was struck with engineering consultants **Ove Arup & Partners** for the siting and business development of hydrogen refuelling stations and hydrogen energy systems. With Arup having access to early stage construction schemes involving energy systems there is a good opportunity here to identify new sites for ITM.

Further demonstrating the quality of partners working with ITM, the company has also recently become an approved supplier to **BOC**, part of the Linde group, and an approved subcontractor and supplier to **Artelia**, the fuel forecourt designer and architect.

Sale to Hydrogène de France

In June 2016 ITM sold a HRS with on-site generation to hydrogen energy operator Hydrogène de France. The deal is worth €1.5 million to ITM Power before follow-on contracts such as maintenance agreements and will be commissioned mid-2017.

Rotherham refueling station. Source: ITM Power

Income Segmentation

ITM has recently announced its preliminary numbers for the year to 30th April 2016, which means as we write this initiation note, that we have an up-to-date picture of the company's finances.

Before we look at the figures we first point out that at its present stage of development, ITM receives a mix of grant income, as well as more standard commercial revenues. This is mainly because the technologies it is developing are for future strategic and energy infrastructure uses, which are viewed as being important by national and multinational bodies. ITM, along with other companies working in this field, has thus been prioritised for development funding to push forward the commercialisation of its products.

Because of this grant income mix, all revenues are aggregated to reflect ITM's 'real world' progress and 'total income'.

The aggregated total income figure is segmented into **sales revenues** reported as recorded top-line revenue, **grant revenues** reported as other income in the income statement, and **grants received towards asset finance purchases,** which are capitalised. For example, when a grant body partly or fully funds a hydrogen refuelling station, most usually as part of a larger program or project and the project is completed, ITM then takes ownership of the new refuelling station as well as the revenues generated from ongoing hydrogen fuel sales (which will become material to the company as the HRS rollout accelerates).

It is important when looking at the company to understand this as the company presents both its results and its future sales forecasts in this format.

Historic revenues and grant financing are reported in the table below.

ITM Historic Revenues & Grant Financing

Y/E April, £000's	FY 2014A	FY 2015A	FY2016A
Recorded Revenue	1,127	1,635	1,930
Grants (Income Statement)	1,370	1,777	3,188
Grants (Asset Finance)	580	1,649	3,069
Total Income, as segmented	**3,077**	**5,061**	**8,187**
Annual Growth Rate		**64%**	**62%**

Source: ITM Power & Align Research

2016 results and current financial position

In the 2016 financial year ITM's aggregate total income was £8.19 million, up 62% year-on-year, with an 18% rise in commercial revenues and an 82% rise in grant incomes. **Year-on-year 'total income' growth has been over 60% for the last two years**. Operating costs were approximately flat year-on-year at £7.99 million (£8.09 million in 2015). The top-line figure masks important underlying progress on the commercialisation pathway however, and which is illustrated when we examine the segmented costs.

Pure R&D spending reduced to £1.95 million in 2016 against £4.33 million in 2015 as the lab-based phase of technical testing work was completed and activities moved on to building prototype units. Indeed, product prototyping spend was £2.95 million, up from £1.41 million in 2015. A step-change in sales and marketing spend is also a good sign, and rose from £0.72 million in 2015 to £1.36 million in 2016, again heralding a shift towards commercialisation as the company seeks to raise awareness of its products.

Administration costs were reduced by around 10% year-on-year, although some of this reduction is likely captured within the increased sales and marketing segment. Overall, the operating loss for 2016 was £4.36 million, down 21% from £5.73 million in 2015 against a significantly increased workload and shifting company focus. We see these numbers as a tangible reflection of ITM's cost reduction efforts as work to tailor commercial deployments begin to bear fruit.

As at 30th April cash was £3.34 million, down from £6.58 million 12 months previously, with trade and other receivables totaling £6.49 million. These are noted as predominantly being related to grant income debtors, which can be slow at making payments. Note 4 in the accounts, (trade and other receivables) indicates £0.78 million of receivables within the gross figure as 'past due'. However, these monies are considered to be fully recoverable by ITM.

Current order book

Alongside its results, ITM updated the market on its current order book status indicating it has a total of £15.81 million of projects under firm contractual obligation and, as at the date of the report, £0.51 million of contracts in the final stages of negotiation. **The total pipeline of orders is thus £16.32 million. This compares to a total pipeline of £10.5 million at the end of 2015.**

Current and future hydrogen refuelling stations

ITM's order book for hydrogen refuelling stations will be a key element of the company's sales in 2017 and beyond. As noted above, sales have already been made to the UK, the US and to Hydrogène de France (HDF). This comes as government bodies and automotive giants, including OEMs Hyundai, Toyota, Honda and Renault (through their partner Symbio FCell), push to roll out a hydrogen infrastructure to support hydrogen vehicles.

In our discussions with ITM, the company provided us with some additional detail regarding the HRS segment of the order book and the roll out plan, which we detail in the table below.

ITM Hydrogen Refuelling Station roll-out

Project	Location	Dispenser	Build Status	Delivery
M1	AMP Sheffield	350/700	Operational	Delivered
Riverside	USA	700	Operational	Delivered
HyFive 1	NPL	350/700	Operational	Delivered
HyFive 2	CEME	350/700	In build	October 2016
HyFive 3	Shell Cobbham	700	In build	December 2016
Big Hit	Orkney	350	In design	April 2017
H2ME	Shell Beaconsfield	350/700	In build	August 2017
H2ME	Shell Gatwick	350/700	In build	August 2017
H2ME2 1	Site TBC	350/700	Contract	2017
H2ME2 2	Site TBC	350/700	Contract	2017
H2ME2 3	Swindon	350/700	Contract	March 2017

Source: ITM Power/Align Research

Eleven HRS stations are detailed, including deployments under several European HyFive projects funded by the European Fuel Cell and Hydrogen Joint Undertaking (FCHJU) and the UK Government Office of Low Emission Vehicles (OLEV). The Hydrogen Mobility Europe 2 (H2ME2) program is funded by the FCHJU under Horizon 2020 and the BIG HIT (Building Innovative Green Hydrogen systems in an Isolated Territory) project is also funded by FCHJU.

The key take-away for investors here is that governmental programs in the UK in Europe and elsewhere in the world are actively accelerating the delivery of the first hydrogen fueling stations.

With these first deliveries, access to hydrogen fuel will become increasingly visible, with it being to the advantage of car manufacturers to let customers know the infrastructure is available so they can market their vehicles.

Indeed, we can only see the pace of the infrastructure deployment accelerating as new territories come on board and as fully commercial fueling stations are commissioned. For example, in California some 47 HRS stations are up for grabs under a competitive tender process with a further 70 HRS in Japan during 2017. Then there is the possibility of specific fleet deployment situations, for example for public transport or delivery fleet usage.

If anything, we believe order growth for ITM's products into the HRS space could develop more quickly than investors currently expect now that systems costs have been reduced to below the EU target for 2020. The grant funded projects detailed above signal the future.

Power to Gas (HGAS)

In the power-to-gas arena, **Thüga's announcement in June that ITM's power to gas technology is suitable for the primary energy balancing market seems to have been almost ignored by the investment market.** This was a core company milestone, with ITM's PEM becoming the first electrolyser to achieve this, with the prototype now having been field-tested for two years to date.

Elsewhere, RWE's Power to Gas plant in Ibbenüren, installed in 2015, has achieved a landmark energy efficiency of 86%. In April 2016 ITM received a €5 million EU grant in the BIG HIT project, (partly detailed above in with regard to fueling) but mainly as provider of the electrolyser, receiving €2.27 million over five years.

The addressable market within this space is really almost unlimited in scope and we expect to see rapid progress given the technological edge ITM has demonstrated in-the-field and the commercial imperatives behind grid balancing needs in a mixed generation environment. **It looks like a win-win for all participants and we expect once the market realises this that developments will be rapid.**

Other Markets

Now that ITM's prototyping efforts have proven the longevity and reliability of ITM's PEM stack, and the systems are price competitive with alkaline water electrolysis, we anticipate the company will engage in a more focused marketing approach to the industrial chemicals space, where the efficacies of its technology have yet to be utilised. As system capacities increase and become more cost-effective, we see a market developing in this space along a parallel trajectory to ITM's other deployments, but potentially with a larger initial unit order size.

Risks

Product adoption risk

Hydrogen fueled vehicular transport is a nascent technology which may or may not see future wide-scale adoption, despite the clear will, intent and supporting intention of major vehicle manufacturers. Similarly, power-to-gas balancing technology albeit very promising, may not be adopted beyond a demonstration project into utility scale deployment, this is equally true for the use of ITM's systems for the commercial chemical industry.

Commercialisation risk

ITM's technology may not be chosen as the go-to choice within the marketplace for a host of reasons, including that larger companies are chosen for non-strictly commercial considerations or for other reasons unforeseeable at this time.

Technology risk

ITM operates within a dynamic and evolving market place of disruptive technologies. We believe the company currently has a keen technological edge however, this may not always be the case. A number of competing companies with significant resources are competing within the same space and ITM's technologies may be eclipsed by a competitor technological development or an unforeseen new entrant to the space.

Subsidy risk and credit risk

At present, ITM is significantly supported by government subsidy through UK, EU and other industry funded grant programs. It is unknown at this time whether 'Brexit' may affect funding from EU bodies in a competitive environment. Additionally, subsidies will not remain in place indefinitely, and or may be removed if economic conditions deteriorate so commercial viability is key to a securing ITM's future.

Grant funding can be subject to delay regarding the disbursement of funds. This may negatively affect ITM's short and medium cash flows, which in itself brings with it risk of a future cash requirement.

Failure to pay for a contract either on time or in totalis, late delivery of project stage payments or unpaid materials payments would be disruptive to thin working capital cover and may necessitate a cash call.

Key employee risk

ITM staff are a key asset, particularly at management level. Retaining staff or losing a key staff member through unforeseen circumstances would be an impediment to progress within such a relatively small concentrated team.

Project concentration risk

Particularly at this early stage of commercialization, and while supported by a series of grants, the company has relatively few actual customers and adjustments to schedules may impact revenue assumptions.

Capital market access risk

ITM is a public company and access to capital, be that for working capital or for purposes of expansion, may be restricted during periods of adverse market conditions presenting a timing risk if external to the necessity of potential future requirements.

Foreign exchange risk

ITM receives revenues in sterling, euros and US dollars, and purchases in a number of currencies. Unhedged currency fluctuations may affect margins, revenues and cost assumptions.

Reliance on channel partners

ITM requires goods and materials from channel partners to build its goods. Supplier longevity and recourse to materials substitution is not guaranteed.

Energy pricing risk

There is an interplay between oil pricing and both the real and perceived demand for carbon-neutral fuels. Much of the predicted change is being driven by legislation but government and intergovernmental priorities are never static.

Financial Model

We have constructed a new financial model to capture ITM Power's visible order book and to model the likely P&L effects and cash flow movements, with detailed estimates through to 2018. The model is tied back to our real-world expectations for the company's developing order pipeline, and with a series of assumptions about ITM's currently contracted, in negotiation, and future contracts. (Note: ITM's customers are often confidential with the company announcing deals to the market when they are able).

The model takes into account the recognition of grants both into P&L and the capitalisation of grant incomes. Furthermore, it accounts for the changing segmental mix of costs related to ongoing refocusing between R&D, prototyping and sales and marketing functions, along with inflation adjusted and headcount adjusted estimates for administration. The model also accounts for revenue from hydrogen sales (from the roll out of refuelling stations) but this is not broken out at this juncture.

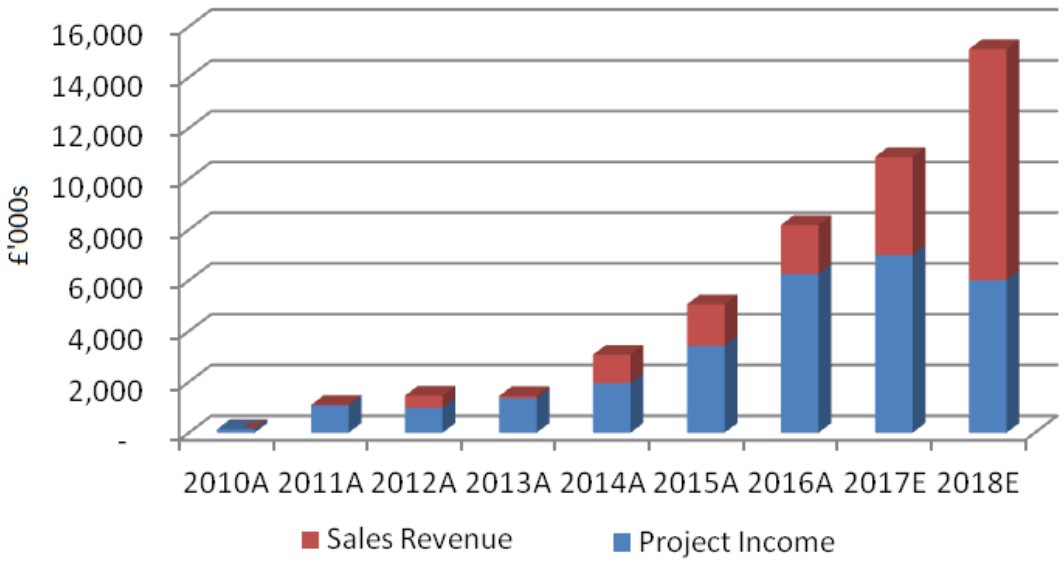
Our base forecasts are presented below.

Total Income Forecast

Y/E April, £000's	FY 2014A	FY 2015A	FY2016A	FY2017E	FY2018E
Recorded Revenue	1,127	1,635	1,930	3,860	9,100
Grants (Income Statement)	1,370	1,777	3,188	3,165	2,684
Grants (Asset Finance)	580	1,649	3,069	3,841	3,329
Total Income, as segmented	**3,077**	**5,061**	**8,187**	**10,867**	**15,113**
Annual Growth Rate		**64%**	**62%**	**30%**	**42%**

Source: ITM Power & Align Research Forecasts

Near Term Forecasts to 2018



Source: ITM Power Accounts & Align Research Forecasts

In the near term, to 2018, our estimates reflect a snapshot of ITM as being in transition from an early stage and largely grant funded business, moving towards the early stages of real commercialisation - a lot of the groundwork has now been done. Our initial estimates for 2017 and 2018 indicate this, with growth predicted in steps as the business re-focusses and sales functions are developed. We expect net losses through 2017 and into 2018 but at a significantly reduced level, (£2.7 million) in 2017 reducing to just (£1.4 million) in 2018 with EPS forecasts of (1.25p) and (0.65p) per share respectively.

Operational cash flow, which is key to any company at this stage of development, will vary with increasing working capital requirements **but essentially, our forecasts indicate the company will remain cash positive and therefore should not need to go back to the market for new funding unless there is a specific project requirement (which would inevitably be value adding) that would directly necessitate it.** We must add the caveat that there is an inherent degree of 'lumpiness' in ITM's receivables both in terms of their straight commercial contracts and their grant incomes, but we can look to refine our expectations as the financial year progresses and adapt the model accordingly.

Valuation

Peer group comparison

We have sought to put a value on ITM by looking at the peer group and applying a relevant price to forward sales multiple. ITM's peers split rather cleanly into two groups; those with estimates averaging around 3.5x 2016 calendar consensus sales and 'others', namely UK peers AFC Energy and Ceres Power and where forward revenue multiples are not as appropriate a measure given their much higher valuation and earlier development stage.

Comparable Fuel Cell Company	Ticker / Epic	Year End	Price £ 5 Aug 16	£M cap (millions)	Price to Revenue Estimate (Consensus)	
					FY 2016 E	FY 2017 E
Plug Power	PLUG:NAQ	31-Dec	£1.31	£235.70	2.56x	1.77x
Ballard POWER Systems	BLD:TOR	31-Dec	£1.53	£239.48	3.74x	2.97x
NEL ASA	NEL:OSO	31-Dec	£0.20	£133.86	5.21x	2.06x
Fuel Cell Energy*	FCEL:NMQ	31-Oct	£4.03	£129.96	1.06x	0.74x
Hydrogenics Inc	HYGS:TOR	31-Dec	£5.29	£65.24	2.26x	1.23x
MCPhy	MCPHY:PAR	31-Dec	£3.95	£37.30	6.11x	2.63x
				Average Forward Multiple	***3.49x***	***1.90x***
AFC Energy plc	AFC:LSE	31-Dec	£0.193	£59.54	74.80x	14.14x
Ceres Power Holdings Plc	CWR.LSE	30-Jun	£0.089	£69.23	104.89x	46.15x
ITM Power Plc	**ITM:LSE**	**30-Apr**	**£0.175**	**£37.96**	**4.18x**	**3.09x**

Peer group comparison. Source: Align Research

Looking at the peer group overall, the overseas companies are generally far more mature than ITM Power is at present. As such, we propose that ITM should attract a premium rating to this group given its transitioning prospects. Looking again at the data, McPhy, which is similarly capitalised to ITM, is indeed rated at a premium to the group average at just over 6.1x 2016 calendar estimates. **Applying the same multiple to ITM would equate to a current share price of 25.5p.**

Discounted cash flow model

We have also adopted the private equity approach by building a discounted cash flow model, extending out our company forecasts to determine a range of pricing options based on realistic exit multiples. We have extended our forecast model to a ten-year period from 2018 to 2028. **This should capture the key growth phase for the company and allows us to come to a prospective valuation**.

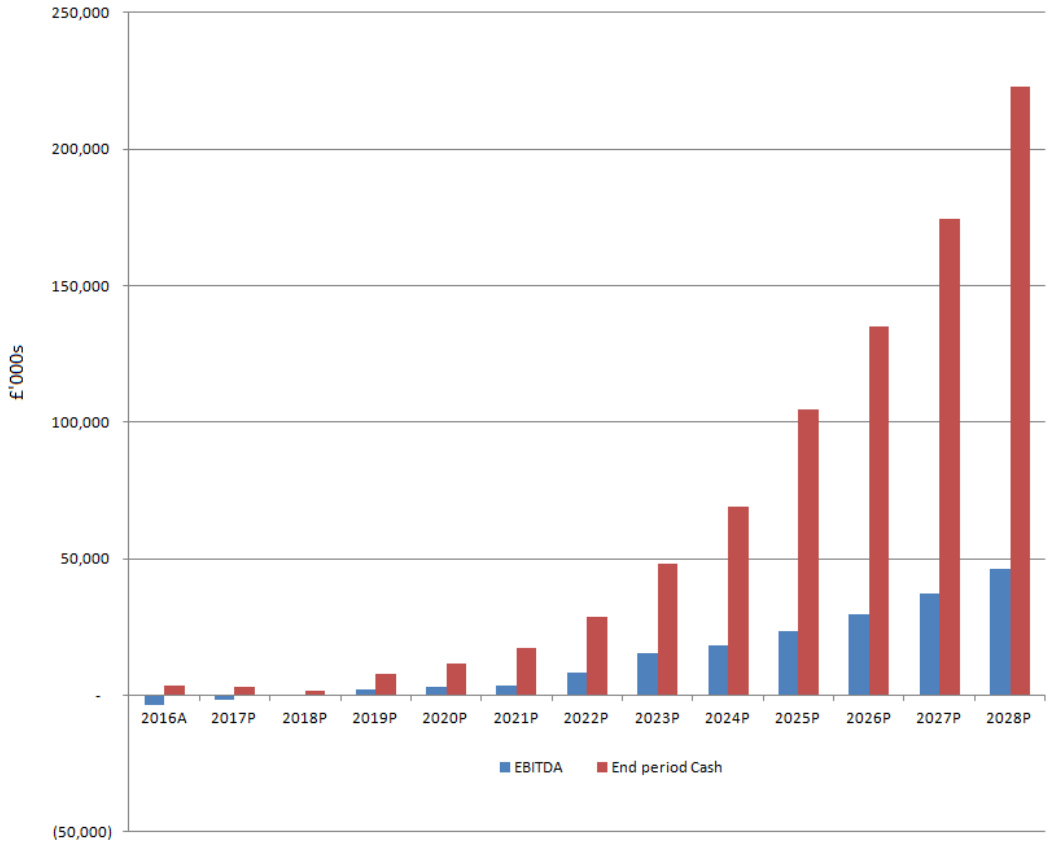
The over-arching assumptions we have modelled for is a scenario with 50% growth in total sales per annum for the five years from 2018 to 2023, with growth of 20% p.a. from 2023-28. Gross revenues from grants are tapered off, with margins incrementally reduced to 20% from the 25% currently anticipated. We have factored in some H2 (hydrogen) sales (tied back to ITM's 'to be owned HRS assets') yet tapered the margins there too. There is a rebalancing of sales and marketing costs, with a step change at the point of commercial capacity.

We have also made an appropriate accommodation for site capacity and an assumed need for new premises once exceeded, which would be in 2023 in our extended model. We have built in an increase in operating costs of £0.4 million per annum and £0.3 million as a one off capex charge in 2023 to take this into account.

Working capital is modelled using a 3 month billing cycle, shortening to 2.5 months in 2020 and then shortening again to 2 months by 2025 - as units are produced faster, billing turnaround should speed up to match. Carried tax losses are extinguished in around 2025, paid in the trailing year. Marginal interest is paid on cash balances at 0.25% APR, for completeness.

Model results

The graph below illustrates EBITDA and end period cash over the period to 2028, extending our model out as described above.



Source: ITM Power & Align Research

The main point of this exercise is that we have extended our model out with what we believe to be realistic underlying assumptions. Illustratively, in this scenario ITM reaches profitability soon after 2018 – think of that as a very unofficial forecast at this time, as we will look to maintain and revise our future estimates as the order book is populated over time.

As to cash flows, working capital requirements look manageable without returning to the market, with strong cash generation going forward.

Back to the private equity approach

Looking at the results of this exercise, it is possible to illustrate a likely development scenario for ITM over the medium-term and ascertain reasonably generated terminal multiple exit valuations. **Our analysis suggests a current value of between 25.9p per share (using a heavy discount rate of 25% and 8x exit multiple) and 76.5p per share (discount rate of 15% and a 12x exit multiple) – see table below.** Clearly this is above the current market valuation but we believe provides the best method to value ITM at this stage in its development.

Total Equity Value £ '000

		Terminal EBITDA Multiple		
		8.0x	10.0x	12.0x
Discount	*15.00%*	£131,195	£148,522	£165,848
Rate	*20.00%*	£84,638	£95,035	£105,432
(WACC)	*25.00%*	£56,191	£62,562	£68,932

Total Price Per Share (pence)

Discount		Terminal EBITDA Multiple		
Rate		8.0x	10.0x	12.0x
(WACC)	*15.00%*	60.5	68.5	76.5
	20.00%	39	43.8	48.6
	25.00%	25.9	28.8	31.8

Forecast Tables

Total Income Forecast

Y/E April, £000's	FY 2014A	FY 2015A	FY2016A	FY2017E	FY2018E
Recorded Revenue	1,127	1,635	1,930	3,860	9,100
Grants (Income Statement)	1,370	1,777	3,188	3,165	2,684
Grants (Asset Finance)	580	1,649	3,069	3,841	3,329
Total Income, as segmented	**3,077**	**5,061**	**8,187**	**10,867**	**15,113**

Profit and Loss Forecast Matching ITM's Financial Reporting Format:

Y/E April, £000's	FY 2014A	FY 2015A	FY2016A	FY2017E	FY2018E
Product sales	**1,127**	**1,635**	**1,930**	**3,860**	**9,100**
COGS	(2,026)	(1,045)	(1,483)	(2,895)	(6,825)
Margin	*n/a*	*36%*	*23%*	*25%*	*25%*
Gross profit	**(899)**	**590**	**447**	**965**	**2,275**
Operating costs					
R&D	(3,979)	(4,322)	(1,952)	(1,709)	(1,760)
Prototyping	(2,171)	(1,141)	(2,954)	(1,671)	(1,033)
Sales and marketing	(695)	(719)	(1,364)	(1,500)	(1,545)
Administration	(1,604)	(1,908)	(1,724)	(2,069)	(2,131)
Operating Profit/(loss)	**(9,348)**	**(7,500)**	**(7,547)**	**(5,984)**	**(4,194)**
Grant/other Income	1,370	1,777	3,188	3,165	2,684
Loss from Operations	**(7,978)**	**(5,723)**	**(4,359)**	**(2,819)**	**(1,510)**
Finance income	-	-	-	-	-
Finance costs	-	-	-	-	-
Investment revenues	25	12	-	8	6
Profit/(loss) before tax	**(7,953)**	**(5,711)**	**(4,359)**	**(2,811)**	**(1,504)**
Tax	164	84	359	100	100
Net profit/(loss)	**(7,789)**	**(5,627)**	**(4,000)**	**(2,711)**	**(1,404)**
Forex	-	116	(62)	-	-
Total Comprehensive Loss	**(7,789)**	**(5,511)**	**(4,062)**	**(2,711)**	**(1,404)**
EPS					
Basic & Diluted (p)	(5.88)	(3.39)	(2.17)	(1.25)	(0.65)
Shares					
Weighted Average Number of Shares	132,489,013	163,213,408	184,566,325	216,892,973	216,892,973
Called up, allotted and fully paid			216,892,973	216,892,973	216,892,973

Source: ITM Power PLC/ Align Research

Cash Flow Forecast

Y/E April, £000's	FY 2014A	FY 2015A	FY2016A	FY2017E	FY2018E
Net profit/(loss)	**(7,978)**	**(5,723)**	**(4,359)**	**(2,819)**	**(1,510)**
D&A	641	592	619	949	1,040
Losses on disposals	-	87	67	-	-
Share based payments	22	8	-	-	-
Operational cash flow before WCap	**(7,315)**	**(5,036)**	**(3,673)**	**(1,870)**	**(470)**
Working capital changes					
Decrease/(increase) in inventories	(567)	250	221	(95)	(151)
Decrease/(increase) in receivables	443	(3,008)	(1,998)	1,957	(210)
(Decrease)/increase in payables	473	1,111	(1,540)	519	775
(Decrease)/increase in provisions	265	(194)	(108)	-	-
Cash used in operations	**(6,701)**	**(6,877)**	**(7,098)**	**511**	**(55)**
Income taxes received	-	193	-	359	100
Net cash used in operations	**(6,701)**	**(6,684)**	**(7,098)**	**870**	**45**
Investing activities					
Interest received	62	12	-	8	6
Cash received from Interest-earning deposit	4,000	-	-	-	-
Purchases of PPE	(929)	(1,470)	(3,315)	(5,242)	(4,559)
Proceeds from sale of PPE	-	-	-	-	-
Grants received relating to PPE	-	-	2,148	3,841	3,329
Intangibles	-	-	(252)	-	-
Net cash (used in)/from investing activities	3,133	(1,458)	(1,419)	(1,392)	(1,224)
Financing activities					
Issue of ordinary share capital	11,388	4,847	5,819	-	-
Fundraising costs	-	-	(466)	-	-
Net cash from financing	11,388	4,847	5,353	-	-
(Decrease) / increase in cash and cash equivalents	**7,820**	**(3,295)**	**(3,164)**	**(523)**	**(1,179)**
Cash and cash equivalents at period start	**1,943**	**9,763**	**6,576**	**3,336**	**2,813**
Effect of FOREX	-	108	(76)	-	-
Cash and cash equivalents at end of period	**9,763**	**6,576**	**3,336**	**2,813**	**1,634**

Source: ITM Power PLC/ Align Research

Balance Sheet Forecast

Y/E April, £000's	FY 2014A	FY 2015A	FY2016A	FY2017E	FY2018E
Non-current assets					
Property Plant & Equipment	1,755	2,546	3,024	3,728	3,917
Intangibles	-	-	252	-	-
	1,755	**2,546**	**3,276**	**3,728**	**3,917**
Current assets					
Inventories	762	512	291	386	537
Trade and other receivables	1,206	4,113	6,487	4,271	4,481
Cash and cash equivalents	9,763	6,576	3,336	2,813	1,634
Total current assets	11,731	11,201	10,114	7,470	6,652
Current liabilities					
Trade and other payables	(2,184)	(3,295)	(1,755)	(2,274)	(3,049)
Provisions	(302)	(108)	-	-	-
Total Current Liabilities	(2,486)	(3,403)	(1,755)	(2,274)	(3,049)
Net current assets	**9,245**	**7,798**	**8,359**	**5,197**	**3,603**
Net assets	**11,000**	**10,344**	**11,635**	**8,924**	**7,520**
Called up share capital	8,093	8,905	10,845	10,845	10,845
Share premium account	50,703	54,738	58,151	58,151	58,151
Reserves	(1,973)	(1,973)	(1,973)	(1,973)	(1,973)
Forex reserve	-	116	54	54	54
Retained profit/(loss)	(45,823)	(51,442)	(55,442)	(58,153)	(59,557)
Total Equity	**11,000**	**10,344**	**11,635**	**8,924**	**7,520**

Source: ITM Power PLC/ Align Research

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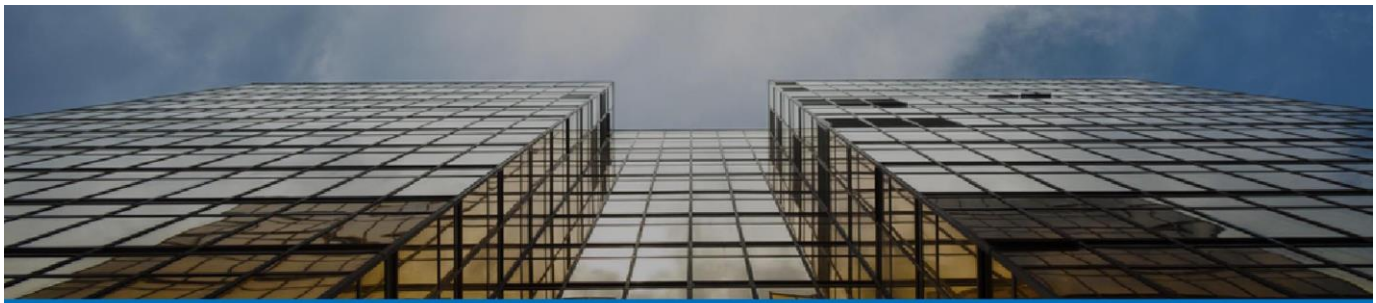

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